JOINT ANNUAL HEALTH REVIEW 2015
Strengthening primary health care at the grassroots
towards universal health coverage

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Acknowledgements

The Joint Annual Health Review 2015 (JAHR 2015) is the ninth annual report written in collaboration between the Ministry of Health and the Health Partnership Group (HPG). The JAHR report assesses progress in implementing tasks assigned in the five-year health sector plan 2011-2015 and results of implementing the MDGs and five-year plan goals. In addition, it provides analysis on the in-depth topic of “Strengthening primary health care in the grassroots healthcare network towards universal health coverage”.

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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<td>ADR</td>
<td>Adverse drug reaction</td>
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<td>AIDS</td>
<td>Acquired immuno-deficiency syndrome</td>
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<tr>
<td>ART/ARV</td>
<td>Anti-retroviral therapy/ Anti-retroviral (drugs)</td>
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<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<tr>
<td>BCC</td>
<td>Behavior change communication</td>
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<td>CHS</td>
<td>Commune health station</td>
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<td>COPD</td>
<td>Chronic Obstructive Pulmonary Disease</td>
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<td>DALY</td>
<td>Disability adjusted life years</td>
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<td>EC</td>
<td>European Commission</td>
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<tr>
<td>EENC</td>
<td>Early essential newborn care</td>
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<tr>
<td>ENT</td>
<td>Ears, nose, throat</td>
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<td>EPI</td>
<td>Expanded program on immunizations</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GDP</td>
<td>Good distribution practice</td>
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<tr>
<td>GLP</td>
<td>Good laboratory practice</td>
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<td>GMP</td>
<td>Good manufacturing practice</td>
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<td>GPP</td>
<td>Good pharmaceutical practice</td>
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<tr>
<td>GSP</td>
<td>Good storage practice</td>
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<tr>
<td>HBV, HCV</td>
<td>Hepatitis B virus, Hepatitis C virus</td>
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<td>HCMC</td>
<td>Ho Chi Minh City</td>
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<tr>
<td>HIS</td>
<td>Health information system</td>
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<td>HIV</td>
<td>Human immuno-deficiency virus</td>
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<td>HSPI</td>
<td>Health Strategy and Policy Institute</td>
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<td>HTA</td>
<td>Health technology assessment</td>
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<td>ICD-10</td>
<td>International Classification of disease</td>
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<td>IEC</td>
<td>Information, education, communication</td>
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<td>IHR</td>
<td>International health regulations</td>
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<td>IMR</td>
<td>Infant mortality rate</td>
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<td>IT</td>
<td>Information technology</td>
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<td>JAHIR</td>
<td>Joint Annual Health Review</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
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<td>MMR</td>
<td>Maternal Mortality Ratio</td>
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<td>MOH</td>
<td>Ministry of Health</td>
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<td>MRI</td>
<td>Magnetic resonance imaging</td>
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<tr>
<td>NCD</td>
<td>Non-communicable disease</td>
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<td>NGO</td>
<td>Non-government organization</td>
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<td>NRA</td>
<td>National Regulatory Authority</td>
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<td>NTP</td>
<td>National target program</td>
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<tr>
<td>ODA</td>
<td>Overseas development assistance</td>
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<tr>
<td>PIC/s</td>
<td>Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>PPP</td>
<td>Public private partnership</td>
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<tr>
<td>SDG</td>
<td>Sustainable Development Goals</td>
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<td>STI</td>
<td>Sexually transmitted infection</td>
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<td>TB</td>
<td>Tuberculosis</td>
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<tr>
<td>TFR</td>
<td>Total fertility rate</td>
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<td>U5MR</td>
<td>Under 5 mortality rate</td>
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<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>USD</td>
<td>United States dollar</td>
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<tr>
<td>VND</td>
<td>Vietnamese dong</td>
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<td>VSS</td>
<td>Vietnam Social Security</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Introduction

Purpose of the JAHR report

As agreed upon by the Health Partnership Group (HPG) since 2007, the Joint Annual Health Review (JAHR) has the overall objective of assessing the current situation and determining priorities of the health sector in order to support annual planning of the Ministry of Health, and at the same time to serve as the basis for choosing focal issues for cooperation and dialogue between the Vietnamese health sector and international partners.

Specific goals of the JAHR include the following: (i) an update on the health sector situation, including an overview of new policies and an assessment of progress in implementation of tasks and achievement of health sector targets laid out in the health sector plans, and progress in implementing health MDGs in Vietnam and (ii) in-depth analysis and evaluation of one aspect of the health system, or one important topic that is the focus of policy-maker attention.

Contents and structure of JAHR 2015

Depending on the situation each year, the contents and structure of the JAHR report are varied to satisfy the goals and concrete requirements of health sector planning and selection of focal areas for cooperation and dialogue between the Vietnamese health sector and international development partners.

In 2007, the first JAHR report was compiled, providing a comprehensive update of the major building blocks of the Vietnamese health system, including the following topics: (i) health status and determinants; (ii) organization and management of the health system; (iii) human resources for health; (iv) health financing; and v) health service provision.

The 2008 and 2009 JAHR reports, in addition to the health system update section, covered the specific topics of Health financing and Human resources for Health, respectively.

The 2010 JAHR report was developed during the final year of implementing the five-year health sector plan for the period 2006 – 2010, and the focus was placed on a comprehensive update of health system building blocks, in order to support development of the five-year health sector plan for 2011 – 2015.

The 2011 JAHR was developed in the first year of implementing the five-year plan for the period 2011-2015, and had the task of providing an update on the new orientation that was determined in the Eleventh National Party Congress, and in the five-year socio-economic development plan, in order to promote implementation of the socio-economic plan and support development of the 2012 annual health sector plan.

The 2012, 2013 and 2014 JAHRs were developed in the second to fourth years of the five-year planning cycle, with the task of supporting development of the annual health sector plans, through updates on new policies, assessment of progress in implementing tasks in each of the six building blocks of the health system. In addition, these reports provided in-depth analysis in different areas including Medical service quality, Universal health coverage and non-communicable diseases (NCD).
The 2015 JAHR was developed in the final year of the five-year planning cycle, which is also the final year for nations to work towards achieving the MDGs, including five groups of goals related to health to which United Nations member countries have committed to achieving by 2015. In addition, the year 2015 is the year in which the new Five-year plan for 2016 – 2020 is being developed, and the JAHR provides substantial analysis for the planning process. The 2015 JAHR report has the following tasks: (i) support development of the 2016 – 2020 health sector plan and (ii) support development of the policies to support Strengthening primary health care at the Grassroots towards Universal Health Coverage for the future.

PART ONE: Implementation of the plan for the protection, care and promotion of the people’s health in the period 2011 – 2015:

Chapter I: Socio-economic situation, health status and determinants

Chapter II: Implementation of the Plan for the protection, care and promotion of the people’s health for the period 2011 – 2015.

Implementation status of the Plan for the protection, care and promotion of the people’s health 2011 – 2015, covering the following contents: (i) human resources for health; (ii) health financing; iii) pharmaceuticals and medical equipment; (iv) health service delivery, (v) health information systems; and (vi) health sector governance.

PART TWO: In-depth analysis of the topic “Strengthening primary health care at the grassroots towards universal health coverage” with the following contents:

Chapter III: The grassroots health network and PHC in Vietnam, providing an analysis of the current situation, challenges and priorities.

Chapter IV: Identification of grassroots health service delivery network including: the need for PHC-centered service delivery, identification of an appropriate framework and basic features of a PHC based service delivery model, organizational model for grassroots healthcare and conditions that need to be put in place for successful PHC-based health service delivery.

PART THREE of the report consists of a summary of priority issues and recommendations for the next 5 years.

Chapter V: Summarizes the priorities and makes recommendations for the Five-year plan 2016 – 2020.

Chapter VI: Makes recommendations on objectives and actions for strengthening PHC in the grassroots health network to inform future policymaking in this important area.

The Appendix to the report includes a summary table of monitoring and evaluation indicators covering various aspects of the health system over the period 2010 to 2014.

Implementation methods

The methodological approaches and general requirements for developing the JAHR 2015 report included the following:

- Consideration of the socio-economic context and specific attributes of the Vietnamese health system at its current stage of reform and development; assessment of performance,
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progress, difficulties and shortcomings in relation to the health system goals of equity and efficiency, and specifically to the tasks that have been set out in health sector plans and strategies; and proposals for appropriate solutions.

- Identification and application of appropriate theoretical frameworks for each health system building block and for the focal topic of the report covered in a specific year, to ensure scientific objectivity in terms of perspectives and approaches, in line with ongoing modernization.

- Careful attention to discussions with government officials and experts in Ministry of Health departments and administrations, in order to clarify where attention needs to be focused to ensure progress in implementing five-year plan tasks that have been assigned to each unit. Exchange of information and timely dissemination of draft reports to the Department of Planning and Finance team developing the five-year health sector plan for the period 2016 – 2020.

Specific methods used to develop the report include the following: (i) compiling and synthesizing available references, including policy documents, legislation, research studies, and surveys; and (ii) gathering and responding to feedback from stakeholders, particularly experts and officials from the health sector, other ministries and agencies and international and foreign organizations.

Compiling and synthesizing available references includes documents of the Communist Party, National Assembly, Government, Ministry of Health and other ministries; research studies and surveys; reports of ministries and sectoral agencies; specialized reviews; and materials from international and foreign agencies. The coordinators support national experts by searching for and providing relevant references and statistical data to supplement their existing information sources.

Gathering and responding to feedback from stakeholders was implemented as follows:

- Organization of roundtable discussions for brainstorming with experts (mainly domestic experts), and three workshops with the HPG.

- Posting draft chapters on the JAHR website (www.JAHR.org.vn) to get feedback from domestic and international experts.

- Requesting multiple rounds of comments on draft chapters from departments, administrations and relevant units of the Ministry of Health and other related ministries and sectors.

Organization of implementation

Similar to previous years, the JAHR 2015 was developed under the coordination and leadership of the Ministry of Health and the HPG. The organizational structure for running the report compilation process included the following:

Coordinators, consisting of representatives of the Ministry of Health, one international coordinator, one national coordinator, and several support staff, who have the responsibility to resolve day-to-day issues of management and administration; organize workshops; compile
feedback gathered from various sources; ensure that the process of writing the report has the participation of many stakeholders; edit; and finalize the report.

National experts, consist of national experts with knowledge and experience related to various components of the health system, who are tasked with drafting chapters of the report, gathering feedback from stakeholders and finalizing their chapters by taking all comments and feedback into account to the greatest extent possible.
Chapter I: Socio-economic situation, health status and determinants

Chapter I provides an overview and update on information since the 2014 Joint Annual Health Review (JAHR) based on a review of available references to highlight the situation and trends in the current socio-economic situation affecting the health system and regarding health status and determinants. In addition, the Chapter identifies priority issues requiring a health sector response in the upcoming period. On that foundation the Chapter develops and proposes an orientation on planning, setting objectives and finding solutions to health system priorities for the five-year health plan 2016 – 2020.

1. Socio-economic context

This section thoroughly analyzes the relationship between the socio-economy and the health sector and effects of the socio-economy on the health sector.

1.1. Strengths

1.1.1. Stable macroeconomy, controlled inflation and reasonable economic growth create conditions to ensure social protection

In the past five years, consistent measures for managing the socio-economy have proven effective, stabilizing the national macroeconomic situation, maintaining reasonable economic growth rates, controlling inflation and guaranteeing major balances in the economy.

Real GDP growth rates have fluctuated around an average of 5.82% per year, from a high of 6.24% in 2011 down to 5.25% in 2012, then trending upwards again to 5.42% and 5.98% in 2013 and 2014 and a forecast of 6.68% in 2015, an average annual growth of 5.9%. GDP per capita has increased from 1271 USD in 2010 to an estimated 2200 USD in 2015 [1,2]. These economic outcomes mean that Vietnam has officially become a middle income country. In the next few years, the country’s macroeconomic situation is expected to become more stable. The World Bank forecasts that economic growth rates will increase to 6% in 2015, 6.2% in 2016 and 6.5% in 2017 [3]. Stable economic growth will permit Vietnam to strengthen investments in health. Per capita health spending in 2012 reached 102 USD, an increase of 26% compared to 2010, and this is forecast to continue growing in the next few years.

Consumer price inflation fell sharply from 18.1% in 2011 to an estimate of 2.05% in 2015 [2]. Interest rates have fallen, in 2015 they were at 40% of the level in 2011 [1]. The reduction in interest rates together with preferential incentives has facilitated hospital investments in infrastructure and equipment, particularly at financially autonomous hospitals.

Despite economic difficulties, the Government has continued to prioritize resource allocations to implement social welfare policies for remote and isolated regions and ethnic minority people. Programs and policies for sustainable poverty reduction and support to the near poor have been actively implemented and achieved important results. The poverty rate fell from 14.2% in 2010 to a predicted rate of about 7 to 7.2% in 2015 [2], and in the poorest districts, the poverty rate decreased about 5% per year on average [4].

1 The term district is used in this report to denominate urban and rural districts and provincial towns (thị xã).
It is estimated that over the past 5 years, Vietnam has created jobs for 7.8 million people. The wage policy has gradually been reformed to follow market principles and international integration. Consequently, government employees, including health workers have seen increases in salaries and salary supplements, although these increases are still not yet commensurate with the long duration of training or the hazards and hardships characteristic of health sector occupations.

1.1.2. Globalization, international integration and opportunities offered by free trade agreements

In recent years, Vietnam has strengthened both breadth and depth of international relations. It has actively and purposefully participated in and strengthened its effectiveness in international and regional mechanisms and forums while deepening economic integration. It is expected that trends in trade ties and trade freedom will continue to play a predominant role, despite latent trade disputes and conflicts, such as technical trade barriers that may still be applied in bilateral trade relations.

Currently 50 countries officially recognize that Vietnam has a market economy. Vietnam has diplomatic and trade relations with over 170 nations and is participating in 8 regional and bilateral free trade agreements, while actively negotiating conditions for an additional 6 free trade agreements with various regions and nations. Particularly important ones are the formation of the ASEAN Community 2015, participation in the Trans-Pacific Partnership (signed in October 2015 but still requiring ratification by participant countries), free trade agreements with the European Union (EVFTA) and other major partners, which will facilitate new development opportunities in the upcoming period.

Participation in free trade agreements will have a positive effect on economic growth by aiding Vietnam to strengthen its economy, improve competitiveness, reform state management systems, such as reducing bureaucracy and subsidization, improve administrative order and reform institutions towards greater freedom while still ensuring national security. Participation in free trade agreements will help in deepening reforms of the national economy by setting up and refining market economy institutions, creating a convenient business environment for all economic sectors, improving macroeconomic management, implementing prudent and sustainable economic development policies and more effectively managing social problems, including those in the health sector [5]. Vietnamese goods and labor in general, and particularly in the health sector, will have more opportunities to access world markets. Integration and opening of markets for healthcare services also help the people to have more opportunities to choose high quality medical services even within Vietnam, to satisfy the growing demand of the more affluent part of the population.

1.1.3. Industrialization and urbanization are contributing to economic development and improving lives of the people

Vietnam is striving to become a basically modern industrialized country with the target of 50% of the population living in urban areas. Development of social infrastructure, particularly

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2 Government Resolution No. 01/NQ-CP dated 3 January 2012 on main solutions to guide implementation of the socio-economic development plan and state budget for 2012, including measures appropriate with the current situation.
in rural areas, also contributes to improving people’s lives and their access to medical services, contributing to reductions in geographic inequality in health care.

1.1.4. Selected socio-economic development policies with effects on the orientation and support for health system development

The direction and policies of the Party, National Assembly and Government increasingly assert the important role of health care for the people on implementation of progress and social equity, improvement in quality of life of the people, responding to needs of industrialization, modernization of the nation. Many Party documents have stated that investment in health is direct investment in sustainable development.

The legal system related to healthcare is increasingly being refined; many laws, Government decrees and Prime Ministerial decisions, Ministerial level guiding circulars have been issued, creating a clear, transparent legal basis for the process of building and developing the health system.

Hunger eradication and poverty reduction policies, the National Target Program on Building a New Countryside have created conditions for implementing equity in health care and health development in rural, remote and isolated areas.

Refinements to the socialist-oriented market economy mechanism may create the impetus for reforms in management and improved performance of public healthcare service providers and at the same time facilitate development of the private health sector.

Mobilization of resources for the investment and development of socio-economic infrastructure

Planning and construction of infrastructure development projects in the areas of transportation, power, irrigation and water supply have actively been deployed with a long term vision and goals. Investment and development of the infrastructure system is oriented towards comprehensiveness, compatibility and modernization, with many key projects being implemented and completed, including in the health sector. Of particular notice, in 2014 the Prime Minister approved the investment for new construction of five central and referral hospitals in HCMC, oriented towards modern high technology on par with advanced countries in the region (Decision No. 125/QD-TTg).

Public investment reforms are being put in place in order to diversify forms of investment such as build operate transfer (BOT) or public private partnership (PPP), and attract more non-public capital for infrastructure development. Infrastructure in the education, health, culture, sports and tourism sectors has experienced strong development under this policy [6].

Administrative and institutional reforms continue to be strengthened by streamlining structure and organization, clarifying functions and duties and simplifying administrative procedures. The MOH has been implementing administrative reform consistent with the structural, organizational and institutional system from central to local levels, promoting applications of information technology and online public services at the highest level in the mandated field.
Development of highly qualified human resources in technical and scientific fields

The scale of education is expanding. Social mobilization in educational activities is being promoted, even in the health sciences fields. Quantity and quality of human resources have both improved. The potential of technology and science has been enhanced. Modern scientific and technological achievements in medical fields like cell technology, stem cells, microbiology, organ transplantation, robotic laparoscopic surgery... are increasingly and widely applied.

Economic restructuring linked with the development model

Restructuring of investment with a focus on public investment: To implement breakthrough solutions in public investment under Prime Ministerial Directive No. 1792/CT-TTg (2011), the health sector has revised the investment fund allocation mechanism towards transparency, balancing investment funds under the medium-term expenditure plans, including funding from the state budget, government bonds and national target programs (NTPs). Funds have been consolidated to focus on key and urgent projects in order to rapidly complete them and put them into operation to promote efficiency. The state has prioritized allocation of funds for projects requiring completion in a given year, and for counterpart funds for ODA projects.

The situation of scattered and fragmented public investments that existed for many years is gradually being resolved. State management of investment has been consolidated with a focus on managing progress and quality of construction works, disbursement of investment funds, and settlement of debts for basic construction. The mechanisms for investment decentralization and enhancement of provincial and investor accountability are being improved. With the restructuring of investments, it is expected that projects investing in health facility development will become more focused and efficient.

Enterprise restructuring: Mechanisms and policies have been improved and a decree on division of responsibility and decentralization of authority, responsibility and obligations of state ownership of state enterprises and state capital invested in enterprises has been issued and implemented. The pace of equitization of enterprises under the administration of the MOH has been accelerated; by the end of June 2014, 100% of pharmaceutical companies under the General Pharmaceutical Corporation of Vietnam had been equitized. To implement the Prime Minister’s directive, the MOH developed a plan to restructure the vaccine manufacturing industry on the basis of reorganizing 3 vaccine manufacturing companies. The equitization of hospitals has also been discussed. However, in contrast to other types of businesses or enterprises, public hospitals are involved in the provision of public services (public goods) to the population. Moreover, it is considered that this is a welfare sector that requires state investment and management. Therefore, currently, the MOH has no plans for hospital equitization. Instead, application of appropriate enterprise management principles in public hospital management is being considered.

1.2. Difficulties and challenges

1.2.1. The macroeconomy still faces many challenges that effect social welfare and health sector investment

GDP growth has slowed compared to previous periods, negatively affecting the ability of both the public and private sectors to invest in the health sector. Real growth of total health expenditure in the period 2010 – 2012 was only 2.9% per year. This is lower than GDP growth
in the same period (6.7% in real terms) and a substantial decline compared to the growth in total health expenditure occurring in the period 1998 – 2008 (9.8%).

The state budget deficit remains high in a context of rapidly rising public debt, adversely affecting the ability to invest state budget in health care. It is forecast that the state budget deficit in 2015 will amount to 5% of GDP, which does not meet the 2015 target of the Financial Strategy to the year 2020 (Prime Ministerial Decision No. 450/QD-TTg (2012)) to reduce the state budget deficit to below 4.5% of GDP (including government bonds), with plans for further reductions in the period next 5-year period from 2016 – 2020. Public debt has been increasing rapidly. By the end of 2013, public debt was equivalent to 54.2% of GDP, government debt was 42.3% of GDP and external debt of the country was 37.3% of GDP. By the end of 2015, public debt is forecast to be equivalent to 61.3% of GDP; government debt at 48.9% of GDP and foreign debt at 41.5% of GDP [1].

Direct government debt repayment amounted to 14.2% of national budget revenue in 2014 (26.2% if one includes debt rollover and loan repayment to obtain further loans). Currently, funding from the state budget accounts for less than 50% of total health expenditure. Thus, while problems of controlling state budget deficits and paying public debts remain unresolved, the ability to increase investments in the state health sector will be hindered. State budget investments in development of infrastructure, particularly health infrastructure, will continue to be cut. In addition, these conditions mean that it will be difficult to increase state budget subsidies for health insurance premiums.

After 2017, Vietnam will graduate from the group of countries receiving World Bank International Development Association (IDA) loans, external assistance in the form of grants will gradually be cut, with a shift towards concessionary loans or foreign commercial loans for health sector projects. Thus, the health spending funded from grant funding and ODA is expected to drop rapidly in the coming period.

Regarding social welfare, although Vietnam’s poverty rate has fallen, the proportion of people living in poor or near poor households remains high, particularly among ethnic minority populations and residents of disadvantaged regions; the gap between rich and poor remains high.

1.2.2. Globalization and international integration create socio-economic challenges

Greater integration in the context of globalization will lead Vietnam’s economy to become more vulnerable to negative effects of downturns in global economy, such as the Eurozone crisis and the Greek debt crisis, while substantial drops in the price of oil and more recently the decision to devalue the Chinese Yuan, increase the risk of triggering a global currency war.

Along with the potential benefits, the signing of free trade agreements can also bring negative consequences and challenges to the development of Vietnam’s economy and social welfare. Many experts consider that Vietnam is paying too much attention to negotiating and signing treaties for integration yet it is slow in making internal reforms, leading to deeper integration than is prudent given the inadequate level of preparation and competitiveness of Vietnam’s enterprises and the economy [7]. Once these trade agreements come into effect, many tariffs will be cut, some even to zero percent, reducing state budget revenues from import tariffs. In the domestic market, integration creates conditions for goods and services of other countries to enter Vietnam, increasing competition, which may negatively affect market
share of domestically produced goods and services. This may even lead some less competitive
domestic enterprises to go bankrupt. Domestically produced goods and services will face more
competitive disadvantages when they must comply with regulations on environment, labor,
bureaucratic constraints, technical barriers, and requirements related to intellectual property
right protection. Guaranteeing compliance with regulations and overcoming these barriers will
create a large cost burden for the Government and domestic enterprise community. In addition,
many foreign direct investment enterprises are planning to reduce direct production to switch
to imports and distribution. This not only reduces the state budget revenues but also affects the
market structure for labor and employment. All of these factors, if no effective solutions are
devised, could negatively affect economic growth, social welfare and ability to invest in health.

Regarding exports, even though tariffs in other countries will be reduced, Vietnamese
goods and services continue to face many difficulties and competitive disadvantages while
participating in the global playing field. Difficulties and disadvantages result mainly from
the need to comply with high and strict standards on environment, labor, hygienic standards,
sourcing of products and other trade protection regulations [8]. If inadequate attention is paid
to investing in improving the institutional environment, improving competitiveness, ensuring
quality of growth, then Vietnam will lose its advantages in international integration.

In the health sector, integration, mutual recognition and permission to practice medicine
within the ASEAN community will create competitive pressure for health facilities within
Vietnam itself. These developments will also require Vietnam to put in place policies and
enforcement mechanisms to manage medical practice of foreign medical facilities and health
workers within Vietnam. At the same time, the risk of brain drain from Vietnam’s health sector
to other countries in the region will increase. Strengthening of intellectual property rights
protection in the field of pharmaceuticals will lead Vietnamese pharmaceutical companies to
face difficulties, particularly in the production of generic drugs, which may lead to increased
prices of medicines and medical services, negatively affecting the ability of the population to
access drugs and health services [9]. Opening public pharmaceutical procurement to the global
market requires strict compliance with international tendering procedures that don’t discriminate
based on the source of drugs. This will affect the ability to supply drugs to hospitals and make
it more difficult to promote the domestic pharmaceutical manufacturing industry.

Globalization will also increase the risk of the spread of epidemics, particularly emerging
diseases, and require that Vietnam continuously improve disease surveillance, and put in place
appropriate strategies for preparedness and response (see part 2 of this chapter for more details).

1.2.3. Effects of industrialization, urbanization and uncontrolled migration

Environmental pollution

In recent years, the prioritization of economic growth in a context of low environmental
awareness has led to neglect of the possible negative consequences on environmental protection.
The disconnect between environmental protection and socio-economic development is common
in many sectors and levels, leading to widespread and increasingly serious environmental
pollution. Causes of environmental pollution are mainly production activities of factories in
industrial zones, handicraft production activities, operation of motor vehicles and household
waste in large urban areas. Environmental pollution has created pressure on the health sector
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through increased cases of poisoning, occupational disease and COPD. In addition, Vietnam is also one of the countries that is most heavily affected by climate change [10,11], which creates existential risks related to food safety, hunger eradication and poverty reduction, and through these factors can also affect health. (See part 2 of this chapter for more details).

Industrialization and challenges for the health system

Besides problems of pollution, industrialization also creates a burden for the health system in terms of ensuring provision of healthcare services for millions of workers concentrated in industrial and processing zones. At the same time, income of workers in the informal sector is sometimes so low it cannot yet ensure minimum living conditions and negatively affects people’s ability to participate and contribute to health insurance.

Urbanization and migration

Urbanization without an overall master plan, and lack of uniformity in urban development leads to rapid development of urban areas but a lack of accompanying medical infrastructure, increase pressure and burden for healthcare services for some areas with large population concentrations. Spontaneous migration, lack of management over migration has led to many complicated social problems in terms of housing, employment, clean water and environmental sanitation. Migration into HCMC is a result of urban and rural income disparities and the diverse cultural and economic development engine of this area. Poverty rates in urban areas are increasing, particularly among new migrants. Improvements in household economic situation have resulted mainly from opportunities of economic growth, rather than the minor effects of poverty reduction programs [12] (See more details in section 2 of this chapter).

1.2.4. Commercialization, privatization and social mobilization in healthcare

The market economy context, with many policies affecting different aspects of the health sector and increasing disparities in living standards creates many challenges to developing a health system oriented towards equity, efficiency and quality. If it is not effectively regulated, the health system will be fragmented; imbalanced between development of the grassroots network and PHC so all people can benefit from basic health services of good quality and development of specialist, high-tech medicine; this would prevent the system from providing comprehensive, continuous, integrated care and achieving equity in a system where public spending on health remains low.

In recent years, social mobilization has been strongly promoted in the health sector, along with commercialization and privatization, which are beginning to occur with the equitization of the Central Transportation Sector Hospital. However, medical services are a special type of good, involving both asymmetric information and a humanitarian nature, so it is not appropriate to apply perfect competition and market principles. Medical service prices in the public sector should be determined based on a full cost accounting, but service prices should not be set higher than the costs of providing services. In addition, medical service price adjustments should be made in line with improvements in service quality and expansion of health insurance coverage to ensure that the people can access medical services of good quality, commensurate with prices while ensuring financial protection through health insurance. Medical service providers can operate in a business-like manner according to the autonomy mechanism in order to improve
efficiency, but should not be commercialized and operate on a for-profit basis. The market mechanism can be applied in some areas of medical services, but medical service prices, quality and number of services must be tightly controlled by the State.

1.2.5. Other issues

The aging of the population is an inevitable fact of development that leads to many challenges for the health system in terms of ensuring health care of a growing share of the population in older ages with high health care needs due to high burden of disease and high treatment costs (See Part 2 of this Chapter for more details).

The development of transport infrastructure has not been accompanied by consistent and effective solutions to prevent traffic accidents, which accounting for a substantial share of disease and mortality burden throughout the country (See part 2 of this Chapter for more details).

1.3. Conclusions

In summary, Vietnam’s economy has overcome many difficulties and challenges as well as achieved encouraging results. The country’s macroeconomic situation has gradually been stabilized, inflation is under control, growth has been maintained at a reasonable level and is gradually being strengthened. The quality of growth in some areas has been substantially improved, and the competitiveness of the economy has been raised. Strategic breakthroughs and economic restructuring associated with the growth model have achieved initial promising results. Social protection has been ensured and social welfare has improved. Diplomatic relations and international integration have been promoted and achieved positive results.

However, the macroeconomy is still unstable, recovery has been slow, growth is lower than in previous periods, and some targets have not been achieved. Underlying risks in the banking system remain. Competitiveness of the economy remains low; the attractiveness of the domestic business environment is lower than that of some other countries in the region. The socialist-oriented market economy institutions have not really become a driving force for economic and social development. The gap of economic development level as compared to many countries in the region is narrowing, but only slowly. For the health sector in particular, the tackling of the overcrowding problem in central and tertiary hospitals is still slow, the quality of medical services has not fully met people’s expectations; the financial autonomy mechanism in public health facilities and health socialization reveals limitations; the implementation of the roadmap towards full cost recovery in pricing of medical services has also been slow. In addition, the State needs to create solutions to actively respond to negative effects of globalization and international integration, industrialization and urbanization, tightly regulate social mobilization, commercialization and privatization in the health sector. The health sector must undertake comprehensive reforms of the organization of medical service delivery to respond to the new situation.

2. Health status and determinants

This section synthesizes information and provides an update on the current situation and trends in health status and determinants in recent years. Relying on that analysis, health
priorities are determined for the coming period to serve as a basis for policy orientation to solve these priorities in the 5-year health plan of 2016 – 2020.

2.1. Major health indicators

Achievements

Health status of the Vietnamese people has substantially improved in recent years, as evidenced by trends in basic health indicators such as average life expectancy, maternal and child mortality and child malnutrition.

Average life expectancy

In the past five years, average life expectancy of the Vietnamese people has improved, rising annually by about one tenth of a year, from 72.9 years in 2010 to 73.3 years in 2015 (70.7 in males and 76.1 in females) (Figure 1) [2,13]. According to the World Health Organization (WHO) data comparable across countries, from 1990 to 2015, life expectancy of the Vietnamese people increased 6 years. Life expectancy of Vietnamese people in 2012 was 76 years which was higher than that of most countries in the Southeast Asia region, except for Singapore (83 years) and Brunei (77 years) and was approximately the same as the life expectancy of some higher income countries in the world like Oman and Slovakia [14].

Figure 1: Average life expectancy, 2010 – 2015

The increase in average life expectancy reflects improvements in the general health of the people, however, it also creates more pressure for the health system and society to respond to the growing health care needs of an aging population (see section on demographic health determinants).
Maternal mortality

Data from the 2009 Population and Housing Census showed that the maternal mortality ratio in Vietnam had fallen to 69/100,000 live births, a substantial decline compared to the 1990 ratio of 233/100,000 live births. However, since then there has been no other national maternal mortality study. According to a MOH report, the maternal mortality ratio in 2015 was estimated at about 58.3/100,000 births [17], while a recent estimate from the Maternal Mortality Estimation Inter-Agency Group puts Vietnam’s 2015 MMR at 54/100,000 live births. (Figure 2). However, the range of uncertainty from 41 to 74 does not allow us to conclude definitively that Vietnam has achieved the Millennium Development Goal (MDG) of reducing maternal mortality by 3/4 between 1990 and 2015.

Figure 2: Trends of maternal mortality reduction in Vietnam, 1990 – 2015


Infant and child mortality

The infant mortality rate (IMR) and under 5 child mortality rate (U5MR) reflect health status as well as the level of social development since they are sensitive to health determinants and closely linked with average life expectancy of the population. IMR reflects the quality and effectiveness of the maternal and child health care system, while U5MR reflects nutritional status, disease prevention and treatment for children. The IMR fell from 44.4 infant deaths per 1000 live births in 1990 to 15.3 in 2010 and 14.7 in 2015 [13]. The U5MR declined from 58.0 child deaths per 1000 live births in 1990 to 23.8 in 2010 and 22.1 in 2015 [13]. The declining trends in IMR and U5MR since 1990 are summarized in Figure 3.
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Figure 3: Trends of infant and under-five child mortality in Vietnam, 1990 – 2015

Source: General Statistics Office. Statistical Yearbook various years [16]

Malnutrition among children under age five

The underweight malnutrition rate of children under age 5 has continued its steady downward trend over the past 5 years, from 17.5% in 2010 to 14.1% in 2015, achieving the planned targets for 2015 (below 15%) and is expected to continue to decline in the coming years. The stunting malnutrition rate has also declined during this period, from 29.3% in 2010 to 24.2% in 2015 (Figure 4). This represents a reduction of more than 60% in the rate of underweight malnutrition in children as compared to 1990, reaching the MDG on child nutrition ahead of schedule.

Figure 4: Reduction in under-five child malnutrition, 2010 – 2015

Challenges

Disparities in basic health indicators between urban and rural areas, between regions and between various population groups have not declined much, and some have even increased in recent years (child malnutrition rates).

Table 1 and Figure 5 show substantial geographic differentials in some basic health indicators among regions and between urban and rural areas in 2014. Generally, the Southeast region and urban areas have the best outcomes while the Central Highlands, Northern midlands and mountains regions and rural areas have the worst. The life expectancy differential between regions with the best and worst levels is 6.4 years. The IMR in the region with the worst outcome is 2.9 times higher than in the region with the best outcome, while the differential for U5MR is 3.0 times and for child underweight malnutrition this differential is 2.7 times.

Table 1: Regional disparities in some general health indicators, 2014

<table>
<thead>
<tr>
<th>Ecological regions</th>
<th>Life expectancy</th>
<th>IMR</th>
<th>U5MR</th>
<th>Underweight malnutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red River Delta</td>
<td>74.5</td>
<td>11.8</td>
<td>17.7</td>
<td>10.2</td>
</tr>
<tr>
<td>Northern midlands and mountains region</td>
<td>70.7</td>
<td>22.4</td>
<td>33.9</td>
<td>19.8</td>
</tr>
<tr>
<td>North Central and Central coastal areas</td>
<td>72.6</td>
<td>16.6</td>
<td>24.9</td>
<td>17.0</td>
</tr>
<tr>
<td>Central Highlands</td>
<td>69.5</td>
<td>25.9</td>
<td>39.5</td>
<td>22.6</td>
</tr>
<tr>
<td>Southeast</td>
<td>75.9</td>
<td>8.8</td>
<td>13.1</td>
<td>8.4</td>
</tr>
<tr>
<td>Mekong River Delta</td>
<td>74.6</td>
<td>11.6</td>
<td>17.4</td>
<td>15.0</td>
</tr>
</tbody>
</table>


Figure 5: Regional disparities in basic health indicators, 2014

Similarly, disparities in general health indicators such as maternal and child mortality were also found among groups of different ethnicity and socio-economic conditions, with
little improvement over the past 5 years. Ethnic minorities in remote areas, members of poor households, people with low education levels still have 2 to 3 times higher risks of maternal and child mortality than residents of lowland areas and members of households with better economic conditions and higher education [20].

**The reduction in child mortality** has slowed considerably in recent years affecting progress towards achieving the MDG on child health. Figure 3 shows that between 2011 and 2015, the IMR declined at a rate of only 0.2 infant deaths per 1000 live births each year on average, while the decline in U5MR was only 0.3 deaths per 1000 live births each year. With this slow pace of reduction, Vietnam is unlikely to achieve the MDG for reduction in U5MR to 19.3 per 1000 live births by 2015. Greater efforts will be needed in the coming years, especially in the Five-year plan from 2016 to 2020, to achieve and sustain further reductions in child mortality. One of the greatest challenges is reducing child mortality in the perinatal and neonatal periods. It will be necessary to prioritize child mortality reductions in regions and populations with high mortality rates, such as the Central Highlands and the Northern midlands and mountains and among ethnic minority people, the poor and people with low education.

**Some health indicators indicate continued shortcomings in health system performance.** Although the overall life expectancy at birth reached a high level in 2014 (73.2 years), healthy average life expectancy (HALE) was substantially lower, at only 66.0 years. Average life expectancy in 2015 has still not achieved the 2015 target of the 5-year plan (74 years). While underweight malnutrition has dropped rapidly, stunting malnutrition in children remained high (24.9% in 2014). This has long term health consequences. In addition, the obesity rate in children under age five is growing rapidly, in 2010 the rate was 4.8%, six times higher than in 2000 [21].

**2.2. Morbidity and mortality**

**2.2.1. Changes in patterns of disease burden and mortality, with an increase in NCDs**

Statistical data and studies show a rapid change in the structure of broad causes of morbidity (communicable disease, neonatal, maternal and nutritional disorders; NCDs; and accidents and injuries) over the past 30 years, most notable being the rapid rise in the share due to NCDs. The rising NCD burden is occurring in a context where morbidity and mortality from communicable disease, maternal, neonatal and nutritional disorders remain high, causing a double burden of disease. In the coming years, the NCD burden of disease is expected to continue to rise as a share of overall disease burden and mortality. These changing patterns of morbidity and mortality require appropriate health system responses in terms of organization, functions, tasks and service availability.

The growing share of NCDs in total hospitalizations and deaths in health facilities has been observed since the 1970s. According to hospital statistics from 1976 to 2013, the proportion of hospitalizations due to communicable diseases fell from 55.5% to 25.3% while the share from NCDs increased from 42.7 to 63.5% and the share from accidents, poisoning and injuries rose to over 10% in the period from 1986 – 2006 and has remained about that level for a couple decades. Similar patterns are found for morbidity during the same period [22].

The increasing trend of NCDs is also confirmed in data evaluating burden of disease and mortality. Figure 6 shows that since 1990 NCDs surpassed communicable disease (including
also maternal, neonatal and nutrition disorders) to account for the largest proportion of the total disease burden measured in DALYs. The NCD share of disease burden rose from 45.5% in 1990 to 48.7% in 2000 to 60.1% in 2010 and 66.2% in 2012.

Figure 6: Trends in cause of disease burden measured in DALYs, 1990–2012

WHO global burden of disease estimates for 2012 show that NCDs accounted for the highest share of overall burden of disease in Vietnam, measured not only by DALYs but also by mortality rate in most age groups (Figure 7). In 2012, NCDs accounted for 72.9% of the estimated 520,000 deaths in the country. The age-standardized mortality rate from NCDs was 435/100,000 population, 4.5 times higher than the rate due to communicable diseases and 7.4 times higher than the rate due to accidents and injuries. NCDs also account for 59.7% of years of life lost (YLL) due to premature death [14].

Figure 7: Structure of disease burden by age group, 2012

Of the 20 most important causes of disease burden in 1990, only 9 were NCDs, however by 2010 that number had increased to 15, and all of the top 5 causes of disease burden were NCDs [23]. NCDs also accounted for the most common causes of deaths in the age groups 30 and above in 2012 (Figure 8).

**Figure 8: Structure of cause of death by age group, 2012**

![Graph showing the structure of cause of death by age group, 2012.](image)

Source: WHO Global burden of disease estimates [24].

**The increase of disease burden and mortality caused by NCDs**

Not only are NCDs increasing as a share of total disease burden and mortality, but in absolute terms, NCD mortality rates and DALYs are also increasing. In the period 2000 – 2012, the NCD mortality rate increased six times from 73.9 NCD deaths per 100 000 people in 2000 to 417.4 NCD deaths per 100 000 people in 2012. Total disease burden due to NCDs also increased from 13.5 million DALYs in 2000 to 16.9 million DALYs in 2012 [14]. Figure 9 shows the increasing trends of NCDs burden by age groups in 2000 and 2012.
Figure 9: Change in burden of disease by age group, 2000 to 2012

Four NCD groups-cardiovascular disease, cancer, chronic respiratory disease (i.e. COPD and asthma) and diabetes-account for nearly 61% of all deaths in Vietnam in 2012. It is estimated that 17% of people aged 30 to 70 years are at risk of dying from these 4 disease groups [25]. These four groups of diseases caused 33% of the total disease burden measured in DALYs.

In Vietnam, there are not yet any national studies adequately evaluating burden of disease caused by NCDs. The following section presents available information on morbidity, mortality and disease burden from a review of results of small-scale studies, estimates from various agencies and organizations and statistical data and routine reports of the national target health programs.

**Cardiovascular disease:** Cardiovascular diseases are the largest cause of NCD disease burden. Cardiovascular disease caused 33% of all deaths in 2012, 16.5% of years of life lost (YLL) and 7.3% of DALYs lost in 2010. Cardiovascular diseases causing the highest burden include hypertension, stroke, and myocardial infarction.

**Cancer:** In 2012 Vietnam is estimated to have over 125,000 new cancer cases, projected to increase to 190,000 new cases by 2020. The most common types of cancer in men are liver, lung, stomach and colorectal. Among women the most common are breast, lung, liver, and cervical cancers. Detection and treatment of cancers in Vietnam often occur at later stages leading to costlier treatment and limited possibility of prolonging life or improving quality of life.

**Chronic pulmonary disease:** COPD incidence is estimated at 4.2% and asthma incidence at 3.9%. Incidence of these diseases has been increasing due to the impacts of air pollution caused by household, production and transportation activities.

**Diabetes:** The incidence of diabetes and glucose intolerance disorders in people aged from 30 to 69 years throughout the country increased faster than expected, nearly doubling over the 10 years from 2002 to 2012. Results of a survey by the National Endocrinology Hospital with a national sample of over 11,000 people aged 30 – 69 found that 5.42% had diabetes [26].
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It is projected that each year there will be about 88,000 new cases of diabetes, with projections of total diabetes cases reaching 3.42 million by 2030.

**Mental illness:** Survey data from 2000 indicated that 14.9% of the population suffers from the 10 most common mental disorders, including alcohol use disorders (5.5%), depression (2.8%) and anxiety (2.6%). Nearly 3 million Vietnamese people suffer from serious mental disorders, including schizophrenia, depression, bipolar disorders and other serious symptoms of anxiety and depression.

**Burden caused by intermediate NCD risk factors:** Hypertension, obesity, and high blood cholesterol have been rising, consequently increasing the NCD burden. Results from the survey on monitoring NCD risk factors in adults aged 25 to 64 years in 2009 and 2010 showed that 30.1% of those surveyed had hyperlipidemia; 19.2% had hypertension; and 12.1% were overweight or obese. These conditions will continue to increase in the future as a cumulative consequence of many behavioral risk factors such as smoking, alcohol consumption, improper diet and physical inactivity [27].

**Accident and injuries:** are also leading causes of death and disability in Vietnam. It is estimated that injuries caused 12.8% of all deaths in 2010, twice the number of deaths caused by communicable disease (5.6%). According to the Vietnam National Injury Survey (VNIS) in 2010, each year Vietnam has more than 35,000 deaths due to accidents and injuries, predominantly from road traffic accidents, falls and drownings [28]. Among children aged 5 to 14 years, drowning is considered the leading cause of death, with an average of 20 child drowning deaths per day [29].

**Impacts of the growing burden of NCDs in Vietnam**

The increase of NCDs in the disease burden is also causing financial burdens for patients and their families, but also creating a burden on the health system and society. Detailed analysis of the impact of the growing NCD burden was performed in the JAHR 2014. Increased attention should be paid to the growing NCD burden in Vietnam for the following reasons:

- **NCDs are not only increasing among urban populations with better economic conditions, but also among the poor in rural areas.** In rural areas, the second stage of epidemiological transition is occurring, with reduced communicable disease, improved nutritional conditions, but untreated hypertension leading to conditions like stroke and heart disease. In urban areas, the epidemiological transition has reached the third stage where coronary problems are increasing due to atherosclerotic conditions [30].

- **People’s awareness of NCDs is limited,** the proportion of NCD patients who remain undiagnosed and untreated is still high. The proportion of diabetes cases still undiagnosed in the age group 30 – 69 in the community is 63.6% [26]. Some 25.1% of adults aged 25 – 64 years have high blood pressure, less than 48% of them know that they have hypertension, only 29.6% are treated and only 10.7% have achieved target blood pressure [31]. Mortality from stroke in hospitals is very high, mainly due to patients not knowing that they have hypertension, or inappropriate treatment for their condition [32].

NCDs cause financial burden for poor households. The odds of catastrophic spending are 3.2 times higher for households who have a member with NCD compared to households without, while the odds of being impoverished due to health spending are 2.3 times higher [33].
The increasing burden of NCDs not only causes a major economic burden for society, but also creates a heavy burden on health systems to deliver comprehensive and long term outpatient services. This problem requires health systems, especially those at the grassroots level, to implement corresponding reforms in response to these changes in the burden of disease.

State investment for the prevention and control of NCDs is not commensurate with the burden of disease. NCD prevention and control activities have only been incorporated into the health NTP starting with cancer in 2006 and other conditions (hypertension, diabetes, COPD) since 2011. The Strategy for the Protection, Care and Promotion of the People’s Health for the period 2011 – 2020 and the goals of the 5-year health sector plan 2011 – 2015 remain focused mainly on infectious diseases. The first strategy on NCD prevention and control was just approved by the Prime Minister in March 2015.

Capacity of the health system, especially the grassroots health system, for the management of NCDs and risk factors and delivery of NCD care and treatment services is limited. These issues were thoroughly analyzed in JAHR 2014.

2.2.2. Communicable diseases continue to challenge the health system due to continued high burden and trends that complicate their control

Although the share of disease burden and mortality caused by infectious disease, maternal and neonatal conditions and nutritional disorders has declined in recent years, the number of deaths and disease burden caused by these conditions remain high. In 2012, this group of conditions caused 86 100 deaths (compared with 97 700 deaths in 2000) and 5.6 million DALYs (compared with 6.7 million in 2000). In addition, infectious diseases are becoming harder to control and causing greater economic burden than before due to climate change, environmental pollution, higher treatment costs because of disease resistance to some medications and chemicals, and new or existing diseases with no effective treatment or prevention method. The following factors are likely to lead to increases in disease burden due to communicable diseases in the near future.

- Increased drug resistance for diseases such as TB, malaria and HIV.
- Climate change and ecological system changes due to urbanization and industrialization (for malaria, dengue fever).
- Increase in disease prevalence in the community (dengue fever).
- Reduced compliance of the population with preventive measures like vaccination.
- The appearance of newly emerging diseases for which no measures are available yet for prevention and treatment, with high risk of fatality and complicated trends.

Because of these problems, infectious diseases continue to be a matter of concern and a challenge for health systems in the coming years. The following section will summarize the burden of morbidity and mortality of major infectious diseases in Vietnam.

*Tuberculosis*

Mortality due to TB has declined remarkably in recent years. The estimated annual TB incidence rate has been decreasing, while the number of TB notifications remains about
constant, leading to an increase in the case detection rate to 78% in 2014 (Figure 10). According to WHO estimates, Vietnam has prevalence of about 180,000 cases of TB each year (198 per 100,000 population)[34].

Nevertheless, the burden of tuberculosis in Vietnam is still very high. Globally, Vietnam is ranked 12th in terms of TB burden and 27th in terms of drug-resistant TB burden, especially multi-drug resistant TB (MDR-TB). The drug-resistant share of TB cases is likely to increase, mainly in relapse cases. This situation poses major challenges to the possibility of achieving and maintaining the MDG for TB control.

**Figure 10: Trends of estimated TB incidence and detection, 1990 – 2014**

Source: Global TB data 2015 [34].

**HIV/AIDS**

Since the peak of the HIV/AIDS epidemic in 2007, the number of newly detected HIV cases and AIDS related deaths have been declining every year. From 2007 to the end of 2014, the number of new HIV cases had decreased by about 60% and number of AIDS related deaths had declined by over 50% (Figure 11). Vietnam has been able to meet its goal of maintaining HIV prevalence below 0.3% in the general population. Although there have been significant changes in recent years, Vietnam’s HIV epidemic remains concentrated among high-risk populations such as people who inject drugs, female sex workers and men who have sex with men. Recently, sexual partners of people living with HIV are also being considered as a new high-risk population to be included in preventive interventions. The female share of newly reported HIV infections has been increasing, with the main source of infection being their HIV positive sexual partners.
However, the reduction in the size of the epidemic is not sufficient or sustainable; the number of newly diagnosed HIV infections continues to rise in some regions, particularly in mountainous, remote and outlying areas. The majority of people with HIV infections are in working ages (90% aged from 20 – 60 years) and they are often the main breadwinner of the family. HIV infection impairs their health and reduces their ability to work, leading to reduction in income for the family and society [35]. Nearly half of the people in need cannot access ART, and about one third of those currently on ART began their treatment at late stages, leading to high mortality, morbidity and cost of treatment as well as contributing to continued transmission of HIV in the community. Treatment for patients with co-morbidity, such as hepatitis C, is still limited due to low availability of effective treatment and high costs of drugs. Finally, the national HIV program is facing sustainability issues due to a substantial decline in external donor funding commitments especially beyond 2017.

**Malaria**

Malaria incidence and mortality in Vietnam have dropped remarkably in recent years. Incidence fell from 280 cases per 100 000 people in 1991 to 62 in 2010 and 30 in 2014 (Figure 12). The number of malaria deaths has also dropped from 4646 cases in 1991 to 21 in 2010 and 6 in 2014 [36]. Most malaria cases and malaria-related deaths occur in the North Central and Central coastal areas and in the Central Highlands. In 2014, 16 provinces reported no cases of malaria and 33 provinces have nearly eliminated malaria. However, up to 73.7% of the population is still living in at risk areas, among which 6.8% are in high risk areas [37]. Vietnam must continue its efforts to implement the commitment to eliminate malaria by 2030.

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3 The term province is used in this report to denominate provinces and municipalities.
Chapter I: Socio-economic situation, health status and determinants

The main challenge for malaria prevention and control in the coming period is the growing risk of drug resistant parasites and chemical resistant mosquitoes. The first case of artemisinin resistant malaria in Vietnam was detected in 2010, and the number of cases is increasing in Vietnam and three other countries in the Mekong river sub-region including Thailand, Burma and Cambodia. In addition, uncontrolled migration in at risk areas also makes it difficult to prevent and control malaria. Meanwhile, funding for the NTP on malaria control has been cut and maintenance of the program activities in the coming period remains uncertain.

Figure 12: Morbidity, admissions and deaths caused by malaria, 2010 – 2014

Source: MOH Decision No. 4717/QD-BYT and 2014 report of the National Institute of Malaria, Parasitology and Entomology

Vaccine preventable infectious diseases

Incidence and mortality of diseases that can be prevented by vaccines in the expanded program on immunization (EPI) have fallen remarkably in recent years. Vietnam continues to maintain achievements of polio eradication, neonatal tetanus elimination and measles control. Incidence and mortality due to diseases such as diphtheria, pertussis and tetanus continue to decrease over time.

The challenge for vaccine preventable diseases is incomplete compliance with the EPI, leaving parts of the population vulnerable to these diseases. The immunization coverage targets have not been achieved for poor children, children living in remote, outlying areas, and children in households of spontaneous migrants. In addition, complications and adverse events following immunization in the past few years has led to a reduction in the proportion of children immunized for some EPI vaccines. The reliance of some households on paid vaccination services, where vaccines are not always readily available, has resulted in late vaccine administration and reduction in effectiveness of disease prevention. The growing number of children who have not received vaccinations, have not been fully vaccinated or have been vaccinated late leads to incomplete immunity, a risk factor for future disease outbreaks. The reduction in budget allocations to the EPI program in 2014 may also negatively affect the ability to maintain control over vaccine preventable diseases in the coming period.
**Other communicable diseases**

Vietnam has achieved remarkable results in the control and prevention of communicable diseases such as dengue fever, hand, foot and mouth disease, and acute diarrhea. However, the risk of outbreaks of these communicable diseases persists due to the impact of migration, travel, environment and climate change and unsanitary habits.

Dengue fever outbreaks still occur every year with the peak period from June to December. Not much success has been achieved in controlling the incidence of dengue fever, which fluctuates substantially from year to year, from 147 cases per 100 000 people in 2010 to 78 in 2011, back up to 97 in 2012, then 75 in 2013 and 32 in 2014. In 2015, the incidence of dengue fever increased 11.5% compared to the average incidence in the period 2010 – 2014. However, the case fatality rate due to dengue fever since 2005 has been controlled at below 1 death per 1000 cases. Over 85% of infected cases and 90% of deaths due to dengue fever are in the Southern provinces (accounting for 76.9% of infections and 83.3% of deaths from 2001 to 2011). About 90% of deaths caused by dengue fever are under age 15.

Hand, foot and mouth disease occurs throughout the year in most provinces, but tends to be more common from March to May and from September to December. It is mainly concentrated in the southern provinces, accounting for 60% of all infections. In 2011 there were 112 370 cases and 169 deaths due to hand, foot and mouth disease reported nationally [38]. The peak of the hand, foot and mouth disease outbreak was in 2012, with incidence of 177.4 per 100 000. Although the incidence and mortality from hand, foot and mouth disease have fallen in recent years, the potential for further outbreaks is still present.

**Emerging diseases**

During the past 10 years, there have been many emerging or reemerging diseases, which are mainly zoonoses (animal-to-human transmitted diseases). Vietnam has been identified as a hot spot for emerging infectious diseases, with potential for pandemic outbreak.

In 2003, Vietnam was one of 37 countries affected by the SARS pandemic with 6 deaths. Also in 2013, Vietnam was the first country to record highly pathogenic avian influenza virus in poultry and was one of the countries most severely affected by A(H5N1) avian influenza in humans with a case fatality rate of nearly 50%.

In 2009, the A(H1N1) influenza (swine flu) also struck Vietnam with nearly 12 000 infections and 58 deaths by the end of 2010. In 2012, the disease returned causing 2 infections and 2 deaths [39].

Other strains of influenza virus, such as A(H5N6), A(H7N9) have been detected in several countries around the world. Other emerging diseases, such as West Nile fever, MERS and Ebola virus disease have not yet been recorded in Vietnam, but are still considered as potential risks in the current context of globalization. The risk of emerging disease outbreaks requires Vietnam’s health system to be prepared to respond to disease outbreaks. Unlike with endemic disease or previously known epidemic diseases, understanding of the transmission mechanism and methods for prevention and treatment for emerging diseases is often unclear, so the main method for control is prevention from a distance, that is when the disease has not yet appeared in the country. The control of zoonotic diseases requires multi-sectoral collaboration,
particularly a strong partnership between human and animal health sectors in surveillance systems and response [39].

2.3. Determinants of health

2.3.1. Demographic factors

*Population size and growth*

In recent years, the annual population growth rate has exceeded 1%. Goals set for reduction in fertility and population growth have not been achieved as set out in the 5-year plan of 2011 – 2015. Population in 2015 reached 91.7 million people [2]. With the current growth rate, the population of the country may reach over 95 million by 2019 [40]. The large population size and high population density, especially in major cities and the delta regions, are creating more pressure for health systems to ensure health services for people in general, and for mothers and children in particular.

*Population age structure*

Since 2007, Vietnam has entered the period of golden population structure which is a great advantage for the country’s economic development. The overall dependency ratio in Vietnam has fallen rapidly over time, from 78.2% in 1989 to 63.6% in 1999 and 44.0% in 2014. This reduction is attributed mainly to population and family planning activities resulting in the decrease of birth rate and the consequent rapid drop in child dependency ratio.

However, with adolescents and youth accounting for a third of the population, the high need for healthy lifestyle promotion and reproductive health care services delivery create significant challenges for the health sector and the whole society. Women and children account for 33.8% of the population, including 1.7 million infants, 5.9 million children aged from 1 to 4, and 24.1 million women in reproductive age, who have high health care needs. The proportion of people who are widowed, divorced or separated has increased with the development of modern society, from 7.9% in 2009 to 8.5% in 2014 with a marked difference between the sexes (3.3% in men compared with 13.4% in women) [13].

*Population aging*

Having recently passed through a golden population stage, Vietnam is beginning to face the challenge of population aging. Vietnam is among the 10 countries with the most rapid population aging rates. The share of the population aged 60 years and older has increased steadily from 7.1% in 1989 to 8.7% in 2009 and 10.2% in 2014. The population aging index has increased rapidly from 18.2% in 1989 to 44.6% in 2014 and will continue to rise in the coming period. Vietnam has officially entered the population aging stage since 2011 which is much earlier than previously forecast (in 2017). With a faster pace of population aging than other countries in the region, it will take Vietnam only about 20 years to move from the population aging stage to an aged population structure, which is the fastest in the world.

The higher the elderly share of the population, the heavier the burden of disease and mortality, especially due to NCDs. This creates an increasing burden on families, society and the health system in delivering long-term and costly elderly care services [41].
Imbalance in sex ratio at birth

The imbalance in Vietnam’s sex ratio at birth is alarming and continues to rise. In 2013, the sex ratio at birth was 113.8 boys/100 girls, which was higher than the target ceiling for 2015 set out in the 5-year health plan 2011 – 2015. Results from the Inter-censal population and housing survey 1 April 2014 indicate that the sex ratio at birth has fallen slightly to 112.2 boys per 100 girls, and estimates for 2015 indicate 112.8 boys per 100 girls, still substantially higher than in 2009 (110.5 boys per 100 girls). In particular, the sex ratio at birth in rural areas (113.1 boys per 100 girls) was considerably higher than that in urban areas (110.1 boys per 100 girls). The preference and pressure to bear a male child, along with the easy access to modern services facilitating fetal sex selection among rural women in recent years are the main reasons leading to this disparity [13].

The imbalance in sex ratio at birth may not cause immediate major impacts on health but can cause long-term consequences on society. With implementation of effective regulatory measures, the sex ratio at birth in Vietnam is expected to peak at 115 boys per 100 girls by 2020, and then return to the biological norm by 2030 [40].

Migration

The high number of migrants each year is creating pressure on urbanization and industrialization processes, and increasing the burden on health service delivery. In addition, spontaneous migration also increases the risk of the spread of disease and creates important challenges for controlling disease and social vices.

Although the two main migration trends in Vietnam are inter-regional and rural to urban, a 2014 survey does show changes in migration compared to just 5 years ago. In three regions, the number of out-migrants is greater than the number of in-migrants, namely the Northern midlands and mountains areas, the North Central and Central coastal areas and the Mekong River Delta. The Southeast region continues to have the highest rate of in-migration due to the concentration of large industrial parks and economic zones in major provinces/cities such as HCMC, Binh Duong and Dong Nai. Since 2014, the Red River Delta has also turned into a magnet for in-migrants from other regions. Among inter-provincial migrants, the flow from rural to urban areas accounts for the highest share (44.2%), a substantial increase compared to the period 2004 – 2009 (30.5%). At the same time, urban to urban migration has fallen from 34.6% to 14.9%. Of the non-resident migration, migration flows from rural to urban areas accounted for the highest proportion (44.2%) and increased significantly as compared to the period 2004 – 2009 (30.5%); whereas urban-to-urban migration decreased from 34.6% to 14.9% respectively, while rural residents moving from other provinces accounted for only 3.38% of the urban population [13].

2.3.2. Socio-economic factors

Labor and employment

The unemployment rate is an important economic indicator, but can also have important effects on health status and health care. For individuals, living in a society with insufficient jobs, fear of job loss or unemployment can negatively affect health of the individual as well as the family. Unemployment leads to financial crisis, debt, declining material conditions,
malnutrition and reduced immunity making people susceptible to disease and mental illness. Tackling unemployment and creating stable jobs for individuals is a concern common to all modern societies.

Vietnam’s unemployment rate among people aged 15 and older was 2.8% in 2010; 2.2% in 2011; 1.96% in 2012; 2.2% in 2013 and 2.31% in 2015. The unemployment rate among youths is usually higher than the general unemployment rate among people in working ages (6.85% in 2015). In addition, 1.85% of people in working ages was underemployed. The unemployment rate is generally higher in urban (3.29%) than in rural (2.83%) areas while underemployment is generally higher in rural (2.32%) than urban areas (0.82%) [2,42].

**Income and poverty**

Income, expenditure, poverty and living standard disparities of the population are the most important economic factors affecting health and health care. In the period 2004 – 2012, Vietnam’s average per capita income at current prices rose 4.1 times from 484 000 VND per month to 2 million per month. However, disparities in average per capita income across urban-rural areas, regions and population groups have yet to be improved. Average per capita income in urban areas was almost double that in rural areas, while in the richest region of the Southeast, average per capita income is approximately 2.5 times higher than in the poorest region of the Northern midlands and mountains areas. Average per capita income per month among the richest quintile was 9.4 times higher than that of the poorest quintile (4.784 million compared to 0.512 million). The Gini coefficient reflecting income distribution has improved very little: from 0.420 in 2004; 0.434 in 2008; and 0.424 in 2012. A similar picture of regional disparities in expenditures was also found. The difference in average per capita spending per month between the highest and lowest income quintiles was 3.8 times (2.733 million compared to 0.711 million) [43].

The poverty rate has fallen from 12.6% in 2011 to 11.1% in 2012 and is estimated at about 7 to 7.2% in 2015 [2]. The rate of poverty reduction in rural areas is slower than in urban areas. In 2014, the poverty rate in rural areas was 10.8% compared to 3.0% in urban areas. While the poverty rate in the Southeast region was only 1.0%, in the Northern midlands and mountains area it was very high at 18.4%. Some provinces have extremely high poverty rates, such as Lai Chau at 35.3%, Dien Bien at 33.0% and Cao Bang at 27.0% [44]. The poverty gap index in Vietnam in 2012 was 4.465 while in the Northern midlands and mountains areas it reached 12.591 [43].

The report of the Study on the Vietnam Provincial Governance and Public Administration Performance Index in 2014 showed that more than 70% of respondents reported that their current household economic situation was “normal”, more than 60% answered that it was higher than 5 years ago, and over 65% reported that their household economy would be better in 5 years’ time [45].

**Housing**

Statistical results in 2014 showed that only 50.5% of households had permanent dwellings, the highest number was in the Red River Delta (93.0%) and the lowest was in the Mekong River Delta (9.4%) and in the Central Highlands (17.3%). The proportion with permanent dwellings among the richest quintile was 55.0% compared to 42.0% among the poorest quintile. The
percentage of households with makeshift dwellings nationwide was 9.2%, the highest rate was in the Mekong River Delta with 26.4%, and among households in the poorest quintile it was 23.1% compared with 1.7% in the richest households [44]. The remainder of households had semi-permanent dwellings.

**Education and training**

Survey data show that the literacy rate among people aged 15 and older in 2014 was 94.7%, an increase of 0.7 percentage points compared with the rate in 2009. However, the differential between urban and rural areas was 4.2 percentage points (97.5% in urban and 93.3% rural) and the differential between the Red River Delta (98.1%) and the Northern midlands and mountains areas (89.0%) was 9.1 percentage points. The percentage of population aged 5 and older who have never attended school was 4.4% (5.5% in rural and 2.2% in urban areas), a decrease of 0.7 percentage points compared to 2009. This percentage was 9.0% in the Northern midlands and mountains areas compared with 1.6% in the Red River Delta. The proportion of population with educational attainment of upper secondary and higher was 26.5% in 2014 compared to 20.8% in 2009. The improvement in people’s educational attainment will help raise their awareness about disease prevention, health promotion and improve access to health services.

In 2015, the proportion of labor force participants of working age who were trained and have diplomas or degrees only reached 21.9% (38.3% in urban and 13.9% in rural areas)[2]. A low percentage of trained workers is an obstacle to the process of industrialization and modernization and economic development, and indirectly affects investment in health development.

**Impacts of industrialization and urbanization processes**

In 2001, Vietnam had set the goal of striving to become an industrialized country by 2020. Since then, the process of industrialization in Vietnam has been taking place very rapidly, as evidenced by several indicators, such as rapid increase in per capita income, increasing share of industry and services in the economy, increasing share of skilled workers, reduced poverty and inequality [46]. Moreover, the urbanization process in Vietnam is proceeding very rapidly, with the urban share of population increasing from 21.7% in 1999 to 33.1% (an average annual increase of nearly 1 percentage point during the past 15 years) [13]. Nevertheless, urbanization and industrialization processes have had many adverse impacts on the natural environment, causing pollution of soil, water and air, as well as leading to many social problems that will be analyzed further in the next sections.

According to the survey report on The Vietnam Provincial Governance and Public Administration Performance Index in 2014, the socio-economic issues that most concern the population are directly or indirectly related to health, such as drug addiction (43%), traffic accidents (41%), food safety (33%), health service quality (22%), employment (16%) and income (13%) [45].
2.3.3. Natural and environmental factors

Climate change

Climate change is a burning global issue, with the greenhouse effect resulting from uncontrolled exploitation of natural resources, growing energy use reliant on fossil fuels, which release CO2 into the environment, and cause the earth’s temperature to rise. Climate change is affecting access to clean air, clean water, food security and safe housing, thereby affecting health. Climate change is also changing the environment and conditions for development of pathogens, disease vectors, increasing frequency of natural disasters and risks of morbidity and mortality from associated diseases.

Vietnam is one of 6 countries in the world most affected by climate change, especially the risks of sea level rise and saltwater intrusion [10,47]. A report of the National Assembly Standing Committee on the implementation of policies and laws on the prevention and mitigation of climate change in the Mekong Delta showed relatively clear signs of climate change in Vietnam in the past 50 years with an average annual increase in temperature of 0.5 degrees Celsius; higher sea level of 0.2 meters; growing intensity and frequency of natural disasters, storms and floods; severely affected natural ecosystems and tidal surges in southern provinces. Unless drastic responses and measures are taken immediately, desertification will expand, invading and destroying forests, land, water, wildlife and mineral resources; natural ecosystems, crops, livestock will become more vulnerable to disease, putting more pressure on people, reducing immunity and increasing intestinal, viral and parasitic diseases such as dengue fever and malaria [48].

Natural catastrophes and disasters

Besides the general impacts of climate change, Vietnam suffers from 8 – 10 typhoons and floods every year. Many intense typhoons complicated by flooding and tidal surges have caused damage to both people and property, such as houses, crops, infrastructure, roads... Apart from direct harm to humans (injuries, death), natural disasters can also cause disease to spread and affect people’s access to and use of health services.

A recent study by the Asia Foundation indicates that in the past 20 years, Vietnam has become one of the 5 countries with the highest risk of natural disasters in the world, with estimated annual losses of 1.5% of GDP. The Xangsane storm alone in 2006 caused the equivalent of 1.2 billion USD in damage in 15 provinces in the central region. In each of the 5 years from 2008 to 2012, natural disasters killed about 500 people with estimated property damage of nearly 74 trillion VND, an increase of over 19.3 trillion compared with the 5 preceding years. Property damage caused by natural disasters in better years (like 2011) amounted to 0.94% of GDP, while in one of the worst years (2009) damage reached 2.47% of GDP. In 2013, 313 people were killed or disappeared as a result of natural disasters, 1150 were injured and damage was estimated at approximately VND 30 trillion, more than double the amount in 2012 [49].

Environmental pollution (soil, water, air, solid waste)

Along with industrialization and urbanization processes, the problem of environmental pollution in Vietnam is increasingly severe, directly affecting people's health. However, insufficient evaluation of pollution in Vietnam's environment has been undertaken.
The International Conference on “Water Pollution Control in Vietnam: Practices and Policies” organized in Hanoi in April 2014 warned that “Water pollution in Vietnam is out of control.” Experts at the conference stated that despite abundant water resources, the level of water pollution in Vietnam was increasingly serious due to the ineffective control of pollution sources. This situation is causing obvious impacts on the people’s health, increasing the risk of cancer, miscarriage and birth defects, leading to a reduction in human health. According to the assessment of the MOH and the Ministry of Natural Resources and the Environment, on average annually about 9000 people die due to contaminated water and poor sanitary conditions. Every year about 200 thousand new cases of cancer occur, with one of the main causes being polluted water [50].

According to the Environmental Performance Index (EPI) report in 2012, Vietnam is one of the 10 countries with the worst air pollution in the world (ranking 123 out of 132 assessed countries). In 2014, Vietnam ranked 136th among 178 countries on the overall EPI rating. For the air pollution indicator alone, Vietnam ranked 170th out of 178 countries, particularly on indoor air quality, which has declined from 97 points in 1990 to 56 points in 2010. Also in 2014, Vietnam ranked 77th on indicators of access to safe water, 106th on access to sanitary latrines and 140th on indicators of water sources (waste water treatment) [51].

Clean water and sanitation facilities

By 2014, 92.0% of households are using clean water (98.2% in urban and 89.1% in rural areas) and 79.2% of the population are using sanitary latrines not shared with other households (90.9% in urban and 73.8% in rural areas) [20]. These estimates show that Vietnam has achieved the MDG on access to clean water and sanitation. However, because of the effects of industrialization and urbanization, rising water pollution hinders population access to clean water sources. In addition, a large share of rural households still uses a shared toilet or an unsanitary toilet, and some don’t even have a fixed place for defecating. Only 67% of households in the Northern midlands and mountains access clean water. The proportion using a sanitary toilet is only 53.3% in the Mekong River Delta and 60% in the Northern midlands and mountains areas. Among ethnic minority people, only 75% are using clean water and 53% have access to sanitary toilets [20].

Food contamination

Food contamination caused by chemicals is still a persistent problem lacking effective measure for monitoring and control. The unregulated use of chemicals and additives in food production and processing is still very common. However, so far there has no adequate study or assessment on the harm from food contamination, especially toxic chemical contamination causing long-term consequences, such as cancer, in Vietnam.

In recent years, about 200 food poisoning incidents with more than 30 victims per incident were reported on average in a year. The risk of food poisoning in collective kitchens has always existed. Safety and hygiene of street food remains unregulated. According to the Food Safety Administration, 194 incidents of food poisoning were reported in Vietnam in 2014, affecting 5000 people, 80% of whom had to be hospitalized and 43 of whom died. Compared to 2013, the number of people suffering food poisoning and the number who had to be hospitalized has declined [52]. Total costs of lost work time due to foodborne disease, lost productivity due
to illness and related market losses are estimated at about 1 billion USD per year or 2% of GDP [53].

2.3.4. Lifestyle and behavioral factors

Tobacco smoking

Smoking is one of the leading causes of mortality in Vietnam, causing an estimated 40 000 deaths each year or more than 100 deaths each day. Currently, estimates show that smoking caused about 16.9% of all deaths and 8.8% of the disease burden measured in DALYs in Vietnam. If no urgent and effective interventions are taken, the estimated number of deaths caused by tobacco-related diseases each year will increase to 70 000 by 2030 [54].

Survey results show that 56.4% of men aged 25 to 64 are daily smokers [27]. Approximately 47.4% of men and 1.4% of women aged 15 years and older are smokers. Smoking prevalence among adolescents remains high. Smoking onset begins at young ages since tobacco products are widely sold and easily accessible even to children. Smoking in public places in violation of no smoking areas is still very common, resulting in the high rate of passive smoking in offices, workplaces and public venues. Up to 73.1% of adults are exposed to tobacco smoke at home (67.6% of non-smokers) and 55.9% of workers are exposed to tobacco smoke at work (49.0% of non-smokers). The passive smoking rate is highest in pubs and coffee or tea shops at 92.6% compared to 84.9% in restaurants. The rate in universities is 54.3% and public offices is 38.7% [23].

Unhealthy use of alcoholic beverages

About 70% of males in Vietnam use alcoholic beverages. The proportion of adolescents, youth and women who consume alcohol has increased rapidly. The per capita alcohol consumption has increased to 6.6 liters of pure alcohol equivalent per person over 15 years of age per year in the period 2008 – 2010 which is double the figure in the period 2003 – 2005. Among people aged 15 and older who drink alcoholic beverages, each drinker consumed about 17.2 liters of pure alcohol equivalent per year (17.4 liters for men and 0.9 liters for women). In 2013, Vietnam consumed around 3 billion liters of beer or 35.6 liters per person on average with total cost of nearly 3 billion USD, accounting for about 1.8% of GDP [23].

On average, one in every four men in Vietnam consumes alcohol at harmful levels [55]. Alcohol use caused 5.7% of all deaths and 4.7% of the total disease burden measured in DALYs in Vietnam in 2010 with about three-fourths of alcohol-related disease burden caused by NCDs such as cirrhosis, stroke, liver cancer, and mental disorders. In 2012, an estimated of 71.7% of cirrhosis in men and 33.7% in women involved alcohol consumption. The corresponding data for accidents was 36.2% in males and 0.7% among females. Prevalence of alcohol use disorders in Vietnam is 4.7% (8.7% in men and 0.9% in women), predominantly alcohol dependence affecting 2.9% of the population (5.9% in men and 0.1% in women) [56].

Inappropriate diet

The diet of Vietnamese people has improved, providing sufficient nutrients and improved balance, yet it remains unhealthy. Existing habits involve consuming too many calories, too much meat, salt, sugar, trans fatty acids, and fast food and insufficient amounts of recommended
foods like seafood, fruits and vegetables. The consumption of too many calories, particularly from sugar-sweetened beverages, foods high in sugar, trans fatty acids and fast foods result in overweight and obesity and are risk factors for NCDs such as cardiovascular disease, diabetes and cancer. Meanwhile, too much salt consumption can lead to (or contribute to) hypertension and significantly increases the risk of heart disease and stroke. The average Vietnamese person consume from 12 – 15 grams of salt per day on average which is much higher than the WHO’s recommendations (of less than 5 grams per person per day). About 60% of people consume twice as much as the daily recommended amount of salt [57]. The burden of disease due to improper diet in Vietnam in 2010 is estimated at 23% of all deaths and 9.5% of total DALYs.

**Physical activity**

Survey results in 2009 – 2010 showed that up to 28.7% of adults aged from 25 – 64 were physically inactive. The proportion of people who get regular physical exercise is increasing, although in 2013 only 27.2% of people reported getting regular physical exercise. Recent surveys showed that as many as 34% of people living in Hanoi, Hue and HCMC did not participate in any physical activity. The percentage of youth participating in physical activity was very low and has been decreasing over time. Up to 23% of young people rarely or never exercise or participate in sports, and 45% only occasionally get physical exercise. In 2013, only about 19.7% of students aged from 13 to 17 years reported physical activity for at least 60 minutes per day at least 5 days per week. Disease burden related to inadequate physical activity includes all NCDs, but particularly cardiovascular disease, colon cancer and diabetes.

**Illegal drug use**

The number of drug addicts being managed by the State has increased to 204 377 people by September 2014. Cases of drug addiction are being reported in nearly 90% of districts and about 60% of all communes\(^4\) nationwide [58]. Drug use is still the main route of HIV transmission in Vietnam with approximately 45% of new HIV infections caused by drug injection. Needle sharing is also the transmission route of Hepatitis B and C among drug users. The organization of institutional detoxification still faces several obstacles and challenges. The proportion of drug addicts treated with methadone replacement therapy remains low and funding cuts are threatening this program. Drug trafficking is still a complicated social issue and use of synthetic drugs is increasing.

**Unsafe sex**

As of July 2014, the number of sex workers as estimated by the Department of Social Vices Prevention and Combat amounted to nearly 33 000 people. According to social and international organizations in Vietnam that number may be as high as 200 000 people. Of these, only 9171 sex workers are being managed by the authorities, mainly in some areas such as the Red River Delta, North Central and Central coastal areas, Southeast and the Mekong River Delta [58].

Sex work and sex-work related crimes nationwide are very complicated especially in the major provinces and cities. The number of sex workers has been increasing; venues for sex

\(^4\) The term commune is used in this report to refer to rural communes, urban wards and district capital towns (thị trấn).
work, particularly disguised forms of sex work in service establishments and foreign-related sex work are increasing; trafficking of women and children for sexual exploitation has not decreased; particularly with the emergence of male sex workers and homosexual sex workers. Unsafe sexual intercourse is a major risk for HIV transmission and other STIs. Incidence of HIV infection through sexual contacts is increasing and accounted for 45.3% in 2013. Sex work often involves the use of drugs and stimulants, creating complex interactions of risk factors to health [59].

2.3.5. Factors associated with health services access

Factors associated with health service access include availability and affordability. Issues associated with availability include health facility location, human resources, essential medicines, medical equipment and geographical difficulties in access to health services for people in mountainous, highland, border and island areas. Issues of affordability include the health financing mechanism, provider payment methods and out-of-pocket payments. Lack of availability can be overcome by support policies for vulnerable groups. These issues will be reviewed in detail in Chapter II.

2.4. Health priorities

On the basis of the following criteria for selection of priorities: high disease burden, potential scale of impact, intervention feasibility (budget, acceptability), and equity issues, on a number of health priorities are proposed for increased attention in the coming period as follows:

- The increasing NCD burden resulting from population aging, impacts of industrialization and urbanization processes, environmental pollution and lifestyle changes. This problem occurs in many developing countries during the epidemiological transition period. It is especially important in the Vietnamese context, due to the population's limited health knowledge, attention and resource investments of the Government incommensurate with the burden of disease and inadequate capacity of the health system to respond to need, both in terms of prevention and effective treatment at the primary care level. Diseases and conditions proposed for priority attention in the coming period are hypertension and cardiovascular disease, cancer, diabetes, COPD and asthma.

- Infectious diseases continue to be a challenge for health systems in the coming years since many of these diseases are still prevalent, and inadequate control means there is a risk of disease outbreaks. Diseases of concern include tuberculosis, HIV/AIDS, malaria, dengue fever, hand, foot and mouth disease, rabies, vaccine preventable diseases and emerging diseases. Climate change, environmental pollution, drug and insecticide resistance increase the difficulty and cost of prevention and treatment of these diseases. The control of emerging diseases requires preventive measures taken before any cases even enter the country.

- The growing impact of factors related to population aging, climate change, urbanization, industrialization and globalization with associated issues of environmental pollution, adoption of lifestyles and behavior harmful to health and spread of social vices, increase pressure on health and social protection service delivery. Rarely are health impact assessments made when new development projects are implemented, consequently inadequate plans are in place for managing community health during construction and
operation of new facilities such as power plants. Unless effective measures are applied to curb the increase in the impact of these factors, disease burden, particularly of NCDs, will grow more rapidly and become harder to control. Greater efforts at intersectoral coordination are needed to implement preventive strategies and health promotion even for healthy people.

- Health status, disease burden and accessibility to health services of people living in geographical and economically disadvantaged areas have been improving more slowly than the average, resulting in little reduction in disparities between regions and social groups. To gradually narrow the gaps in health care between regions and social groups, health policies and interventions should focus on priority regions and vulnerable people living in disadvantaged areas. Health disparities requiring prioritization include maternal and child health, such as maternal mortality, infant mortality, especially newborn and perinatal mortality, child underweight malnutrition and stunting.

- Currently, environmental health activities are being implemented in different sectors and at different levels, but they lack coordination within a comprehensive, scientific national strategy or plan and a system aimed at maximizing effectiveness of resource use and activities. Therefore, development of a national action plan on environmental health is extremely important for Vietnam.
Chapter II: Implementation of the Plan for the protection, care and promotion of the people’s health 2011 – 2015

This chapter review and assess implementation of the goals and tasks set for each building block in the Five-year health sector plan 2011 – 2015 (Ministry of Health Decision No. 19/KH-BYT dated 10 January 2011), points out achievements and various goals and tasks not yet completed, along with the reasons for these limitations and shortcomings. On that basis, the chapter proposes priority problems that need to be resolved in the next five-year plan. Then in Chapter V recommendations for solutions to resolve those priority problems are proposed.

1. Health human resources

1.1. Five-year plan (2011 – 2015) objectives and their implementation

The objective related to human resources in the 2011 – 2015 Five-year plan is to “promote the development of health human resources in both quantity and quality, to meet the needs of the health sector; strengthen the health workforce for rural, mountainous and remote areas and in specific specialties (paraclinical, preventive medicine, pediatrics, communications and health counseling ...).”

The Five-year health sector plan for the period 2011 – 2015 has set concrete targets for health human resources. Table 2 summarizes the progress from 2010 to 2015 towards achieving the 2015 targets.

Table 2: Progress towards achieving basic health human resources targets, 2010 – 2014

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014 (estimated)</th>
<th>2015 targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors/10 000 people</td>
<td>7.20</td>
<td>7.33</td>
<td>7.46</td>
<td>7.61</td>
<td>7.8</td>
<td>8.0</td>
</tr>
<tr>
<td>University-trained pharmacists/10 000 people</td>
<td>1.76</td>
<td>1.9</td>
<td>1.96</td>
<td>2.12</td>
<td>1.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Percentage of villages served by VHWs</td>
<td>97.5</td>
<td>96.9</td>
<td>96.6</td>
<td>96.0</td>
<td>95.0</td>
<td>90</td>
</tr>
<tr>
<td>Percentage of CHS served by a doctor*</td>
<td>70.0</td>
<td>71.9</td>
<td>73.5</td>
<td>75.0</td>
<td>78.0*</td>
<td>80</td>
</tr>
<tr>
<td>Percentage of CHS with a midwife or obstetric-pediatric assistant doctor</td>
<td>95.6</td>
<td>95.3</td>
<td>96.4</td>
<td>96.0</td>
<td>98.0</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

*Includes CHS served by a doctor 3 or more days per week

Source: Review report of the health sector 2014, focal tasks and solutions for 2015 and for the period 2016 – 2020 [35]; Health Statistics Yearbook various years [60].

- In general, on a national level, Vietnam can achieve the basic health human resources goals set out in the 2011 – 2015 Five-year plan by 2015.

- However, Table 2 also shows that the indicators related to university-trained pharmacists, VHWs and midwives and obstetric-pediatric assistant doctors were nearly or already achieved in 2010 before the plan was implemented. This implies that greater attention must be paid towards setting appropriate and useful targets for the 2016 – 2020 Five-year health sector plan.
1.2. Assessment of implementing Five-year plan tasks on health human resources

1.2.1 Major policies related to health human resources during the period 2011 – 2015

In the 2011 – 2015 period, several major documents orienting health human resources policy direction have been issued or come into effect:

The Law on Public Employees was issued by the National Assembly in 2010 and came into effect in January 2012. This Law stipulates the authority and responsibility of public employees; recruitment, deployment and management of public employees in public service units, with requirements for management of human resources, including for the health sector, according to work positions.

The Law on Examination and Treatment was issued by the National Assembly came into effect on 1 January 2011. The Law calls for developing a health workforce of appropriate quality, structure and distribution, and stipulates that medical practitioners must obtain a medical practice license and continuously update their medical knowledge.

The Comprehensive Plan for human resources development for the period 2012 – 2020 was issued by the Health Minister in 2012 with the overall goal to “Develop health human resources… contribute to improving quality of health and population work, and meet the need for protection, care and improvement of the people’s health with an orientation towards equity, efficiency and development.” The Comprehensive Plan also stipulated four specific objectives: (i) develop the health workforce in sufficient quantity and adequate quality, with an appropriate structure and distribution; (ii) improve the quality of health worker training to meet the needs of societal development and international integration; (iii) strengthen capacity for health human resources management; (iv) develop appropriate regulations, policies, work environment and remuneration package for health workers, particularly in mountainous, disadvantaged areas and areas with large ethnic minority populations, and in fields facing difficulties in recruiting personnel. The Comprehensive Plan also proposed five sets of solutions including: Reform and strengthen state management of health human resources; manage, deploy and retain health workers; train health workers; international cooperation and priority projects; and financial measures.

Government Resolution No. 93 (2014) stipulated regulations and policies for development of public medical facilities and medical-pharmaceutical universities. Specifically, these units are allowed to enter cooperation and investment arrangements to implement facility development projects through loans and joint ventures or business partnerships. Accordingly, they are allowed to deploy their public employees and civil servants to work in private hospitals.

1.2.2. Tasks related to training of health workers

During the 2011 – 2015 period, many decisions related to training were issued and implemented, for example Resolution No. 29-NQ/TW was issued at the 8th Conference of the IXth Central Executive Committee in 2013, on the reform of basic, comprehensive education and training. This Resolution set the orientation for reforms of health human resources training. The MOH is currently formulating the action plan to implement it. Prime Ministerial Decision No. 319/QD-TTg (2013) approved the project to encourage training and development of health
human resources specialized in tuberculosis, leprosy, mental health, forensic medicine and pathology for the 2013 – 2020 period with regulations relating to special salary supplements. MOH Decision No. 342/QDBYT (2014) promulgated basic competency standards of Vietnam midwifery and Circular No. 22/2013/BYT on continuing medical education, under the provisions of the Law on Examination and Treatment.

**Task 1: Improvement in quality of training conditions and process**

The five-year plan set out the task to: “Prioritize investments in upgrading of health workforce training establishments, improve quality of instructors, reform curriculum, including revisions to training materials and pedagogical methods; upgrade teaching equipment and devices, strengthening practical training and implementation of management measures to improve the capacity and quality of health worker training.” This section presents implementation results and difficulties and shortcomings related to this task.

**Implementation results**

The health worker training establishment network has been greatly expanded in recent years [61]. By June 2014, out of a total of 173 health worker training establishments, 35 provided university level training (14 medical schools and 21 multi-disciplinary schools; an increase of 10 establishments compared to 2010), 44 provided junior college level training, 123 provided secondary medical education. Among these 173 establishments, 68 were non-public [62].

Physical facilities of medical training establishments have gradually improved. Besides funding from the State budget, a number of ODA loan projects have prioritized support for infrastructure upgrading of medical secondary schools, colleges and pharmaceutical and medical universities. In particular, the Health Human Resources Development Program loan of ADB in collaboration with grant funding from the Department of Foreign Affairs and Trade of Australia (DFAT) was implemented from 2011 to 2015 with total funding of 76 323 000 USD. One of the main objectives of this program was to invest in upgrading health worker training facilities to ensure uniformity and comprehensiveness, focused on priorities. This program involves 17 universities and junior colleges of medicine and pharmacy. The total cost of this project and the North Central Coast Health Support Project (World Bank) for the procurement of equipment for medical education and practical training is approximately 23 066 000 USD [63].

In particular, according to Prime Ministerial Decision No. 2054/QD-TTg (2013), the World Bank project on Health Professionals Education and Training for Health System Reforms was adopted to improve the overall quality of education of health workers through innovative approaches to teaching and learning focused on competencies and strengthening the quality assurance system in education. The project is being carried out from late 2014 to 2019 and includes four components: (i) improving the quality of health worker education at the university and junior college levels through innovation of approaches to teaching and learning based on competencies and improve the quality assurance system in education. The project supports 31 universities and colleges so that doctors, nurses and other medical staff graduating from these establishments will have better competencies and skills to meet the current healthcare needs of the Vietnamese people; (ii) improving capabilities for medical management capabilities and management of health worker deployment; (iii) improving PHC performance through training.

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5 ADB. Health Human Resources Sector Development Program (RRP VIE 40354-01).
ensuring uniform and required conditions and competencies for district and commune level health workers; and (iv) Project management [64].

Out of a total of 35 ODA projects managed by the MOH, 17 projects support training activities with a total budget of over 201 851 433 USD, accounting for 13.8% of total external assistance funds. Training-related activities include: Construction, reforming curriculum and teaching materials; support for long-term training such as training PhDs, masters, specialists, general doctors, pharmacists, and short-term training of health care professionals for teacher training establishments at the central level and provincial levels through projects funded by the World Bank, ADB, the Global Fund, etc. [63].

Development and improvement of training programs, developing training materials and active teaching methods: These contents have also received support from donors like ADB, World Bank, JICA, Global Fund, UNFPA, some non-governmental organizations such as Pathfinder International, and Atlantic Philanthropies [65].

Difficulties, shortcomings

Health human resources training establishments are not yet effectively implementing competency-based training. Accreditation of training curricula and of education establishments remains inadequate [66]. No effective mechanism is in place to ensure quality and uniform standards for the curricula used at different universities, in the programs prioritizing training local people from disadvantaged regions with commitments to return to serve their origin areas and for post-graduate training in the health sciences. Of particular concern is the lack of practical training. These problems lead to low quality and uneven qualifications of new medical graduates [67,68]. In order to ensure the quality of the health workforce, the Ministry of Education and Training issued an official letter (No. 6975/BGDDT-GDD in December 2014) to suspend training in the field of general medicine, dentistry, traditional medicine and pharmacy in general universities and colleges that are not specialized in medical training.

Human resources responsible for quality assurance at pharmaceutical-medical universities are very limited, ranging from 2 – 8 official staff (including those who work only on quality assurance and those who take those tasks on in addition to other job responsibilities). Quality assurance personnel have only received short-term training on a few of the relevant contents such as standards and quality evaluation criteria, yet they lack training on monitoring, evaluation for development of standards for graduates. Most of the schools have no recurrent budget for this activity and lack software for systematic quality management [65].

There are signs that excessive numbers of health workers are being trained, especially at secondary level. In a rapid assessment conducted in Hai Duong province, the Provincial Medical Secondary School graduated more than 800 people in 2012, while the leaders of the Department of Health said they only needed to recruit 70 people throughout the province in 2012 [61]. According to statistics on enrollment quotas nationwide in 2014, the professional secondary system had plans for training more than 21 000 secondary-level nurses, 31 000 assistant doctors and nearly 40 000 secondary pharmacy assistants) [62].

Task 2: Ensure appropriate quantity, structure and distribution of health workers

The Five-year health sector plan also set out human resources management tasks, namely: “Gradually build the health workforce of adequate quantity, quality, and balanced structure and...
distribution to meet the growing needs of the health sector, for both the public and private health sectors. Develop skill and competency standards required for each type of medical personnel and standardize outputs of health workforce training.” “Continue implementation of schemes to train workers from disadvantaged regions with commitments to return and serve their origin areas, four-year training programs to upgrade personnel to medical doctor and university-trained pharmacist; expand training of doctors, midwives, nurses, pharmacy staff, village health workers, village birth attendants as required by the MOH to meet the needs of health workforce in rural, mountainous and disadvantaged areas.” This section assesses the extent that these tasks were accomplished.

Implementation results

Health statistics show that the number of staff working in the public health sector significantly increased from 344,876 in 2010 [69] to 424,237 people in 2013 [22]. The number of doctors with a university degree or higher has increased rapidly, on average about 6.5% per year. According to the General Statistics Office, with this growth rate, Vietnam can easily achieve the strategic target of 10 doctors per 10,000 people by 2020 and narrow the gap with countries in the region. With this number and level of qualifications of medical staff, Vietnam can meet its targets in the Socio-economic Strategy for the 2011 – 2020 period [70].

A number of policies and projects have been implemented in recent years to address labor shortages in remote, isolated and disadvantaged areas. Prime Ministerial Decision 319/QD-TTg (2013) approved the scheme to encourage training and development of health workers specialized in tuberculosis, leprosy, mental health, forensic medicine and pathology for the period of 2013 – 2020. A pilot project to deploy young volunteer doctors to work in mountainous, remote, border, island and socio-economically disadvantaged areas (priority for 62 poor districts) was approved by the Health Minister (Decision No. 585/QD-BYT in 2013) and has been implemented since 2014. It is expected that by 2016 there will be about 500 young doctors working in these areas.

The policy of training to upgrade from lower to higher degrees and training of people from disadvantaged areas with commitments to return to serve their origin area have contributed to deploying health workers in disadvantaged areas. Over a 5-year period (2007 – 2011), 34 provinces in the country have directly recruited 1,812 people from disadvantaged areas for training, and they have committed to return and serve their origin areas including 1,331 people trained at the university level (medical and pharmaceutical), 198 people at the junior college level, 271 at the technical secondary level, 4 nurses and 8 technicians. Overall achievement in relation to the target has reached 91.3% for university-level staff, 87.8% for junior college level and 60.2% for technical secondary level staff [71].

The MOH issued Circular No. 07/2013/TB-BYT stipulating standards, functions and duties of village health workers, adding village birth attendants as a new form of village health worker specialized in reproductive health care in villages inhabited by a large number of ethnic minorities that face difficulties in reproductive health care. The Circular also sets out training requirements, namely: Village health workers working in PHC must have an elementary level medical qualifications or have completed three or more months of training following the MOH curriculum; village birth attendants must have completed at least 6 months of training under the MOH curriculum. At the same time the MOH has approved two new training programs including 6 months of basic training and 6 months of more advanced training on midwifery
skills for village birth attendants over the period 2011 – 2013. Circular No. 07/2013/TT-BYT and approved training programs serve as the basis for training establishments and projects to participate in training village health workers and birth attendants for localities facing many difficulties such as the provinces in the Northern midlands and mountain areas [72].

In the period from 2011 to now, the MOH has developed and promulgated standards for different types of medical personnel such as: Basic competency standards of Vietnamese nurses issued by the MOH under Decision No. 1352/QD-BYT (2012); Basic competency standards of Vietnamese midwives according to Decision No. 342/QD-BYT (2014); Standards for general doctors have been developed and approved by the Ministry of Health (Decision No. 1854/QD-BYT in 2015). The MOH is developing competency standards for other types of medical personnel [35], with research and assistance under projects such as the World Bank Health Professionals Education and Training for Health Systems Reform Project (2014 to 2019) [64]. Vietnam, along with Laos and Myanmar, have led the development of minimum guidelines for training and recognition of skilled birth attendants for the ASEAN region. These guidelines were formally approved and issued at the Conference of Ministers of Health in the ASEAN region in Hanoi in 2014.

Difficulties, shortcomings

The lack of linkages between training and deployment, which has existed over many years, has led to perverse outcomes such as oversupply of health worker training but continued shortage of health workers, especially in some areas facing difficult socio-economic conditions [73] and in some fields or specialties facing difficulties in recruiting staff [61]. For example, human resources in preventive medicine are insufficient in quantity, lack formal training and specialized skills for preventive medicine. The number of preventive medicine staff at the provincial level only meets 60% of the requirements stipulated in Circular 08/2007 (12 800 people). Provincial preventive medicine facilities nationwide face vacancies for 5300 health workers, about 40% of the staffing norms set out in Circular No. 08/2007. A more detailed analysis on the structure of the workforce in terms of the specialties in which they are trained indicates that the vacancies are most prevalent for the position of medical doctor, accounting for about 54% of the vacancies at the provincial level, while for public health specialists (university level) or lab technicians the vacancy rate is about 15%; the remaining vacancies are distributed evenly among the other types of health workers. The proportion of provincial preventive medicine staff with only technical secondary degrees is rather high at about 32%, and there is a need to reduce the share with this low level of training in provincial preventive medicine centers [74].

The shortage of health workers, particularly doctors at district and commune level facilities, despite gradual improvements, remains a priority issue. According to a study by the Health Strategy and Policy Institute conducted in 4 provinces, instability of staff employed at district and commune levels requires attention. Retirements and transfers in district level health facilities (district hospitals and district health centers) amount to about 50% of the total new recruits, while at the commune level, retirements and transfers amount to about 30% of new recruits [75]. Growth in the number of medical workers over the period 2010 to 2012, specifically for doctors and nurses, has been very low according to data analyzed for 904 medical facilities and hospitals that reported on fluctuations in their human resources in this period. Notably in

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disadvantaged areas such as the Northern midlands and mountains areas growth in the number of people working in grassroots medical facilities is much lower than in the Red River Delta region during this period, only 7.6% compared with 10.9%. Likewise the growth in the number of doctors working at grassroots facilities between 2010 and 2012 was 7.8% in the Red River Delta and 5.4% in the Northern midlands and mountains area [60].

Quality of the health workforce, especially at the commune level, in terms of expertise in first aid, diagnosis and treatment of common diseases, as well as knowledge about dealing with epidemics, is very limited. According to a recent study implemented in mountainous areas, only 17.3% of the doctors and nurses had correct knowledge and skills in first aid, 17% new danger signs during pregnancy, 50.5% new how to diagnose hypertension and 15.6% knew how to deal with a disease outbreak [75]. Even though competency standards for some types of health workers have been developed, or are in the process of being developed, there remains a lack of information to assess the application of competency standards for improving training quality or for health human resources management.

Remuneration for medical staff remains too low and incommensurate with the number of years of study, effort required, productivity, working environment, and working conditions, especially in mountainous and rural areas [76]. Some policies aimed at attracting health workers to disadvantaged areas such as bonuses and voluntary periods of service for newly graduated doctors to work in mountainous, remote and isolated areas may be difficult to sustain. Project 1816 involving medical staff rotations from higher to lower level facilities to help build capacity and skills may solve some initial difficulties in human resources, but it is also limited due to the lack of a national policy such as a Government decree on the deployment and remuneration of health workers in the spirit of Politburo Resolution 46 [61].

**Task 3: Training aimed at strengthening the application of scientific advances in the medical field**

Health human resources of Vietnam need to continue to develop and apply new technology to continuously improve the efficiency and quality of health services, but also to develop future medical school instructors and researchers. Thus, the task of: “Strengthening post-graduate training for health workers and putting in place incentives and support policies for health workers in the Northern midlands and mountains areas, Central Highlands and the Mekong River Delta to undertake post-graduate studies” was included in the Five-year plan of the health sector.

**Implementation results**

Postgraduate education (specialist I, II, resident physician, Masters and PhD) for medical workers was strengthened in all forms. According to the Health Statistics Yearbook, the number of medical postgraduate students graduating in 2010 was just 3378 people, but rose to 4680 people in 2013 (Table 3) [60]. The Health Human Resources Sector Development Program (ADB) by the end of 2014 has supported training for 27 doctors (one overseas and 26 domestically); 143 Masters (28 in overseas and 108 domestically) [77].

Some ODA projects have components of medical training focused on postgraduate qualifications such as the Vietnam Avian and Human Influenza Control and Preparedness
Project (World Bank); Northern Upland Health Support Project (World Bank) and the Health Care in the South Central Coast Region project (ADB) [63].

**Table 3: Postgraduate students completing their studies, 2010 – 2013**

<table>
<thead>
<tr>
<th>Type of training</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td>143</td>
<td>179</td>
<td>119</td>
<td>168</td>
</tr>
<tr>
<td>Master</td>
<td>954</td>
<td>950</td>
<td>972</td>
<td>1063</td>
</tr>
<tr>
<td>Specialist I</td>
<td>1710</td>
<td>2502</td>
<td>2403</td>
<td>2616</td>
</tr>
<tr>
<td>Specialist II</td>
<td>463</td>
<td>566</td>
<td>501</td>
<td>516</td>
</tr>
<tr>
<td>Resident physician</td>
<td>117</td>
<td>257</td>
<td>166</td>
<td>317</td>
</tr>
<tr>
<td>Total</td>
<td>3378</td>
<td>4454</td>
<td>4161</td>
<td>4680</td>
</tr>
</tbody>
</table>


**Difficulties, shortcomings**

There has been no assessment, nor is there an overall plan about the number of staff and an appropriate distribution by type of health worker for highly qualified and specialized staff [61].

**1.2.3. Effective management and deployment and equitable distribution of health human resources**

**Task 1: Implementing regulations on medical practice certificates under the Law on Examination and Treatment**

**Implementation results**

From 2011 to the present, to create a basis for implementing the policy on issuing medical practice certificates according to the Law on Examination and Treatment, many policy documents have been issued. These include, Government Decree No. 87 (87/2011/ND-CP) stipulating regulations and guidelines for implementation of some articles of the Law on Examination and Treatment; Decree No. 102 (102/2011/ND-CP) on malpractice insurance for medical examination and treatment on the basis of medical examination and treatment; Circular No. 41/2011/TT-BYT on issuing medical practice certificates and medical facility licenses; Circular No. 35/2013/TT-BYT about suspending medical practice certificates or facility licenses and professional activities of practitioners, medical treatment and examination clinics. MOH Decision No. 5248/QD-BYT (2012) on the establishment of the Advisory Council on medical practice certification; Decision No. 2803/QD-BYT (2013 on the organization and operation of the Advisory Council on the issuance and reissuance of medical practice certificates; Decision 263/QQD-BYT (2014) on appointing Head of the subcommittee of the Advisory Council on issuance, re-issuance of certificate of the MOH.

According to stipulations of the Law on Examination and Treatment, currently nationwide 249 852 individuals require medical practice certificates and 1200 hospitals require operating licenses. The results of issuing practice certificates and operating licenses for government hospitals up till 15 July 2014 is shown in Table 4 [78].
Table 4: Results of issuing medical practice certificates and medical facility operating licenses in public facilities, 2014

<table>
<thead>
<tr>
<th>Type of facility</th>
<th>Proportion of health workers issued practice licenses</th>
<th>Proportion of facilities issued operating licenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals managed by the MOH</td>
<td>92%</td>
<td>95%</td>
</tr>
<tr>
<td>Hospitals managed by other sectors</td>
<td>67%</td>
<td>25% (10/40)</td>
</tr>
<tr>
<td>Hospitals managed by the Provincial Health Department</td>
<td>89%</td>
<td>65% (726/1117)</td>
</tr>
</tbody>
</table>

In the period 2011 – 2014, the Health Human Resources Sector Development Program (ADB) provided funding for: Activities and equipment procurement for the Medical Practice Certificate and License Division of the Medical Services Administration (MOH), the decentralized offices in 63 provinces, and the Advisory Council of the MOH on medical practice certificates; development of the national registration and certification system: putting into operation a computer system linking 63 provinces with the MOH, issuing and managing records for 230 000 medical practice certificate dossiers (> 80%). The program is currently selecting a consulting firm to support and upgrade the system [77].

**Difficulties, shortcomings**

Under the provisions of Decree No. 87/2011/ND-CP guiding the implementation of some articles of the Law on Examination and Treatment, the progress of issuing medical practice certificates has not met requirements. These requirements stipulated that before 31 December, 2013, the issuing of medical practice certificates for government hospitals should be completed and by 31 December 2014, the issuing of medical practice certificates should be completed for the remaining facilities including medical assessment facilities, clinics and maternity clinics.

The 18 month practical training period in a hospital for doctors completing their medical studies at university as a requirement for issuing medical practice certificates has not yet been implemented [67]. There is still no linkage between fulfilling requirements for continuing medical education and the granting of medical practice certificates to medical practitioners.

**Task 2: Strengthening the management and efficient use of health human resources**

The Five Year Plan 2011 – 2015 states: “Strengthen the management and efficient use of health human resources. Review and recommend policies and appropriate measures to ensure preferential treatment for medical staff at all levels, especially to attract health workforce to work in mountainous, remote and isolated regions and at the grassroots level”; and “Continue implementation of the staff rotation policy (Project 1816)”.

**Implementation results**

Many major policy documents have been enacted in recent years to focus on solving the problems of human resources management (as mentioned in section 1.2.1). In addition, a number of documents related to recruitment, deployment and remuneration of health workers continue to be supplemented and refined.
In relation to remuneration, the Government issued Decree No. 56/2011/ND-CP stipulating preferential salary supplements for civil servants and employees working in state health facilities. Particularly, some of the policy documents of the government directly or indirectly focused on strengthening and attracting health human resources to work in the grassroots healthcare network and in disadvantaged areas such as the Circular guiding the implementation of Decree No. 64/2009/ND-CP on the policy for government officials and public employees working in the health sector in disadvantaged regions.

Related to health human resources at the grassroots level: National Assembly Resolution No. 11/2011/QH13 requires strengthening of health services at the grassroots level to reduce hospital overcrowding and to implement human resources development reforms. The MOH issued national benchmarks for commune health for the period 2011 – 2020, according to Decision No. 3447/QD-BYT (2011). Accordingly, criteria related to human resources specify staffing norms to ensure sufficient manpower for commune health stations (CHS) and requirements for continuing medical education for different types of health workers. In 2014, the MOH issued Decision No. 4667/QD-BYT promulgating updated national benchmarks for commune health to the year 2020, replacing Decision 3447. The 2014 revision categorized localities into 3 regions, in order to develop more suitable benchmarks appropriate with the healthcare needs of people in each region, and ensure effective use of health human resources, especially in mountainous, remote, isolated and maritime areas. The Health Ministry has also developed and submitted to the Government a draft resolution on strengthening grassroots healthcare in the new situation [35].

In the past few years a project focusing on maritime areas has been implemented, including policies on health human resources. The Project for Development of Maritime Health to the year 2020, was approved by the Prime Minister in Decision No. 317/QD-TTg (2013). In particular, it aims to develop health human resources in sufficient quantity and quality to meet the needs of care and health protection for the people of the maritime and island areas. The scheme set the target for 70% of doctors working in health facilities in maritime areas to be trained in maritime health by 2020.8

In recent years, the MOH has implemented schemes and projects in order to attract medical personnel to work in grassroots level facilities. Since 2008, the MOH has implemented Project 1816 on personnel rotations from higher to lower level facilities to support technology transfer and capacity building. After 5 years of implementation, some 15 000 Central hospital staff rotations to lower level facilities have supported transfer of medical skills, knowledge and technology. In addition approximately 1905 staff rotations have been implemented between provincial and district levels, and 3234 staff rotations have occurred between district and commune levels to assist 1815 CHSs to provide health care [79]. Following this the MOH issued Decision No. 5068/QD-BYT (2012) regulating training and technology transfer for package of health services under the project of 1816 from 2013 to 2014. The MOH continues to strengthen professional mentoring, to reform implementation of Project 1816, to transform the program from supporting human resources towards training and transferring technical packages and to implement training and technology transfer under Projects 47 and 930 [35]. By 2013, to further strengthen high quality human resources for the grassroots level, the MOH has implemented a pilot project to bring young volunteer doctors to work in disadvantaged border and island areas.

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8 Maritime health is generally concerned about the health of seafarers, including emergency first aid and ocean disaster relief, but in Vietnam also covers healthcare of workers and residents of islands and coastal areas.
and 62 poor districts. Phase 1 of the project, lasting from 2013 – 2016, is expected to bring 500 young doctors volunteering to poor districts. By 2014, seven training programs had been developed, young volunteer doctors were recruited and trained to work in 62 poor districts [35].

The MOH has established a training system for health sector managers at the HCMC Institute of Hygiene and Public Health and at the Health Management Training Institute at the Hanoi School of Public Health. The Health Management Training Institute is the first unit in the country with the function of providing specialized professional training for health sector managers in the new situation following standards for public servant positions and professional positions. At the same time this Institute organizes research and application of management sciences in the health sector.

**Difficulties, shortcomings**

Management capacity of medical officials at all levels is still quite limited. An MOH study in 2013 showed large gaps in the management capacity of current officials compared with requirements. Managers medical facilities are mainly doctors who are highly skilled in their profession (especially in hospitals), and have been providing medical services, so their experience in management is somewhat limited. Although many hospital managers have worked in management for many years, only 30% have actually been trained in management. Over 95% of the medical managers say that they lack management skills [64].

Recruitment, deployment and remuneration policies have not been fully implemented. For example, even though Circular No. 07/2013/TT-BYT was approved in 2013, so far about 50% of village birth attendants (out of 1700 in total) have not yet begun to work in the health system or are not yet receiving their monthly stipends. Performance appraisal of medical workers is not being used as an effective tool for human resources management or as a basis for rewarding or disciplining personnel, with the consequence that job satisfaction and motivation of health workers are low in both treatment and preventive services, particularly at the grassroots level [80 – 83].

Master planning, general planning and human resources management at all levels remain weak. Monitoring and management of the health sector workforce has not been standardized. There is a severe lack of information, particularly related to health human resources working in the private sector, despite the rapid expansion of the private health sector, which plays an important role in the health system. This lack of information creates major difficulties for the planning and development of strategic policy for the health workforce [61].

**1.3. Priority issues**

**1.3.1. Health human resources planning is inappropriate as it does not ensure balance between requirements of the health system and outputs of health worker training**

There is a lack of information on health human resources in terms of number of workers and their quality (trained in short-term, long-term courses, recruitment, structure, ...) in both public and private sectors. There is also inadequate information for evaluating impact of health human resources policies, inhibiting the ability to effectively formulate plans and policies.

Regulations on organization, positions and staffing norms with associated budget for health statistics work in health facilities are not yet in place. Human resources for information
technology in the health sector are inadequate in both quantity and capacity. Human resources in other fields are also lacking or have skills that are not appropriate for current requirements of their work such as medical equipment maintenance technicians, health insurance auditors, clinical pharmacists, doctors specialized in obstetrics or pediatrics, etc.

1.3.2. Quality of health human resources does not yet satisfy the health care needs of the population

Quality assurance activities at medical training establishments and of training curricula has not yet been effectively implemented due to limitations in guidelines, monitoring, supervision and evaluation. Training curricula in Vietnam has not yet been internationally integrated in terms of approach, pedagogical methods and training contents.

Competency-based training and quality assurance of training facilities and curricula has not yet been effectively implemented due to limitations in guidelines, monitoring, supervision and evaluation. Vietnam’s training curriculum is not yet integrated with that in other countries in terms of approach, training methods and content.

Results of monitoring in 44 medical junior colleges indicate that many schools are operating at a large scale (there are even 5 schools with more than 2000 students), trainers with post-graduate education remain few in number (in 42% of junior colleges less than one fifth of instructors hold university degrees). Results of monitoring in 10 universities that provide training for students from disadvantaged areas or training to upgrade from lower to higher level degrees indicate a high share of their students are in these programs.

Management capacity of health sector managers remains weak because they have not yet received professional management training.

1.3.3. Distribution of health human resources

Geographic distribution of health workers is inappropriate. Despite improvements and changes in recruitment and geographic distribution of health workers, many shortcomings remain. It is difficult to attract high quality health workers. The number and quality of health workers is not appropriately distributed between treatment and prevention, across specialties, between central and provincial levels, and between urban and rural areas, particularly in mountainous areas. The main reason is that the remuneration package, working conditions and career development opportunities do not adequately compensate for the amount of time spent in training, the work effort required and the working environment, particularly for preventive medicine workers and health workers at the district and lower levels. Opportunities for continuing medical education to improve qualifications are insufficient, particularly in rural and mountainous areas.

2. Health Financing

2.1. Five-year plan (2011 – 2015) objectives and their implementation

In the 2011 – 2015 Five-year health sector plan, specific objectives relating to health financing were identified as: “Reform the financial and operating mechanisms of health sector service units, move towards greater public spending on health, develop universal health
insurance and adjust allocations and use of health financial resources to improve efficiency.”

This section makes a general assessment about the situation of health financing in Vietnam, while the specific tasks to achieve these objectives are discussed below.

Reforms in the operational and financial mechanisms of public health service units included three major policy documents. These are: (i) Decree No. 85/2012 laying out the roadmap for implementing full autonomy and incorporating the full cost of providing medical services into the government administered service prices of government medical facilities; (ii) Joint Circular No. 04/2012/TTLT-BYT-BTC revising the user fee schedule for medical services at government medical service facilities; and (iii) Resolution 93/NQ-CP (2014) stipulating a mechanism to strengthen public-private partnership in the health sector. While the goal of the Five-year plan was to “move towards greater public spending on health”, National health accounts data reveal a relative decline in spending. In 2010, public spending (state budget, social health insurance and external assistance) as a share of total health expenditure had reached 49.4%. During the period 2010 to 2012, public health spending increased 12.6% (in current price terms) per year, yet in real terms (adjusted for inflation), public health spending did not increase, but rather decreased 3.5% over this period. At the same time, total health expenditure increased 19% (in constant price terms) per year, which is equivalent to an increase of 2.9% per year in real terms. Consequently, by 2012, public spending on health had declined to 44.1% of total health spending [84]. This decline in the public share of total health expenditures and the reduction in growth of public spending on health is contrary to the intention of the Five-year plan. The consequence is that out-of-pocket spending of households on health as a share of total health spending increased from 44.8% in 2010 to 48.8% in 2012 (Figure 13).

Figure 13: Structure of health financing resources, 2010 and 2012

<table>
<thead>
<tr>
<th>Total health resources (billion VND)</th>
<th>2010</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>State budget</td>
<td>42.6%</td>
<td>46.6%</td>
</tr>
<tr>
<td>SHI</td>
<td>46.6%</td>
<td>48.8%</td>
</tr>
<tr>
<td>External assistance</td>
<td>2.8%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Households</td>
<td>15.8%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Other</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Note: Percentages indicate the relative size of each financial resource. Bar height indicates the current value of health resources from each source.
Source: National Health Accounts 1998 – 2012 [84].

Vietnam made the decision to develop a health financing system based on social health insurance, which is considered one of the measures to achieve universal health coverage. The 2013 Constitution of Vietnam stipulates “The State and society invest in development of the
protection and care of the people’s health and implement universal health insurance.” The roadmap to implement universal health insurance has been approved by the Prime Minister, with the goal that more than 80% of the population will be enrolled in health insurance by 2020. The Five-year plan also called for developing universal health insurance. Health insurance coverage expanded rapidly from 60% in 2010 to 71% by the end of 2014, and is expected to reach 75.3% by the end of 2015 [17].

Adjustments in allocations and use of health financing to improve efficiency were made mainly through policies on provider payments. Two important policy documents in this area include MOH Decision No. 5380-QD-BYT (2013) on implementing a pilot to revise the capitation payment mechanism for health insurance reimbursement of medical services and MOH Decision No. 488/QD-BYT (2015) on piloting case mix payments.

Basic health financing targets and indicators are regularly monitored to assess the overall health financing situation and achievement of plan targets, but also to facilitate making adjustments to policies and plans. Table 5 shows that the 2015 target of health insurance coverage of the population was achieved. However, the financial protection goals were not achieved as hoped, since the out-of-pocket share of total health expenditures has increased, while catastrophic spending and impoverishment due to health spending remain at relatively high levels. The overall share of GDP spent on health in Vietnam is relatively high compared to other countries. This suggests that further reforms of health financing will have to focus on improving efficiency rather than mobilizing additional resources for health, and enacting policies that more effectively reduce the financial burden on households using health services.

Table 5: Monitoring basic health financing targets and indicators, 2010 – 2014

<table>
<thead>
<tr>
<th>STT</th>
<th>Target/indicator</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014 (est.)</th>
<th>Goal 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health insurance coverage rate (%)</td>
<td>60.3</td>
<td>65.0</td>
<td>66.4</td>
<td>68.5</td>
<td>71.0</td>
<td>70%</td>
</tr>
<tr>
<td>2</td>
<td>Out-of-pocket share of total health expenditures (%)</td>
<td>44.84</td>
<td>45.58</td>
<td>48.83</td>
<td></td>
<td></td>
<td>Reduce</td>
</tr>
<tr>
<td>3</td>
<td>Prioritize state budget spending on preventive medicine (at least 30% of state budget health expenditures)</td>
<td>68.6</td>
<td>69.8</td>
<td></td>
<td></td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>4</td>
<td>Growth rate of public health spending (%) (current prices)</td>
<td>35.70</td>
<td>(0.50)</td>
<td>(6.51)</td>
<td></td>
<td></td>
<td>Rapid growth</td>
</tr>
<tr>
<td>5</td>
<td>Health spending as a share of GDP (%)</td>
<td>6.36</td>
<td>6.20</td>
<td>5.97</td>
<td></td>
<td></td>
<td>There is no goal in Five-year plan</td>
</tr>
<tr>
<td>6</td>
<td>Public share of health spending</td>
<td>49.40</td>
<td>47.51</td>
<td>44.11</td>
<td></td>
<td></td>
<td>50%</td>
</tr>
</tbody>
</table>

9 Data provided by VSS (May/2015)
Chapter II: Implementation of the Plan for the protection, care and promotion of the people’s health 2011 – 2015

<table>
<thead>
<tr>
<th>STT</th>
<th>Target/indicator</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014 (est.)</th>
<th>Goal 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Per capita health spending by region (1000 VND)</td>
<td>1579</td>
<td>1967</td>
<td>2184</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red River Delta</td>
<td>1887</td>
<td>2247</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Northeast</td>
<td>1524</td>
<td>1956</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Northwest</td>
<td>1183</td>
<td>1442</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>North central coast</td>
<td>1232</td>
<td>1533</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>South central coast</td>
<td>1252</td>
<td>1584</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Central Highlands</td>
<td>1187</td>
<td>1506</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Southeast</td>
<td>2240</td>
<td>2786</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mekong River Delta</td>
<td>1247</td>
<td>1601</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>% of households facing catastrophic spending</td>
<td>3.3</td>
<td>2.5</td>
<td>2.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>% of households facing impoverishment due to health spending</td>
<td>2.4</td>
<td>1.8</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Indicator 1-Health insurance Department of the MOH; Indicators 2 – 7: National Health Accounts [84]; Indicators 8 – 9 Hoang Van Minh and Nguyen Kim Phuong 2015 [85]

2.2. Assessment of implementing Five-year plan tasks on health financing

2.2.1. Tasks related to financial resources mobilization

**Task 1: Rapidly increase state budget spending on health**

Continue to raise state budget spending on health at a growth rate higher than the growth rate of the overall state budget spending in line with Resolution 18 of the National Assembly; increase the share of state budget spent on health to 10% or more to meet the need for investments and recurrent expenditures on health. By 2015, raise the percentage of public health expenditure (including resources from state budget, social health insurance and external assistance) to at least 50% of total health expenditure of society.

**Task 2: Ensure investment capital from public sources for approved projects**

Ensure adequate funds from the state budget, government bonds and grants to invest in projects approved by the Prime Minister including the Master plan of health system development (under Decision 153/2006/QD TTg) and the projects under Decision 47/2008/QD-TTg (district hospitals), Decision 930/2009/QD-TTg (specialized hospitals), and Decision 950/2007/QD-TTg (CHSs).
Task 3: Expand international cooperation

Expand international cooperation, mobilize and effectively implement international support projects including overseas development assistance (ODA) and non-governmental organizations (NGO) for the development of the health sector.

Implementation results

The share of the state budget spent on health in 2014 is estimated to be 8.2%, an increase compared to 2010 when it was only 7.7%.

According to data on implementing the draft health sector budget for the period 2011 – 2015, state budget funding for health expenditures in 2011 – 2015 increased annually at a rate higher than the overall state budget expenditure, achieving the target set under Resolution 18 of the National Assembly (with the exception of 2011 when the growth rate was negative after adjusting to constant prices using the GDP deflator) (Figure 14).

Figure 14: Percentage increase in state budget allocations for health expenditure and overall state budget allocations, 2011 – 2015

Source: The Planning and Finance Department, MOH

According to data from the National Health Accounts 2012, state budget accounted for 27% of total health expenditures. Recurrent expenditure accounted for about 55% of total state budget spending, the majority of which is provincial spending. Funds from the state budget reserved for fully or partially subsidizing health insurance premiums for various entitlement groups defined under the Health Insurance Law accounted for less than 20% of total state budget spending on health. Among state budget allocations for health, funding for investment and development, including from government bond funding, fluctuated around 20% (Figure 15). Funds from government bonds were reserved for projects to refurbish health facilities, including the project of district and inter-district regional hospitals under Decision 47/2008/QD-TTg, the project for refurbishment of provincial general hospitals and some central and provincial specialist hospitals under Decision 930/QD-TTg (2009) and investment for development of CHSs according to Decision No. 950/QD-TTg (2007).
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and promotion of the people’s health 2011 – 2015

Figure 15: Uses of state budget funding for health, 2011 – 2015

Source: The Planning and Finance Department, MOH

Public funding for health includes state budget funding, health insurance payments for
medical services and external assistance funds from loans and grants. According to the National
Health Accounts for 2012, public expenditure accounted for 44.1% of total health expenditure
[84]. From 2011 to 2015, total public expenditure for health increased on average 10.2% per year
(adjusted for inflation). The contribution to public financing from health insurance (including
state budget subsidies for health insurance premiums for target groups) increased from 27% in
2010 to 35% in 2015 while the contribution from the state budget fell from 70% to 63% and
from external assistance from 4% to 2% in the same period (Figure 16).

Figure 16: Public financing for the health sector, 2010 – 2015

Source: The Planning and Finance Department, MOH
To realize the goal of universal health insurance coverage, the number of people covered by health insurance must increase and the health insurance premiums also must increase in line with increases in salary. Between 2010 and 2014 health insurance coverage increased 18.3% and the premium per card increased by 75% (in current prices), although the CPI indicates an 87% increase in prices of medical services and drugs over the same period.

New sources of state budget funding have been developed over the past few years including the tobacco control fund. According to the Tobacco Control Law, starting in 2013, the tobacco control fund officially began collecting funds from contributions of enterprises producing or importing tobacco products. Each year, the tobacco control fund collects about 400 – 500 billion VND, to be used for tobacco control activities, IEC, policy development and studies to learn about international experience. In the future it is likely that sin taxes on alcohol and environmental fees will contribute additional funds to the state budget for health.

In the context of a general decline in external assistance funds for Vietnam, the health sector is still striving to mobilize additional alternative external assistance funds. External assistance funds have been maintained at about 1.5% of total health expenditure. Decree 38/2013/ND-CP of the government on the management and utilization of official development assistance (ODA) and concessionary loans from donors is expected to overcome previous problems related to ineffective management of external assistance to enhance donor confidence that funds will be effectively used.

**Difficulties, shortcomings**

Even though the Five-year plan goals include rapidly increasing state budget spending for health and increasing the public spending share of total health spending, nevertheless recent data indicate that the public share of total health expenditure has seen a slight downward trend from 49.4% in 2010 to 44.1% in 2012. The goal of public spending accounting for 50% of total health expenditure and a sustainable increase in public spending on health have not been achieved. At the same time, the increase in the share of state budget spent on health has not been stable in order to meet the target for state budget health spending to grow faster than overall state budget spending (National Assembly Resolution 18). It will be difficult to achieve the target of 10% of total state budget being spent on health, particularly in light of recent reductions in growth of state budget spending on health. Macro-economic difficulties have had a substantial adverse effect on implementing the goals of increasing state budget spending on health. Inadequate attention has been paid to mobilization of innovative new sources of funding for health.

The contribution of social health insurance to total health expenditure remains relatively low compared to the health insurance coverage rate in terms of population coverage. While 66% of the population was covered by health insurance in 2012, only 15.8% of total health spending came from health insurance in that year. The underlying reasons for this include: (i) health insurance does not cover most preventive medicine, public health and health promotion service delivery costs, which account for 17.2% of total health expenditures; (ii) health insurance does not pay for costs of the population not yet covered by health insurance (about 30% of the population); (iii) health insurance does not cover self-medication costs for insured individuals; (iv) the insured still have to pay some items when using medical services, particularly when bypassing lower level facilities or when using private sector facilities. However, even considering the eligible expenditures to be reimbursed by health insurance, i.e.
costs of inpatient and outpatient care, the contribution of health insurance remains low. In 2011, as a share of total curative care spending, health insurance accounted for only 25% compared to population coverage of 65%.

The household out-of-pocket share of total health expenditure remains high at 48.8% in 2012 and has seen a slight increase in recent years. One of the downsides and risks of implementing the hospital autonomy policy was to increase the out-of-pocket payment of patients, including insured patients.

Provincial disparities in public spending on health (including payment from the health insurance fund) affect equity in health care. In the context of important provincial differences in the ability to mobilize private resource and correlated differences in the contributions to the health insurance fund to cover medical services, the state budget plays an important role to equalize resources across localities. However, long delays in updating data on public expenditure for health due to decentralization of public finance management and prolonged state budget reconciliation processes, it is difficult or even impossible to collect and analyze monitoring data on public expenditure for health in a timely fashion.

State budget allocation of capital to implement projects for infrastructure development and procurement of medical equipment falls short or suffers long delays. Some investment projects in the health sector were approved by the Government, without any budget commitment and no mechanism to ensure that the assigned sources of funding were actually mobilized and funds allocated. This is the case for the project to support development of the district preventive medicine centers for the period 2007 – 2010, approved by the Prime Minister in Decision No. 1402/QD-TTg, the project to invest in building CHSs in disadvantaged regions for the period 2008 – 2010, approved with Decision No. 950/QD-TTg and the more recent project to invest in upgrading traditional medicine hospitals (Decision No. 362/QD-TTg in 2014). In all of these projects, local budgetary sources were supposed to be the main source of capital, including extracting capital from existing related projects, while central state budget was only intended to be supplementary, and in all projects social mobilization or ODA were encouraged.

Implementation of Projects 47 and 930, mentioned in the Five-year plan, suffered long delays due to shortage of funds, with many projects approved in the 2007 – 2009 period, not completed by 2015 (Table 6).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>17 000</td>
<td>14 000</td>
<td>12 548</td>
<td>20 818</td>
<td>148.7%</td>
</tr>
<tr>
<td>930</td>
<td>45 280</td>
<td>32 628</td>
<td>10 652</td>
<td>32 250</td>
<td>98.8%</td>
</tr>
<tr>
<td>Total</td>
<td>62 280</td>
<td>46 628</td>
<td>23 200</td>
<td>53 068</td>
<td>113.8%</td>
</tr>
</tbody>
</table>


External assistance for health accounts for a small portion of total health expenditure and is expected to be further reduced in the coming years. However, there are programs and activities that are heavily dependent on this source of funding, which will now require attention to ensure continued funding from alternative sources such as the state budget or private contributions.
2.2.2. Development of universal health insurance

Task 1: Ensure participation in health insurance among working people

Develop a sustainable universal health insurance, with at least 80% of Vietnam’s population covered by health insurance by 2015. Ensure compliance with health insurance premium contributions in the formal labor sector; strengthen supervision and inspection and penalize those who do not participate in health insurance according to government regulations. Develop a roadmap for implementing overall solutions to effectively and rapidly roll out health insurance for informal labor groups.

Task 2: Continue to provide state budget subsidies to purchase health insurance for priority groups

Continue to increase support from the state budget to purchase health insurance cards for the poor, near poor, children under 6 years of age, the elderly, ethnic minorities and other social assistance beneficiaries. Gradually expand the state budget to support the indirect costs of treatment (food, travel costs) for the poor and disadvantaged when hospitalized in public hospitals to increase accessibility to and utilization of health care services from these groups.

Task 3: Improve entitlements of people with health insurance

Along with scaling up the share of population covered by health insurance, the benefits and quality of health services must also improve (depth of coverage). Improve the health insurance purchasing and payment procedures to facilitate use of health services among people with health insurance.

Implementation results

Remarkable progress has been made in implementing the health insurance tasks set out in the 5-year health sector plan 2011 – 2015. The MOH closely coordinated with Vietnam Social Security (VSS) and other ministries/sectors, and stakeholders to revise health insurance policies and legislation, especially the Amendments to the Health Insurance Law passed by the National Assembly in 2014, which came into effect in January 2015. The refinements and increasing consistency of legal documents on health insurance serves as a strong legal foundation for the goals of sustainable development of health insurance. The Government issued Decree 92/2011/ND-CP on administrative penalties in health insurance, which covers violations such as non-payment of compulsory health insurance premiums. Subsequently, the MOH has issued Decision No. 3745/2012/QD-BYT on inspection of implementation of health insurance policies in health facilities. The application of these important legal documents has helped to strengthen compliance with health insurance contributions in the formal labor sector; strengthened supervision, checking and imposition of penalties among employers not contributing to health insurance according to regulations and law. A roadmap for implementing universal health insurance has also been approved by the Prime Minister in Decision No. 538/QD-TTg (2013), which identifies specific objectives for each period and the overall and coherent solutions to perform these objectives. According to the Roadmap, health insurance coverage should reach 80% by 2020.
The share of population covered by health insurance continued to increase on average 4.3% per year between 2010 and 2014, reaching 71% in 2014 and 75.3% in 2015 (Figure 17).

**Figure 17: Health insurance population coverage rate, 2010 – 2015**

Source: VSS, 5/2015; MOH Annual review report for 2015 [17].

Analysis of health insurance enrollee structure showed that most of the insured belong to groups whose health insurance coverage is fully or partially subsidized by the state budget. These groups accounted for 70% of all health insurance consumers (Figure 18). This achievement reflects a strong political and financial commitment of the Government for the implementation of the objectives on expanding health insurance coverage.

**Figure 18: Trends in structure of health insurance coverage by entitlement group in the Health Insurance Law, 2009 – 2014**

Source: VSS, May/2015
Analysis of health insurance coverage by entitlement group over time indicates that groups with nearly 100% coverage of eligible population included government staff, pensioners, the poor and ethnic minorities. Students and pupils also had a very high participation rate of up to 94% in 2014. Two groups with stable and clear increases in coverage are students and the near poor. The health insurance payment of these two groups was partially subsidized by the state budget. The health insurance coverage among groups considered as voluntary consumers increased steadily over time (Figure 19). In 2012, the Prime Minister approved an increase in the subsidy for health insurance premiums among the near poor from 50% to 70% (Decision No. 797/QD-TTg).

Figure 19: Trends in health insurance coverage rate by entitlement group, 2011 – 2014

Along with the expansion of health insurance coverage, the benefits for the insured have also increased. The Law revising and amending some articles of the Health Insurance Law expanded entitlements of people with health insurance. According to current regulations, most currently available drugs and health services are covered by health insurance. The co-payment percentage was reduced for some groups. The health insurance package in Vietnam is comprehensive and broad in scope. Insured individuals used their insurance on average 2.1 times per year in 2014, an increase of 8.5% compared to 2010. This indicator reflects to some extent an increase in the coverage of health services for the insured. With 80% of the insured registered for first level care at commune and district levels, the insured can easily access health facilities when they need health care. There are substantial differences in the average frequency of medical service contacts among entitlement groups, particularly the voluntary group, which had double the frequency of medical service contacts compared to the average (Figure 20).
Figure 20: Average number of medical service contacts using the health insurance card by entitlement group, 2014

<table>
<thead>
<tr>
<th>Entitlement Group</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remaining (mainly voluntary) group</td>
<td>4.34</td>
</tr>
<tr>
<td>Students and pupils</td>
<td>0.76</td>
</tr>
<tr>
<td>Children under age 6</td>
<td>1.73</td>
</tr>
<tr>
<td>The poor and near poor</td>
<td>1.43</td>
</tr>
<tr>
<td>Pensioners and social assistance</td>
<td>3.43</td>
</tr>
<tr>
<td>beneficiaries</td>
<td></td>
</tr>
<tr>
<td>Civil servants and formal</td>
<td>2.03</td>
</tr>
<tr>
<td>sector workers</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>2.11</td>
</tr>
</tbody>
</table>

Source: VSS, May/2015

As the fund holder, in recent years the VSS has made special efforts to ensure financial sustainability of the health insurance fund. The medical care expenditure per insured individual has been maintained below the premium contribution per card in the period 2010 – 2014. In 2014, the average expenditure per card was 636 082 VND. Pensioners and social assistance beneficiaries have the highest expenditure which was 2.6 times higher than the average, followed by the voluntary group, which was nearly two times higher than the average. The student group had the lowest expenditure per card, about one sixth of the average.

**Difficulties, shortcomings**

Over the past 5 years, health insurance continues to develop to provide financial protection for the people when they use health services. Figure 21 shows that between 2008 to 2014, a major decline has occurred in the proportion of households with catastrophic health spending exceeding 40% of capacity to pay and the proportion of households impoverished as a result of health spending, however the pace of decline has slowed. By 2012, it is estimated that 982 287 households faced catastrophic health spending (health spending exceeding 40% of ability to pay), with a high correlation between catastrophic spending and presence of an elderly person in the household or residence in rural areas. In the same year 2012, it is estimated that 583 724 households fell into poverty as a result of spending on health services. This means that for 2.5% of households in Vietnam, the amount of money leftover in the household budget after spending on health puts them below the poverty threshold. The impoverishment rate due to health spending in Vietnam is higher than in China (1.8%), Indonesia (1.7%), Laos (1.4%), Philippines (1.0%) and Thailand (0.7%) [85].
Progress in expanding health insurance coverage has slowed in recent years: the growth rate in health insurance coverage declined from 8.3% per year in 2011 to only 2.9% in 2014. The groups with low health insurance participation include: (i) the enterprise group: the health insurance coverage rate reached only 48%, in the 5 years from 2010 to 2014, participation in this group has not only failed to increase, but has even fallen slightly; (ii) the near poor: the coverage rate reached only 55% despite 70% subsidies for health insurance premiums; (iii) the voluntary group: has only reached 34% coverage, with over 65% still not covered by health insurance.

The effectiveness of health insurance coverage should be strengthened in three aspects: access to services, medical service quality, and reduction of out-of-pocket payment of people with health insurance. However, so far the health insurance agency has not taken an active (strategic) purchasing role. Supervision of the health insurance fund has not been effective, partly due to delays in applying information technology.

Most people with health insurance belong to groups entitled to state budget subsidies, so health insurance is not contributing much to mobilizing resources for health. Meanwhile for the voluntarily insured, the health insurance contribution is relatively low while the frequency of using health insurance and the average expenses per card of this group are high, leading to a threat to sustainability of social health insurance.

### 2.2.3. Tasks related to efficient use of health financing

Adjustments in allocation and use of health financing resources to increase efficiency involve mainly two policies for piloting provider payment reforms. These are MOH Decision No. 5380/QD-BYT (2013) to pilot revisions in capitation payments from the health insurance fund to providers and MOH Decision No. 488/QD-BYT (2015) to implement the pilot test of case mix payments.
Chapter II: Implementation of the Plan for the protection, care
and promotion of the people’s health 2011 – 2015

Task 1: Prioritize allocation of state budget to preventive medicine

Prioritize state budget allocation for preventive medicine (at least 30% of state health budget), grassroots healthcare, PHC, service delivery in mountainous, isolated and remote areas and implementation of basic social policies on health (such as supporting the poor, children under age 6, etc.).

Task 2: Reform state budget allocation mechanism towards pay for performance

Gradually reform the state budget allocation mechanism for health facilities towards performance-related pay and payment for achieving targets; strengthen autonomy of state health service delivery facilities, combined with mechanisms for checking and verification to increase efficiency and effectiveness in use of state budget spending on health.

Task 3: Control healthcare costs

Implement appropriate measures to gradually control healthcare costs, gradually reducing the share of household out-of-pocket payments in total health expenditures, through reforming hospital service payment mechanisms (bundled prices), developing standard care pathways, strengthening checking and monitoring of prescriptions, use of pharmaceuticals, lab tests, and medical technologies, and improving quality of services to reduce average length of stay.

Task 4: Reform the hospital financing and payment mechanisms

Implement classification of public hospitals and health facilities to improve autonomy and accountability. Manage hospital finances by implementing the Government decree on reforming the operational and financial mechanisms in the health sector. Implement the hospital autonomy policy.

Reform medical service prices by developing a medical service price schedule based on correct and full accounting of costs of inputs and a transparent payment mechanism for medical services.

Reform the hospital and medical service payment mechanism (capitation, case mix). Pilot application of partial case mix payments for common conditions being treated as inpatients at hospitals to replace the fee-for-service mechanism. By 2015, strive to ensure that 50 – 70 common medical conditions are paid on a case mix basis. Study the feasibility of moving towards case mix payments appropriate for Vietnamese conditions. Implement feasible methods to control hospital costs.

Implementation results

Prioritization of state budget allocation for preventive medicine was concretized in the target set in National Assembly Resolution No. 18/2008/QH12: “Allocate at least 30% of state health spending on preventive medicine.” But the definition of the term and distinction of what is included in “preventive medicine” and “health budget” were unclear and inconsistent. According to the National Health Accounts, out of total state budget funding for health, including both central and local levels, the proportion allocated for preventive medicine and health promotion accounted for 69.8% in 2011 [84]. Note that this does not include user fee revenues paid to state facilities nor does it include health insurance reimbursements. Following the State Budget Law
definition, preventive health spending reached 43.9%, since total state budget officially also includes “charges and fees, income from business activities and other revenues paid into the state budget from government entities.” However, when comparing to total health expenditures of the whole society, preventive and promotive health spending accounted for only 27.9%. Results of analysis of data on national budget allocated to the health sector and managed by the MOH in the 2011 – 2015 period, preventive medicine funds accounted for only 16 – 17% of central budget allocations, going as low as 11.3% in 2012. If state budget funding of NTP programs is included in preventive health spending (since most activities are preventive), the figure rises to 30%.

According to data on the implementation of the state budget for the 2011 – 2015 period, funds for NTPs increased in the 2011 – 2013 period, followed by a substantial decrease in the last 2 years from 2014 to 2015. The funding structure of NTPs also changed towards reducing the government contribution (from 92% to 53%), leading to increased dependence on external assistance grant and loans (Figure 22).

**Figure 22: Financial resources of NTPs on health, 2011 – 2015**

![Financial resources of NTPs on health, 2011 – 2015](image)

Source: The Planning and Finance Department, MOH

The investment policy to strengthen the grassroots health network in recent years was mainly financed by government bond funding to refurbish and upgrade district general hospital, inter-district regional hospitals and regional polyclinics according to Resolution 18/2008/QH12 of the National Assembly and Prime Ministerial Decision No. 47/2008/QD-TTg. Total government bond capital allocated from 2008 – 2014 was 20 818 billion VND, with an amount of 2735 billion VND remaining for 2016 spending [86]. In addition, by the end of 2011, the provincial budgets contribution was around 2693 billion [87]. To find a way to achieve breakthrough change for grassroots health care, on 24 – 25 March 2015, the MOH organized the first conference on Strengthening grassroots health for PHC toward universal health care. Investment in and financing for grassroots healthcare was one of the three key topics of the conference. The difficulties, problems, shortcomings and challenges in financial investments
for grassroots health care have been analyzed as a basis for proposing financing solutions for grassroots health.

The roadmap for implementing universal health insurance is supported by strong political commitments and financial support from the state budget. The implementation of social policies was ensured by partial or full state budget subsidies to enable vulnerable groups to participate in health insurance. The number of beneficiaries and the amount of subsidies increased over time following provisions of the Health Insurance Law. Funds from the central state budget to subsidize health insurance cards for the poor, ethnic minorities and children under age 6, and to provide partial subsidies for the near poor, students and members of middle-income agricultural households are included in annual state budget estimates. Total funds from the state budget to subsidize health insurance for these beneficiaries increased over time, in 2015 estimated at 20% of the total state health budget.

One of the key health financing policies in the period 2011 – 2015 was transformation of the operational and financial mechanisms applied to state health facilities. Decree No. 85/2012/ND-CP on the operation and financing mechanism for public health facilities; prices of health care services at public health facilities has been issued in October 2012. Two fundamental issues were addressed in this policy, further granting of managerial autonomy and reforms in the financing mechanism, moving away from direct subsidies to government health facilities towards indirect subsidies for consumers of health services through subsidies for contributions to health insurance. The shift in the form of the subsidy requires that gradually incorporating the full costs of providing services into the service prices following the roadmap to be completed in 2018. Joint Circular No. 04/2012/TTLT-BYT-BTC on the price schedule for 447 health care services has incorporated three out of seven service price components. In 2016, Decree No. 16/2015/ND-CP adjusted the roadmap, now the human resource component and the wages the service price are expected to be added in 2016, and a completed set of components is planned to be fully calculated in 2020.

The autonomy of public hospitals was implemented according to regulations under Decree No. 43/2006/ND-CP and adjusted in accordance with Decree No. 85/2012/ND-CP and Decree 16/2015/NDCP. A recent WHO assessment on implementation of autonomy in Vietnamese hospitals, had the following results: (1) hospital director authority to manage and operate hospitals has increased; (2) hospital facilities and equipment were upgraded in a context of limited state budget funding; (3) attitudes and conduct of health workers shifted more towards considering patients as clients; (4) the scope of hospital services expanded, especially the range of technical services applying high-technology and expensive equipment.

In recent years, the MOH have been focusing on reforming provider payment methods, focused on reforming capitation and intensifying piloting of case mix payments, while continuing to seek more effective methods for managing fee-for-service payments.

The project on piloting capitation was implemented from January to December 2014 according to Decision No. 5380/QD-BYT and extended for a year to December 2015. The project was implemented in four provinces: Bac Ninh, Ninh Binh, Thua Thien Hue and Khanh Hoa. Bac Ninh and Ninh Binh applied a capitation payment model for outpatient services only while Hue and Khanh Hoa implemented capitation payment for inpatient and outpatient services at district and commune levels. During the capitation pilot, the project steering committee paid special attention to monitoring and evaluation. Bi-annual workshops were organized to review
the results of implementation, find solutions to overcome difficulties arising in implementation. The assessment of the pilot and proposal for modification will serve as the basis for development of a circular guiding scaling up of revised capitation models nationwide starting in 2016.

Along with the capitation pilot and refinement of the capitation payment mechanism, the case mix payment mechanism is also being developed, with a research project piloting payment for 26 common medical conditions under the Health human resources sector development program funded by ADB and other activities to develop a pilot project on case mix payments. The Minister of Health signed Decision No. 488/QD-BYT (2015) on piloting the case mix payment method for medical services during the period 2015 to 2020. The design and implementation of the pilot focus on capacity building for health staff on the payment method and strengthening and ensuring compatibility of the information systems between hospitals and VSS. A series of training workshops were held in Vietnam and abroad with the participation of international experts, contributing to raising awareness and knowledge for related staff. In addition, the MOH also organized study tours to countries with experience in effective management of the fee-for-service payment mechanism, such as Japan and Korea, and workshops organized in Vietnam for discussion of these policies with experts.

One of the priority tasks in the 5-year health sector plan 2011 – 2015 was to gradually control healthcare costs and reduce the household out-of-pocket share of total health expenditures. VSS as the health insurance fund holder is implementing strict measures to control healthcare costs reimbursed by the health insurance fund, such as applying caps on total charges, auditing of claims, tightly controlling drug costs from procurement to prescription. The implementation of drug price control following drug procurement regulations under Circular 01/2012/TT-BYT-BTC and related documents showed good results in reducing drug costs paid by health insurance. In some provinces the price of drug procurement fell 20 – 30% compared to the initial estimated price. The analysis of average costs of outpatient and inpatient visits from 2010 – 2014 showed a remarkable decrease in the rate of cost escalation (Table 7).

### Table 7: Average cost per outpatient and inpatient visit for the insured, 2010 – 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average cost/outpatient visit (VND)</td>
<td>97 862</td>
<td>113 542</td>
<td>131 629</td>
<td>138 989</td>
<td>138 341</td>
</tr>
<tr>
<td>Year on year rate of increase</td>
<td>16.02</td>
<td>15.93</td>
<td>5.59</td>
<td>(0.47)</td>
<td></td>
</tr>
<tr>
<td>Average cost/inpatient visit (VND)</td>
<td>1 166 816</td>
<td>1 452 280</td>
<td>1 687 258</td>
<td>1 969 760</td>
<td>2 077 757</td>
</tr>
<tr>
<td>Year on year rate of increase</td>
<td>24.47</td>
<td>16.18</td>
<td>16.74</td>
<td>5.48</td>
<td></td>
</tr>
</tbody>
</table>

**Difficulties, shortcomings**

Priority allocation of state budget to the grassroots health system has not yet been assured. An appropriate level of investment and financial mechanism to strengthen grassroots health care is not yet in place. Specifically:

- Funds to ensure implementation of basic functions and tasks assigned to district health centers and CHSs remain inadequate. One of the key problems in strengthening the grassroots healthcare system is the need to review the tasks and functions of grassroots health care to ensure they are suitable with current healthcare needs.
Some grassroots health system investment projects were approved by the National Assembly and Government but funds were not allocated for implementation, specifically Project 950, investing in CHSs in disadvantaged regions and Project 1402 investing in district health centers with specialized preventive medicine function.

Funding to cover recurrent costs of commune and district level facilities are still based on inputs or state budget norms, and are not yet allocated based on activities or actual need to encourage improvements in effectiveness and quality of activities.

Fund allocations for NTPs were cut abruptly before the activities funded from this source could be integrated into general health system activities. Funds for NTPs are still heavily dependent on external assistance, while this source of funding is being reduced as a result of Vietnam achieving lower middle income status.

Implementation of provider payment reforms is still facing many difficulties:

- Provider payment reforms are difficult and complicated because they are directly related to the conflicting interests of different stakeholders. Therefore, apart from technical issues, the cooperation, collaboration and consensus of stakeholders, particularly between the health sector and VSS at central and local levels is extremely important. No effective or clear coordination mechanism is yet in place.
- The information system and data are severely limited.
- There is not yet a dispute resolution mechanism related to health insurance reimbursement of medical care costs (arbitration of disputes).
- The use of cost-effectiveness evidence in financial resources allocations, and in selecting services and drugs to be reimbursed by health insurance, remains very limited.
- The proportion of unnecessary hospitalization was relatively high (20%).

2.3. Priority Issues

2.3.1. Inadequate coordination, coherence and consistency among health financing policies

- Lack of strategic health financing objectives to orient health financing policy formulation, implementation, monitoring and evaluation. Health financing policies and plans often conflict leading to reduced effectiveness.
- Lack of access to public finance data, including social health insurance data and data analysis to monitor the proportion of public health expenditures going to different levels of the health system, hindering the ability to assess whether public financing is allocated towards policy priorities.
- Many health financing plans and policies have not adjusted in line with changes in health system priorities and transformations including:
  - The current capitation fund-holding model puts district hospitals at risk when they have to pay for costs of referrals and bypassing to higher level facilities. There is no incentive to refer downward to the district or commune level.
CHSs have little incentive for increasing performance, particularly for community health or outreach services.

Health financing plans have not been adjusted promptly to respond to reduction in ODA that occurred as Vietnam became a middle-income country.

Some health financing plans have not yet been issued to ensure funding for healthcare services that were previously put in place to ensure a funding mechanism for services previously organized and funded through NTPs, including basic services such as HIV/AIDS, TB and immunizations.

Health financing plans rarely take into account rising and geographically uneven private sector investments in the health sector (including PPPs).

Important health system priorities have not received adequate funding, such as statistics and reporting or continuing medical education.

2.3.2. Limitations in efficiency of financial resource utilization

Inefficiencies exist in the health system due to inappropriate incentives related to:

- Slow reforms in the health insurance provider payment mechanism.
- Lack of incentives for effective performance of preventive medicine services and public health activities due to the government budget financing mechanism that mainly pays when epidemics occur, not when they are prevented.
- Conflicts of interest and cost escalation arising from implementing the hospital autonomy policy in a context of inadequate regulation or oversight of service provision and costs of care.

Inefficiencies due to inadequate reliance on evidence in policy formulation and implementation:

- Lack of clear evidence-based clinical practices (including overprescription, overuse of diagnostic imaging, lab testing, etc.).
- Lack of evidence-based policymaking approaches especially related to the development of the social health insurance benefit package, such as cost-effectiveness analysis, impact evaluation, etc.

Health insurance administration lacks necessary conditions to implement strategic purchasing, which could increase effectiveness of social health insurance expenditures including:

- Inadequate clarity in allocation of responsibilities and authority for deciding what to purchase, from whom and how.
- Insufficiently trained human resources, particularly for insurance claims auditing and health insurance statistical analysis.
- Lack of standard clinical guidelines for many diagnoses to assess clinical appropriateness, particularly for costly diagnostic imaging and prescription drugs.
2.3.3. Inadequate financial protection

- Despite increasing health insurance coverage, the share of total health spending paid by households out-of-pocket has not declined, and at the same time Vietnam has a relatively high number of households pushed below the poverty line due to health spending.

- The share of the population covered by health insurance is not increasing adequately fast as the uninsured belong to groups for which compliance with compulsory insurance is difficult to achieve (self-employed agriculture or non-farm activities or non-working middle income groups). In addition, the enforcement of compulsory social health insurance enrollment among employees of small and medium enterprises remains ineffective.

- Health insurance coverage depth is inadequate as the scope of the insurance package is not based on an assessment of healthcare needs of the population, particularly for preventive care needs or services that were previously funded through NTPs whose funding has been cut, while those services are not yet incorporated into the insurance package.

- Financial protection from health insurance is also inadequate. In part this is due to inefficiencies in the provision of care leading to high out-of-pocket payments for insured patients. Low financial protection and low access to effective services is particularly a problem among ethnic minorities, the poor and residents of disadvantaged areas due to low awareness of entitlements, or difficulties in accessing necessary services.

3. Pharmaceuticals, vaccines, biologicals, medical infrastructure and equipment

3A. Pharmaceuticals, vaccines and biologicals

3A.1. Five-year plan (2011 – 2015) objectives

Regarding pharmaceuticals, the main objective set out in the Five-year plan for 2011 – 2015 is to “develop the domestic pharmaceutical industry, increase efficiency in management and use of drugs and medical biological products.” In order to implement this objective, the Plan set out some focal tasks that the pharmaceutical sector must implement, which are summarized in the following four groups:

- Improving policies and regulations related to the pharmaceutical industry
- Increasing access to medicines
- Management of drug quality
- Safe and rational use of drugs
3A.2. Assessment of implementing Five-year plan tasks on pharmaceuticals

3A.2.1. Improving the system of legal documents related to pharmaceuticals

In 1996, the Government of Vietnam issued Resolution No. 37/CP, approving two influential and important policies affecting the pharmaceutical sector, namely: (i) Strategic orientation on people’s health care to 2000 and 2020; and (ii) the Vietnam National Drug Policy. After nearly 20 years of implementing Resolution 37/CP, the pharmaceutical industry has made substantial achievements in all aspects of state management of pharmaceuticals including manufacture and supply of drugs, quality assurance and safe and rational use of drugs. The goals and main tasks of the pharmaceutical industry for the period 2011 – 2015 were built on those of the 1996 National Drug Policy, as embodied in the following policies and guidelines.

The Project “Development of the pharmaceutical industry and models for drug supply systems in Vietnam for the period 2007 – 2015 and vision to 2020” (Prime Ministerial Decision No. 43/2007/QD-TTg) set the overall objective as “Develop Vietnam’s pharmaceutical industry into a key technical-economic sector with an orientation towards industrialization and modernization; improve Vietnam’s domestic drug manufacturing capacity and strengthen its drug supply system to ensure regular and timely supplies of adequate amounts of quality drugs at reasonable prices, that are used safely and effectively for the protection, care and promotion of the people’s health, meeting the requirements for regional and international integration.”

In the period 2011 – 2015, the MOH has advised the relevant authorities to issue or has directly issued 37 policy documents. These documents represent the major state policies in the field of pharmaceuticals and guidance for regulation of the pharmaceutical trade, drug registration, quality assurance, competitive tendering for drug procurement and safe and rational use of drugs. Among these are two major documents that provide an orientation for the pharmaceutical sector in the coming years:

- National Strategy for Development of the Vietnamese pharmaceutical industry to the year 2020 and vision to 2030 in Prime Ministerial Decision No.68/QD-TTg (2014).

In the 2014 agenda for developing laws and ordinances, the MOH has taken the lead for formulating the Law revising some articles of the Pharmaceutical Law. On 17 April, 2014 the Government submitted draft amendments to the Law to the Standing Committee of the National Assembly. After reviewing the draft revised law, the Standing Committee of the National Assembly gave its opinion that comprehensive and sustainable development of the pharmaceutical industry would require expansion of the scope of amendments to the Law, particularly on the issues related to pharmaceutical industry and medicinal ingredients development, drug price management and a few other areas. Thus, the Standing Committee of the National Assembly requested that submission of the draft Law to the 7th session (June 2014) be postponed, to allow for further research and preparation to expand the scope of adjustments in the revised Pharmaceutical Law. After more than one year, the revised Pharmaceutical Law was submitted by the Government to the National Assembly (562/TTr-CP) on 22 October 2015 and the National Assembly has discussed the Law. It is expected that the revised Pharmaceutical
Law will be presented to the National Assembly for consideration of approval in the 11th session of the XIIIth National Assembly in 2016.

3A.2.2. Tasks related to increasing people’s access to medicines

**Task 1: Ensure provision of sufficient medicines**

Tasks related to ensuring provision of sufficient medicines and vaccines include: “Continued implementation of the Pharmaceutical Law; strengthening of the domestic pharmaceutical industry to meet at least 60% of the people’s needs for therapeutic drugs, particularly essential drugs. Intensify production of traditional pharmaceuticals and medicinal materials. Ensure that EPI vaccines for children under 1 year of age are domestically produced.”

**Implementation results**

Access to medicines in Vietnam has continued to be strengthened towards greater convenience (reaching an average density of 2123 people per retail pharmaceutical outlet) (Table 8). The drug supply system extends throughout the country, ensuring supply of sufficient drugs to all areas, including maritime areas, remote and isolated regions.

<table>
<thead>
<tr>
<th>Forms of establishment</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug manufacturers achieving GMP</td>
<td>101</td>
<td>109</td>
<td>119</td>
<td>123</td>
<td>131</td>
</tr>
<tr>
<td>Manufacturers of vaccines and biologicals achieving GMP</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Manufacturers of finished herbal products achieving GMP</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>24*</td>
</tr>
<tr>
<td>Units meeting GLP</td>
<td>104</td>
<td>113</td>
<td>124</td>
<td>130</td>
<td>141</td>
</tr>
<tr>
<td>Importer-exporters achieving GSP</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>174</td>
</tr>
<tr>
<td>Drug storage facilities meeting GSP</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Drug-wholesalers achieving GDP</td>
<td>0</td>
<td></td>
<td></td>
<td>1900</td>
<td></td>
</tr>
<tr>
<td>Retail drug outlet</td>
<td>43,629</td>
<td>39,172</td>
<td>39,124</td>
<td>42,262</td>
<td>..</td>
</tr>
<tr>
<td>Population per retail drug outlet</td>
<td>1,993</td>
<td>2,242</td>
<td>2,269</td>
<td>2,123</td>
<td>..</td>
</tr>
</tbody>
</table>

* 10 of these produce both herbal medicine and modern pharmaceuticals.


The National Strategy on Vietnam Pharmaceutical Development to 2020 and vision to 2030 aims to develop domestic production of drugs, particularly essential drugs, generic drugs, traditional medicines and herbal medicines.

In response to the Vietnam Fatherland Front’s campaign encouraging Vietnamese people to prioritize consumption of Vietnamese products, the pharmaceutical industry has actively implemented the project promoting Vietnamese people to prioritize using Vietnamese pharmaceuticals. The Drug Administration of Vietnam has implemented an IEC campaign on
“The road to Vietnamese medicines”. The objective of these projects is to raise awareness of the general population and health workers about using drugs produced in Vietnam. The projects are expected to contribute to increasing the use of high quality Vietnamese manufactured pharmaceuticals as a share of all drugs used in medical facilities and in the community in Vietnam and simultaneously to promote development of the Vietnamese pharmaceutical manufacturing and sales sectors.

Growth in drug spending per capita has been continuous and stable [60]. This indicator shows that attention has been paid to meeting the need for health care and health promotion among the population. In 2005, average drug expenditure per capita was 9.85 USD, by 2010 it had risen to 22.25 USD and by 2014 had reached 34.48 USD.

Vaccines are a special type of product of the pharmaceutical industry. Domestically produced and imported vaccines licensed by the MOH generally meet Vietnam’s vaccine needs. Even though Vietnam is not yet a developed industrialized country, it nevertheless produces vaccines that meet the basic needs of the EPI program. Domestic vaccine manufacturers produce 10 out of 12 types of vaccines used in the EPI program (the only ones not yet produced domestically are Hib and rubella). Since 2006, domestic output of vaccines for 10 out of 12 EPI vaccines exceeds demand, with the exception of Pentavalent vaccine (a conjugation of five individual vaccines in one including diphtheria, tetanus, pertussis, hepatitis B and Haemophilus influenzae B (Hib)) and rubella which cannot yet be produced domestically.

Difficulties, shortcomings

The Pharmaceutical Law of 2005 stipulates a policy aimed at development of pharmaceutical manufacturing into a key technical-economic sector, however implementation of this policy is not highly feasible in reality. According to an assessment of the United Nations Industrial Development Organization (UNIDO), the pharmaceutical industry in Vietnam has reached only level 3 out of 5 levels, meaning the industry specializes in manufacturing drugs out of imported raw materials. The value of drugs produced in Vietnam accounted for 0.72% of GDP in 2014 and only 2.18% of national industrial revenues. The scale of pharmaceutical enterprises is still modest, so they are categorized as small and medium enterprises in both financial and human resources terms.

Pharmaceuticals produced in Vietnam face difficulties competing in international markets because they consist mainly of drugs for treating common diseases or only generic drugs that have not yet achieved bioequivalence standards, hindering exports. Vietnam still depends on imports to meet the pharmaceutical needs of the population, while currently domestic drug production meets only 50% of Vietnam’s demand for drugs (by use value), primarily common drugs; while up to 90% of pharmaceutical ingredients and packaging materials used to manufacture drugs domestically are still imported. The value of domestic drug output has been increasing in absolute terms each year, however, the objectives set out in Prime Ministerial Decision No. 43/2007/QD-TTg were not met. In addition to the reasons mentioned above, health workers still have the habit and tendency to prefer prescribing and using more expensive imported drugs to meet healthcare needs. This strongly influences the development of the domestic pharmaceutical industry and increases treatment costs.

10 Document No. 100/TTr-CP submitted by the Government of the National Assembly on 17 April 2014 on the Draft revisions to the Pharmaceutical Law.
Task 2: Update and strengthen the essential drug policy

The Five-year plan set the task of “Modifying the essential medicines, vaccines and consumables lists for health facilities.”

Implementation results

Vietnam’s VIth essential medicines list was issued by the MOH in Circular No. 45/2013/TB-TYT. The medicines list no longer indicates the level of facility (central, provincial, district of commune), now it lists the class of facility (special, first class, second class…) allowed to dispense various types of drugs, and provides improved guidelines on strength, dosages and guidance for prescribing. Another major change is to no longer include the list of traditional and herbal medicines into the overall essential medicines list, but to separate the two lists of essential modern medicines and essential herbal medicines in Circular No. 40/2013/TB-TYT. This change reflects the policy to raise the status and promote use of traditional medicine and herbal medicines and use these advantages for development of the pharmaceutical industry.

The MOH has issued the list of modern pharmaceuticals, traditional medicine and herbal medicines that can be reimbursed by VSS to serve as the legal basis for reimbursements of drugs at medical facilities contracted with VSS. This list replaced the old major drug list.

Difficulties, shortcomings

There currently exist two drug lists: the list of essential medicines (modern pharmaceuticals; traditional medicines and herbal medicines) and the health insurance drug formulary.

The report evaluating implementation of the National Drug Policy 1996 – 2010 indicates that although almost all medical facilities surveyed have the essential medicines list, most facilities ignore it, as they are mainly interested in the health insurance drug formulary (formerly known as the major drug list) [89].

Task 3: Management of drug prices

The Five-year plan 2011 – 2015 assigned the health sector the task of “Implementing measures to manage drug prices; standardize competitive tendering procedures and mechanisms for procurement and supply of drugs. Strengthen surveillance on drug price stability.”

Implementation results

In the context of economic and social transformation, there is substantial interest in drug price management and implementation of effective measures to stabilize drug prices. The Ministry of Health has actively directed implementation of Joint Circulars No. 30/2011/TTLT-BYT-BTC-BCT on state management of drug prices, No. 01/2012/TTLT-BYT-BTC guiding competitive tendering for drug procurement at medical facilities, No. 36/2013/TTLT-BYT-BTC and Circular No. 37/2013/TB-TYT guiding development of bidding documents for drug procurement in health facilities and Circular No. 31/2014/TB-TYT stipulating standards for evaluating technical specifications on drug tendering bids. The result is that drugs supplied to hospitals satisfy both quality and cost criteria. Reports on winning bid prices for pharmaceuticals containing the 20 most frequently used active ingredients11 used at 26 hospitals managed by...
the MOH and provincial health departments show a decline of 35.33% when comparing the value of drugs procured based on the bidding quantities and winning bid prices following new regulations (in 2013) with procurement of these drugs following old regulations (in 2012).

According to the Law on Prices, commercial enterprises set their own price and compete based on prices and are subject to supervision of regulatory authorities through declaring and posting prices and not selling their products at prices above the posted price. During the period 2011 – 2015, in general the pharmaceutical market has maintained stability, with no sudden and unreasonable price rises occurring that would adversely affect disease prevention and medical treatment activities.

**Difficulties, shortcomings**

The Pharmaceutical Law stipulates that declaration and re-declaration of drug prices must “ensure that drug prices are no higher than drug prices of countries in the region with similar health and economic conditions as Vietnam.” On that basis, Decree No. 79/2006/ND-CP of the Government detailing the implementation of some articles of the Pharmaceutical Law stipulates: “The MOH, in collaboration with the Ministry of Trade and other ministries and agencies shall publish a list of the specific countries in the region with similar health and economic conditions as Vietnam.” However, so far the Ministry has not yet issued this list because of difficulties in determining the list of countries with similar health and economic conditions, while the reference drug prices are not useful for managing prices of drugs supplied to the Vietnam market but not sold in reference countries.

As for the provision of item d in Clause 2, Article 5 of the Pharmaceutical Law—“state agencies have authority to announce publicly the declared drug prices, periodically announce a maximum drug price for drugs paid from state budget and social health insurance sources”—so far this has not yet been implemented because of the high number of drugs produced and circulating in Vietnam reaching about 25 000 items covering 1500 active ingredients. Each active ingredient has many types, strengths, types of packaging or modes of administration, and different producers, thus determining a maximum price for all drug products is very difficult, and might lead to prices rising to the maximum.

The Pharmaceutical Law assigns the MOH to take the lead on drug price management, but does not clearly assign responsibilities to other sectors, nor does it set up a multi-sectoral committee or commission for drug price management, leading to substantial difficulties in implementation and an inability to ensure transparency and openness in drug price management activities because multi-sectoral action is required.

**3A.2.3. Drug quality assurance tasks**

**Task 1: Implementing drug quality assurance measures**

The Five-year plan 2011 – 2015 listed several tasks related to implementing good practice standards including: “all modern pharmaceutical manufacturers should meet WHO-recommended good manufacturing practice (GMP) standards; 100% of drug quality assurance labs must meet the principles and standards of good laboratory practice (GLP) according to WHO or ISO 17025; 100% of large-scale importers and distributors must meet standards of good storage practice (GSP).” Besides pharmaceuticals, vaccine quality is also mentioned in
the plan, with the assignment of the task to “improve technology, improve quality of drug and vaccine manufacturing, ensure good practice standards are met in manufacture, distribution, laboratory testing and storage. All vaccines and medical biologicals produced domestically must meet GMP-WHO standards.”

Implementation results

Comprehensive quality management from stages of production and imports all the way to the stage where drugs are dispensed to consumers is a major policy of the pharmaceutical sector. In 1996, the pharmaceutical sector began to apply GMP principles and standards, which set an important foundation for improving quality of domestically produced pharmaceuticals. In subsequent years, other good practice standards for manufacture of drug packaging, storage, laboratory testing, wholesale and retail trade, cultivating and harvesting medicinal plants, and clinical testing have all been implemented at the recommendation of WHO. In the domain of the pharmaceutical industry, the number of enterprises being certified by the Drug Administration of Vietnam (DAV) for reaching GMP-WHO standards has increased each year (Table 8). To date, all of the factories producing modern pharmaceuticals (from chemicals) have met GMP standards, while 100% of large importers and distributors have met GSP standards.

Pharmaceutical enterprises are intensifying investments in equipment, personnel training and establishing production management systems. Importation of modern equipment and drug technology production lines and contract manufacturing of pharmaceuticals are being promoted. Besides traditional forms of drugs like tablets, capsules, and liquids, manufacturers are developing new ones, like freeze dried injectables, aerosols or slow release drugs. Generic drugs certified to meet bioavailability and bioequivalence (BA/BE) standards are expected to increase to 40% of active ingredients by 2020 (Decision No. 68/QD-TTg).

In June 2015, WHO certified that Vietnam has a fully-equipped national regulatory system that ensures the safety and efficacy of vaccines produced and used in Vietnam. This is a necessary condition for Vietnamese-produced vaccines to participate in supplying drugs funded by international organizations, not only for domestic use, but also for international sales over the next 5 years.

Difficulties, shortcomings

The number of pharmaceutical enterprises is large but there is a lack of specialization and continued overlaps in investments. Many drug manufacturing establishments primarily invest in production lines for drugs with simple forms of drug delivery and packaging, and focused primarily on a limited group of therapeutic effects including analgesics, antibiotics and anti-inflammatory drugs. Capacity for domestic production of specialist drugs is limited, while investments and application of technology in production of modern dosage forms, such as sustained release drugs or drugs that can be absorbed through the skin, remains very limited due to lack of state support for capital investments and introduction to the market. The pharmaceutical distribution and supply system in Vietnam currently lacks specialization and fragmentation leads to increased distribution costs and difficulties in surveillance of pharmaceutical quality.

Vietnam needs to maintain the status of the national regulatory authority that meets WHO standards for vaccine-producing countries for the next NRA re-assessment in 2018. This may require additional human and financial resources. Financial independence would be needed to ensure long-term sustainability.
**Task 2: Strengthen monitoring and inspection**

In addition to applying good practice standards, the Five-year plan also assigned the health sector the task of “Strengthening monitoring and checking of production, supply and quality management for drugs and vaccines. Strengthen drug quality assurance.”

**Implementation results**

Monitoring and checking on the quality of drugs circulating in the market are tasks conducted regularly and routinely at both central and local levels. Results of this monitoring indicate that the proportion of drugs of substandard quality has declined gradually (currently about 3% of total pharmaceutical products sampled for quality control) (Table 9). Based on the dynamics of the market, the state agency regulating pharmaceuticals has instructed technical and professional units at both central and local levels to strengthen drug quality surveillance and to purposefully select samples of drugs in the market for quality assurance purposes. In general, the group of antibiotics and anti-inflammatory analgesic drugs are the group with the highest proportion of sub-standard drugs.

**Table 9: Proportion of drugs sampled that fail to meet quality standards, 2010 – 2013**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of samples taken for quality assurance</th>
<th>Number of samples of substandard quality</th>
<th>Percentage of drugs of substandard quality (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>32 313</td>
<td>1008</td>
<td>3.12</td>
</tr>
<tr>
<td>2011</td>
<td>33 508</td>
<td>950</td>
<td>2.81</td>
</tr>
<tr>
<td>2012</td>
<td>32 949</td>
<td>1008</td>
<td>3.09</td>
</tr>
<tr>
<td>2013</td>
<td>39 482</td>
<td>948</td>
<td>2.54</td>
</tr>
<tr>
<td>2014</td>
<td>40 711</td>
<td>967</td>
<td>2.38</td>
</tr>
</tbody>
</table>


**Difficulties, shortcomings**

State budget funding for the domestic drug quality assurance system remains low. The number of drug products produced and circulating in the market continues to increase, including products with new modes of administration, new active ingredients, bio-pharmaceuticals, drugs produced using high technologies (nanosome, liposomes), while the drug quality assurance system lacks equipment and standard materials for its work. Equipment of the drug quality assurance laboratories, particularly the provincial drug quality assurance centers have many limitations. On average, state funding amounts to only about 120 million VND per expert working on drug quality assurance, of which 65% is to pay salary and 35% for work materials.

**Task 3: Improving quality of herbal medicines**

The Five-year plan 2011 – 2015 includes the task of developing standards and strengthening quality control of herbal medicines.

**Implementation results**

In recent years, the MOH issued Vietnam Pharmacopoeia I, II, III, and in 2009 issued the Vietnamese Pharmacopoeia monograph IV with 314 treatises on medicinal herbs and herbal
medicines as the basis for assessing medicinal ingredient quality before it is put into production and use. The Vietnam Pharmacopoeia IV was updated in 2015 adding an additional 43 treatises on medicinal herbs. Circular No. 09/2010/TT-BYT guides the management of drug quality and regulation of drug quality assurance in manufacture, importation, distribution and use of traditional medicines, ensuring compliance with the provisions of the Pharmaceutical Law, the Law on Standards and Technical Regulations, Law on quality of products and goods and other legal documents related to drug quality.

**Difficulties, shortcomings**

The inspection and control of the origin and quality of medicinal herbs used in the manufacture of traditional and herbal medicines, and used in traditional medicine clinics, have not yet been implemented effectively. Investment resources and upgrading of physical facilities and equipment for the quality assurance laboratory system, while it has received some attention, is still inadequate and equipment being used is ineffective. Most of the facilities producing herbal medicines in Vietnam are small scale, lacking financial capacity and using obsolete equipment.

Traditional medicines or herbal medicines are still licensed for circulation based on general recognition of the effects and uses of combinations of herbs commonly used in traditional medicine, and not based on documentation of adequate clinical research.

The qualitative and quantitative analysis of pharmaceutical components of herbal medicines is not feasible. In the quality standards for finished pharmaceutical products, it is possible to require quantification and qualification of all components, all components expected to have pharmaceutical effects or components that account for a substantial share of the drug ingredients. Chemistry methods and chemical fingerprinting (chromatography) may give some preliminary assessment of unknown components.

Quality of herbal medicines depends primarily on the quality of raw medicinal materials used in production of drug products or used in prescribing and mixing of herbal concoctions at traditional medicine facilities. Reports from the National Institute for Drug Quality Control on the quality of traditional medicines or drugs from pharmaceuticals in recent years (2008 – 2012) show that traditional medicines and herbal medicines failing to meet registered standards each year accounted for nearly 10% of the total sample taken for inspection (Table 10).

**Table 10: Results of quality testing for traditional and herbal medicines, 2010 – 2014**

<table>
<thead>
<tr>
<th>Year</th>
<th>The number of samples taken for quality checking</th>
<th>Number of samples of substandard quality</th>
<th>Sample rate of substandard quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>6511</td>
<td>625</td>
<td>9.60%</td>
</tr>
<tr>
<td>2011</td>
<td>5801</td>
<td>353</td>
<td>6.09%</td>
</tr>
<tr>
<td>2012</td>
<td>6345</td>
<td>524</td>
<td>8.26%</td>
</tr>
<tr>
<td>2013</td>
<td>8040</td>
<td>576</td>
<td>7.16%</td>
</tr>
<tr>
<td>2014</td>
<td>6069</td>
<td>454</td>
<td>7.48%</td>
</tr>
</tbody>
</table>

Quality of pharmaceuticals and traditional medicines is a critical issue. In 2012 the Traditional Medicine Administration established a team to examine the use of medicinal herbs, herbal medicines and traditional medicines in traditional medicine clinics. The team took samples targeted at specific medicinal herb ingredients and herbal medicines that are often mixed up or counterfeited. The results of testing 82 samples suspected of violating quality standards discovered 20 samples not meeting quality standards and 18 counterfeit ones.

3A.2.4. Tasks related to safe and rational use of drugs and blood products

Task 1: Ensure safe and rational use of drugs

The Five-year plan is not only interested in quality of the manufacturing and distribution processes, but also pays attention to safe use of drugs through assigning the task of “regulating the sale of prescription drugs; management and use of drugs and related products to ensure safety for the consumer.”

Implementation results

The MOH issued the list of non-prescription drugs in Circular No. 23/2014/TT-BYT, including a list of 25 active modern pharmaceutical ingredients. For traditional and herbal medicines, the circular did not state the specific list of drugs, but rather gave the principles for distinguishing prescription and non-prescription herbal medicines based on drug components (toxic or not) and route of administration and dose.

Safe and rational use of drugs is an important task of the health sector. To achieve this goal, three parties have direct responsibility: the prescriber (treating doctor), the clinical pharmacist and the drug consumer, with clinical pharmacy playing the important role of bridging between the doctor providing treatment instructions and the patient who must comply with those instructions.

In 2012, the MOH issued Circular No. 31/2012/TT-BYT guiding clinical pharmacy activities at hospitals. Clinical pharmacy activities include managing rational prescribing, monitoring use of drugs, providing drug information and monitoring adverse drug reactions (ADR), patient record reviews for physicians to exchange and learn from each other about appropriate use of drugs. It also includes instructions for the determination of drug lists and plans for drug procurement appropriate with the disease patterns and appropriate with economic conditions of each hospital and region so the patients can use drugs with reasonable prices that ensure the most effective treatment.

The monitoring of adverse drug reactions has seen some major developments in the past five years. The MOH assigned the National Center for Drug Information and ADR monitoring (Hanoi Pharmaceutical University) responsibility for implementing these activities since 2009. By 2011, the Southern National Center was established at Cho Ray Hospital, and a national system of ADR monitoring is being established widely in all regions and in leading hospitals. The MOH has issued Decision No. 1088/QD-BYT in 2013 guiding monitoring of ADRs in medical facilities. The number of reports on ADRs sent to the National Centers has increased over time (Table 11). Almost all hospitals are now reporting to the ADR system (over 90%). The Centers also receive information about drug safety within the country and from abroad and sends reports to the advisory council on drug registration at the MOH. Additionally, the
Centers collaborate with the units involved in developing and refining the national guidelines on pharmacovigilance.

**Table 11: Number of ADR reports received, 2010 to 2014**

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of ADR reports</td>
<td>1807</td>
<td>2407</td>
<td>3236</td>
<td>6016</td>
<td>8513</td>
</tr>
</tbody>
</table>

Source: Final Report of Vietnam Center for ADR monitoring, website: canhgiacdcuoc.org.vn Summation of ADR reports [91]

**Difficulties, shortcomings**

In the 2005 Pharmaceutical Law there were no provisions related to clinical pharmacy activities. According to a survey of hospital clinical pharmacy activities implemented at provincial and central hospitals nationwide by the Hanoi Medical University in 2011, many hospitals, depending on their size, human resources and training of pharmacists, have implemented to some extent clinical pharmacy activities. There are too few clinical pharmacists currently working in health facilities, many lack in-depth training to implement their clinical pharmacy tasks, particularly skills necessary to collaborate with doctors in treating patients. According to a report evaluating six years of implementing the Pharmaceutical Law, in some hospitals only one university-trained pharmacist is employed, who has to take on multiple tasks concurrently, in addition to their drug information tasks. Many district hospitals don’t even have a university-trained pharmacist, and must rely on a secondary technical school trained pharmacist, or a doctor to implement drug information tasks. Out of seven establishments assigned responsibility for providing university level pharmaceutical training, most are implementing the training curriculum framework for university trained pharmacy required by the Ministry of Education and Training, which includes clinical pharmacy as part of the general training curriculum; the orientation towards clinical pharmacy is not yet widely implemented.

A major shortcoming exists in safe and rational use of drugs, namely many retail pharmacies do not comply with the regulations on prescription drugs. A report of the health inspectorate over multiple years pointed out that a regular violation in retail pharmacies is the sale of prescription drugs without a prescription. A recent report indicates alarming levels of antibiotic resistance that are being used for treatment [92].

**Task 2: Ensure the safety of blood transfusions and blood products at all levels**

**Implementation results**

The MOH issued Circular No. 26/2013/TT-BYT on blood transfusion guidelines. Accordingly, to ensure the safety of blood transfusions, blood transfusion facilities must implement mandatory regulations on rapid testing for hepatitis B virus for first-time blood donors and implement protocols related to resolving cases of people suspected of having hepatitis B. They must also implement more specific regulations on providing information to donors and take responsibility in the case that a blood donor meets an adverse event during or after donating blood.

With the support of the WHO and technical assistance of reference laboratories in Australia in the early years and Vietnamese implementation of the project after technical
assistance ended, from 2009 to date, the National Institute of Hematology and Blood Transfusion has implemented external laboratory verification annually (Table 12), including verification of screening results for HBV and HCV and in 2013 launched international verification of HIV screening results. The reference samples are selected according to standard procedures and checked by reference laboratories in Australia, although not all blood screening laboratories participated (in 2013, only 72 participated out of 113 blood transfusion facilities that accept blood donations).

Table 12: Blood screening results in Vietnam, 2013

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Number of samples XN12</th>
<th>Number of reaction samples</th>
<th>Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBsAg - HBV</td>
<td>935 293</td>
<td>18 397</td>
<td>1.97</td>
</tr>
<tr>
<td>Anti HCV</td>
<td>933 833</td>
<td>5 421</td>
<td>0.77</td>
</tr>
<tr>
<td>Anti HIV</td>
<td>934 931</td>
<td>2 044</td>
<td>0.22</td>
</tr>
<tr>
<td>Syphilis</td>
<td>931 790</td>
<td>1 858</td>
<td>0.20</td>
</tr>
<tr>
<td>Malaria</td>
<td>587 537</td>
<td>72</td>
<td>0.012</td>
</tr>
<tr>
<td>Anti HBcAb</td>
<td>230 207</td>
<td>318</td>
<td>0.138</td>
</tr>
<tr>
<td>Anti HTLV I/II</td>
<td>230 207</td>
<td>204</td>
<td>0.089</td>
</tr>
<tr>
<td>Unusual antibodies</td>
<td>433 520</td>
<td>87</td>
<td>0.020</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td><strong>28 401</strong></td>
<td></td>
</tr>
</tbody>
</table>

By 2013, the proportion of blood units of abnormal HBsAg test (positive and suspected) was 1.97% lower than in 2012 (2.5%). Meanwhile, the rate for HCV and HIV has reduced its volatility (HCV in 2013 was 0.77% compared to 0.6% in 2012 and HIV in 2013 was 0.22% and 0.23% for 2012).

**Difficulties, shortcomings**

Blood safety is affected by limitations in the quality of blood screening, the fragmentation of blood transfusion facilities, the lack of regulations and inadequate blood screening. Currently, blood transfusion centers are small, and scattered, while only 105 facilities receive blood from donors (about 92.9% of all facilities). This situation leads to major risks to safe blood transfusion because of the inability to test for blood-borne viruses through ELISA techniques.

In addition, the distribution of blood products between transfusion centers faces many difficulties because of shortcomings in the organization of the system from central to local levels. The administrative mechanism and especially the financial mechanism are major impediments to these activities.

The results of external verification of labs with a reference sample indicated that some labs have results inconsistent with the reference results. For HBV, HCV, HIV: ELISA results diverging from reference results ranged from 6.0 to 11.3%, compared to the rapid test range from 4.1 to 46.1%. For HCV: the chemiluminescence immunoassay test was inconsistent with reference results for 26.7% of samples.

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12 Only covers testing of whole blood units
3A.3. Priority Issues

3A.3.1. Impediments to availability, affordability and access to essential medicines

- Local production of pharmaceuticals has not yet exploited its full potential to supply good quality, low-price, essential drugs to meet the health needs of the Vietnamese people.\(^{13}\)

- There is a wide gap on the availability and access to essential medicines across the different levels of health care, especially in hard to reach areas [93].

- While there has been some success in controlling prices, prices of some drugs remain high, particularly retail prices, hindering people’s access to drugs. Although the consumer price index for medicines does serve monitoring of drug price increases, it does not meet needs for monitoring drug price levels nor price increases of detailed groups of drugs to serve state management of drug prices. Some methods of drug price management have not yet been adequately exploited, such as use of international and domestic reference pricing for assessing reasonableness of drug prices (Circular No. 50/TTLT-BYT-BTC-BCT) and centralized competitive tendering to reduce disparities in drug prices across facilities and localities.

3A.3.2. Unsafe and irrational use of drugs

- The situation of irrational and inefficient use of drugs persists in all levels of care.

- Clinical pharmacy activities in treatment facilities are inadequate and ineffective, and have received inadequate attention.

- Weak controls and coordination mechanisms in medicines selection and monitoring of use.

- The risk of antimicrobial resistance is increasing as a result of overprescribing and inappropriate use of antimicrobials in both the human and animal sectors. The presence of antibiotic residues in the food chain and in soil and water is alarming and needs to be continuously monitored.

- Health facilities lack the capacity and mechanisms for reporting and managing ADRs and medication errors. Safe use of medicines remains a huge concern in all health facilities.

3A.3.3. Uneven quality assurance in traditional medicines, and biologicals and blood services

- Resources for implementing quality assurance testing for domestic drugs remains limited in the context in which there is an increasing number of pharmaceutical products, using new production technologies and new active ingredients.

- Regulations and quality management systems for traditional and herbal medicines remain weak; there are overlapping functions and tasks in the management process leading

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\(^{13}\) According to assessment of the United Nation Industrial Development Organization (UNIDO), the pharmaceutical industry in Vietnam has reached only level 3 or 4 out of 5 levels. The value of drugs produced in Vietnam accounted for 0.72% of GDP in 2014 and only 2.18% of national industrial revenues in 2011.
to ineffective coordination. Control over the source materials and quality of medicinal ingredients used in production of traditional medicines is not effectively implemented.

- Regulations for the quality and safety of blood and blood products needs to be strengthened. A hemovigilance system is not yet in place.

3B. Medical infrastructure and equipment

3B.1. Five-year plan (2011 – 2015) objectives and their implementation

The Five-year plan objective related to medical infrastructure and equipment stated:

“Continue investments to improve health system capacity, prioritize development of the grassroots healthcare network and healthcare facilities in mountainous, remote, isolated and disadvantaged areas; Develop domestic production of medical equipment; Strengthen effectiveness in management and use of medical equipment.”

Overall in the past 5 years, major investments were made to upgrade health system capacity including investments in the areas of preventive and curative care at all levels from central to grassroots, and in both public and private sectors. Between 2010 and 2013 in the public curative care sector, there was a net increase of 25 new provincial general, specialist, leprosy and rehabilitation hospitals. At the grassroots level there was a decline in the number of regional polyclinics and birthing homes, but an increase of over 100 new CHSs, increasing the share of communes with a health station to over 95% in all regions. Indicators measuring output of implementing medical equipment investments have also shown substantial increases in the three-year period 2010 to 2013. Specifically, in the public health sector, the number of lab tests grew by 22%, the number of ultrasounds increased by 35% and the number of x-rays increased by 15%. Data from the Medical Equipment and Infrastructure Department of the MOH indicates that investments in medical equipment account for about 10% of total health spending. In recent years, the growth rate of medical equipment procurement (high tech, diagnostic equipment) is increasing and accounts for a substantial share of the total. Currently there are 119 hospitals (both public and private sectors) in 47 out of 63 provinces that have MRI machines, not including MRIs in sectoral facilities and private clinics. Mountainous and disadvantaged provinces such as in the Northern midlands and mountains region and the Central Highlands are also covered by MRI capacity.\textsuperscript{14}

The five-year plan target related to medical infrastructure and equipment is to ensure that 100% of medical facilities treat hazardous medical waste according to standards. This target was not fully achieved, but progress was made. As of the end of 2014, approximately 54.4% of hospitals had liquid waste treatment systems (central: 73.5%, provincial: 60.3%, district: 45.3%) and 95% of hospitals implement daily sorting and treatment of hazardous medical solid waste [35].

\textsuperscript{14 Preliminary results of analysis from 43 medical facilities out of 119 facilities that have MRI in 33 out of 43 provinces included in the study by the Health Strategy and Policy Institute, 2015.}
3B.2. Assessment of implementing Five-year plan tasks on medical infrastructure and equipment

3B.2.1. Major policies related to medical infrastructure and equipment during the period 2011 – 2015

A number of Government and health sector policies and projects have been put in place to ensure adequate medical equipment and infrastructure to contribute to developing and improving quality of health care for the people, especially at provincial level health facilities. However, the main strategic guiding documents on medical equipment and infrastructure are currently out of date, and are not providing adequate guidance for the coming period. Existing policies, while providing important technical standards and some guidance for planning infrastructure investments, do not adequately address issues of mandatory maintenance and calibration of equipment with external verification. In addition, existing policies do not provide appropriate mechanisms, such as evidence-based master plans and enforcement mechanisms to ensure compliance with the plan in terms of appropriate investments in medical equipment and infrastructure to best meet the needs of the population without overinvesting in facilities whose capacity will be underutilized, or that will lead to provision of unnecessary services in order to boost incomes of facilities.

Policies related to management of medical infrastructure and equipment development

- Decision 130/2002/QD-TTg approved the national policy on medical equipment in the period 2002 – 2010. The Decision clearly describes objectives for research, domestic production of medical equipment and solutions to ensure efficient supply and utilization of medical equipment. In 2005, the MOH issued Decision No. 18/2005/QD-TTg approving the project “Study on fabrication and manufacture of medical equipment to the year 2010.”

- Decision 47/2008/QD-BYT established the functions and tasks of the Department of Medical Equipment and Infrastructure including the main tasks of developing legal documents, protocols and national standards in the area of medical equipment and infrastructure and guiding implementation of the national policy on medical equipment and related projects. For MOH facilities, the department participates in procurement, competitive tendering for medical equipment and investment projects. It implements the public administration functions such as receiving and reviewing dossiers for imports, production, declaration of standards and advertising of equipment. The department also participates in mobilizing private capital, allocating state budget funding plans for equipment and infrastructure and developing training materials related to medical equipment. Finally, it is involved in evaluating activities of procurement, investment, management and use of medical equipment at healthcare facilities.

- Decree No. 176/2013/ND-CP stipulates penalties for administrative violations in the field of health care, including medical equipment. Specific types of violations include, absence of required medical equipment in a licensed medical facility, false advertising, hiding information on adverse events or non-compliance of quality/precision standards related to equipment, non-licensed sale, production or imports of medical equipment.
Besides general policies, the MOH has also collaborated with other ministries and sectoral agencies to issue many documents regulating technical standards related to medical infrastructure and equipment, including: (i) regulations on the official list of medical equipment in provincial and district general hospitals, regional polyclinics, CHSs and village health worker kits (Decision No. 437/2002/QD-BYT), and in 2008 supplementary equipment items were added to the list for regional polyclinics (Decision No. 3333/2008/QD-BYT); (ii) National provincial preventive medicine standards for the period 2008 – 2015 (Decision No. 4696/QD-BYT) and district preventive medicine technical standards (Decision No. 2367/QD-BYT); (iii) documents about technical standards for construction of hospitals including the different hospital departments and functional structures like surgical theaters, x-ray and laboratory rooms, wastewater treatment systems; (iv) Decision No. 13/2007/QD-BKHCCN of the Ministry of Science and Technology issuing the “List of measurement devices for quality control.”

During the period 2011 – 2015, the MOH collaborated with various relevant Government agencies and units to develop a draft decree on management of medical equipment with the objective of setting up an integrated medical equipment management system, including regulations defining and classifying medical equipment based on risk; common technical dossier for each type of medical equipment; process for registering equipment for use and regulations on premarket approval (PMA) and a post-approval warning system for substandard or unsafe medical equipment.

Shortcomings

- Most policy and regulatory documents related to medical equipment were put in place over 10 years ago and have not been updated.

- There is a lack of documents stipulating a concrete medical equipment classification system and regulations on management of medical equipment (related to specific stages in the life of medical equipment, from research on application and manufacturing through to introduction to the market and deployment at medical facilities).

- There is no system of regulatory documents on accreditation or quality monitoring of medical equipment, particularly for the types of equipment that directly affect the lives of patients that have not yet been included in the list of equipment for mandatory accreditation (equipment in operating theater, therapy, diagnosis and interventions).

Policy on investment in medical infrastructure

- In 2006, the master plan for development of the Vietnamese health system for the period to 2010 and vision to 2020 was approved by the Prime Minister (Decision No. 153/2006/QD-TTg). Some provinces have developed master plans for development of the local health system to the year 2020 and vision to 2030, but they lack general guidance because the national master plan has not been updated.

- The Government also has long-term investment strategies for the whole health system and some specific focal areas including: (i) principles, criteria and norms for allocating investment capital from the state budget for the period 2011 – 2015 (Decision No. 60/2010/QD-TTg); (ii) National strategy for protection, care and promotion of the people’s health for the period 2011 – 2020 with a vision to 2030 (Decision No. 122/2013/
Chapter II: Implementation of the Plan for the protection, care and promotion of the people’s health 2011 – 2015

QD-TTg); (iii) Project for development of Vietnam’s maritime health system to the year 2020 (Decision No. 317/2013/QD-TTg); Project to reduce overcrowding of hospitals for the period 2013 – 2020 (Decision No. 92/2013/QD-TTg).

- The Government also has several infrastructure and equipment investment projects such as Project 47 and Project 930, which will be discussed in Section 3B.2.2.

3B.2.2. Tasks on access to physical infrastructure of adequate quality

Task 1: Continue to invest in developing infrastructure according to Prime Ministerial Decisions

The Five-year plan requires “Continued investment in development of infrastructure according to Prime Ministerial Decisions 47, 930 and 950. Intensifying the pace of disbursing capital, checking on completion of projects, transferring completed structures to facilities and putting them into operation as stipulated in the approved projects.”

Implementation results

The three approved projects mentioned in the Five-year plan include investments in CHSs in disadvantaged areas to meet national commune health benchmarks (Prime Ministerial Decision No. 950/QD-TTg in 2007), investments in district and inter-district regional hospitals including new construction, renovations and upgrades (Prime Ministerial Decision No. 47/2008/QD-TTg) and investments in provincial specialist hospitals (TB, mental health, oncology, pediatrics) and provincial general hospitals in disadvantaged mountainous areas (Prime Ministerial Decision No. 930/QD-TTg in 2009). There are additional Prime ministerial decisions and National Assembly resolutions that added additional hospitals to the list of facilities receiving government bond funding (such as Decision 1872/QD-TTg in 2009 and Resolution No. 881/2010/UBTVQH12). Besides these 3 projects there are many other state budget funded infrastructure projects approved by the Prime Minister including the Project for development of the district preventive medicine centers (1402/2007/QD-TTg), to meet required standards according to Decision 2367/QD-BYT); The project to strengthen capacity of provincial food safety offices (1256/QD-TTg in 2011), the project to upgrade the traditional medicine hospital system (362/QD-TTg in 2014).

At the central level, 11 MOH facilities are being constructed, renovated or upgraded as part of projects approved for government bond funding (mainly under Decision 930/2009/QD-TTg). Of these, the Tuberculosis and Lung Hospital in Phuc Yen, the National Cancer Hospital (in Tan Trieu) and basic components of the investments at the Can Tho Medical University have been completed according to plans. It is expected that by the end of 2016, all facilities that have received capital will have completed construction and been put into use to serve patients [86].

Regarding provincial hospitals, the Project approved in Decision No. 930/2009/QD-TTg includes new construction, renovation and upgrading of 155 provincial facilities, including provincial general hospitals, specialist TB hospitals, mental hospitals, pediatric/obstetric hospitals, cancer hospitals and other hospitals. During the period 2008 – 2012, 73 hospitals were completed and put into use (some only partially completed) [86].

The district level has also benefited substantially from Project 47, with 598 district hospitals/health centers and some regional policlinics being upgraded, expanded, renovated...
and equipped and a few new hospitals constructed compared to the overall plan of 645 facilities (original plan plus 24 facilities added in Decision 1872/QD-TTg in 2009). By the end of 2014, newly constructed/upgraded/renovated infrastructure of 507 hospitals and 114 regional polyclinics was put into use, contributing to increasing the number of beds, capacity utilization and medical care capacity at the district level [86].

According to MOH statistics on CHSs, in 2010 there were a total of 10,926 CHSs, by 2013, this number has increased to 11,033, for an overall increase of over 100 new CHSs during the period [60]. In 2014, new commune health benchmarks were issued by the MOH (4667/QD-BYT) with variation across three types of region in an effort to prioritize investments, for example, in more remote areas far from hospitals, the CHS should have a doctor and should be able to assist at normal deliveries, while in lowland commune and urban ward health stations, part-time doctors are allowed and investments are not being made to ensure conditions for deliveries.

In addition to state budget funding for infrastructure, the health sector is also benefiting from grants and loans from international banks and investment funds, a high share of which consists of funds invested in infrastructure and medical equipment for medical facilities at different levels, including CHSs and district preventive medicine facilities. According to statistical data of the MOH, in 2011 there were 61 ODA projects and programs, in 2013, there were 41 projects and by 2014 there are 35 programs and projects using ODA funding, including 19 funded by grants and 16 by concessionary loans. Total funds from these programs and projects by 2014 amounted to 1.58 billion USD (equivalent to 31.047 trillion VND), including ODA assistance amounting to 1.46 billion USD, accounting for 92.6% of total funds for projects and programs and matching government funds amounting to 7.4% of the total funds. Out of total ODA, funds invested in basic infrastructure amounted to 135,097,691 USD, accounting for 9.3%, while procurement of medical equipment amounted to 400,204,479 USD, accounting for 27.4% [63]. Specifically, for infrastructure construction, funds invested in basic construction of all ODA projects and programs being managed by the MOH were invested in 56 provinces, with 31 central level facilities (universities, general hospitals like Bach Mai, Uong Bi, Huu Nghi, Vietnam-Cuba), specialist hospitals (dental, ENT, eye, lung, mental health, traditional medicine, geriatrics, acupuncture,...) with total investment funds of 64,710,590 USD; 79 facilities at the provincial level with total funds invested in the amount of 35,412,436 USD, including 34 medical facilities, which are actually provincial preventive medicine centers, provincial hospitals, traditional hospitals, endocrinology, lung disease, rehabilitation, mental health, pediatrics/obstetrics, junior colleges of medicine and secondary medical establishments; new construction, major repairs and additions to functional space of 17 regional general hospitals with total funds of about 11,759,247 USD; new construction of hospitals, small repairs, additions of functional rooms of district general hospitals, district preventive medicine centers with total funds of about 24,215,418 USD.

**Difficulties, shortcomings**

Many of the investment projects funded through issuing government bonds have not yet been completed, while some have been halted due to limited capital, investments spread over too many facilities and slow resolution of impediments, leading to long delays in allocating funds and putting infrastructure into operation and general inefficiency (362 projects are still not yet fully completed).
Preventive medicine centers and district health centers responsible for preventive medicine in many localities often still lack separate facilities, equipment and other means for implementing their work. Even though policies and infrastructure investment projects have been approved for preventive medicine facilities (1402/QD-TTg in 2007), provincial food safety offices (1256/QD-TTg in 2011), traditional medicine hospitals (362/QD-TTg in 2014), and development of maritime health facilities (317/2013/QD-TTg), the process and pace of implementing these projects is not being monitored or assessed, both in terms of developing plans and mobilizing funds for each period.

Even though investments in commune health are always considered as a priority of the health sector and localities, implementing the investment policy following various projects has had limitations. Even the plan for implementing investments in CHSs in disadvantaged areas (Decision No. 950/QD-TTg (2007)) has not met regulatory requirements (inadequate area, inadequate construction quality, lack of rooms), and in 2013 only 40% of CHSs were reported to have met commune health benchmarks. The main reason for this is that localities have not been actively allocating local budgets for investments in health facilities in their locality.

Although large amounts of capital have been and are currently being invested in ODA projects for basic construction and medical equipment for facilities at all levels, with over 520 million USD, no evaluation of investment effectiveness has been implemented, and there is a lack of integration of these projects into the overall investment plan in the localities.

One of the underlying reasons for the early shortages in capital investment funds is the many recent changes in the organization of the district health system, where the fragmentation of responsibility for implementing various functions has led to establishment of many new types of facilities, leading to a huge requirement to invest in infrastructure and equipment, while the need to maintain balance in the state budget essentially means funds are not available to meet those new requirements. The results of completed infrastructure investments have not been evaluated to assess effectiveness or to identify problems requiring resolution to improve effectiveness of investments and use of facilities that have recently received investments.

**Task 2: Relocate selected hospitals to the outskirts of major cities**

The Five-year health sector plan also placed priority on “implementing the Government plan to relocate selected health facilities from the center to the outskirts of Hanoi and HCMC.”

**Implementation results**

In Hanoi, many central and municipal hospitals are located in the downtown area, with only small area and in zones with limited potential for further development, thus contributing to the overcrowding of infrastructure and a large amount of medical waste that becomes difficult to treat. Given the situation, the Government decided to relocate some hospitals outside of the downtown areas of the city. In order to support the relocation, the Prime Minister issued Decision No. 130/QD-TTg (2015) on methods, roadmap and use of land after relocation of industrial facilities, hospitals, universities, vocational training establishments, government agencies and units located in Hanoi according to the Law on the Capital City (Law No. 25/2012/QH13).

In order to reduce overcrowding due to the lack of space in the downtown areas, the MOH has implemented the following activities:
- Developed 2nd and 3rd campuses outside of the downtown such as:
  - National Cancer Institute received Government bond investments to complete its 3rd campus in Tan Trieu, Thanh Tri Hanoi, put into operation in 2014. Prior to that, in 2012 the 2nd campus was built in Tam Hiep.
  - The National Endocrinology Hospital: The Prime Minister permitted continued bank lending to invest in completing the 2nd campus of this hospital in Tu Hiep, Thanh Tri, Hanoi.
  - The 2nd campus of Bach Mai and of Viet Duc hospitals are being constructed in Phu Ly, Ha Nam province, with expected completion some time in 2016.
  - The 2nd campus of the National Hospital of Tropical Diseases was newly constructed in Dong Anh, Hanoi using Government bond funding (2014).

- Develop completely new facilities outside the downtown area of Hanoi such as:
  - The Hanoi Medical University Hospital is clearing land in Hoang Mai, Hanoi, to develop a new facility, with construction to begin in 2015 and completed by 2017, using state investment capital (30%) and the balance mobilized by the university (70%).
  - Hanoi School of Public Health was permitted by the Prime Minister to prepare investments to build a new facility in Dong Ngac, Tu Liem Hanoi with a build, operate, transfer (BOT) arrangement, which is expected to be completed in 2017.
  - New facilities are or have been built for the General Office of Population and Family Planning and the Health Strategy and Policy Institute in Tu Liem, Hanoi.

- Construct high-rise facilities to use limited land area more effectively:
  - National Hospital of Pediatrics-Project to expand, renovate and upgrade, phase II in a high-rise building at its original campus (2015).
  - Pediatric Oncology and Cardiology Center at Bach Mai hospital, built as high rise in original campus (expected in 2015).
  - Viet Duc hospital- High tech building (11 floors) as part of the project to invest in expanding Viet Duc hospital within the original downtown campus (2015).
  - National Hospital of Obstetrics and Gynecology, with 500 beds in an 11 story building with 2 basements (extended completion date beyond planned deadline).
  - Oncology center built as a new 1600m² facility in the Cho Ray campus (2015).
  - High tech treatment building for the National Geriatrics Hospital (2015).
  - Thong Nhat Hospital (HCMC) expanded treatment area at its main campus (2015).

**Difficulties, shortcomings**

Although these hospital construction projects aim to reduce hospital overcrowding and reduce urban environmental pollution, the large amount of capital required means capital is...
being diverted from the priority area of strengthening local, particularly grassroots level, health facilities, when capital is in severe shortage for investments in those facilities. Currently no evaluation of impact or effectiveness of these central hospital investments has been implemented.

**Task 3: Put medical waste treatment facilities into operation**

Among the tasks in the area of medical infrastructure, the Five-year plan has placed some priority on medical waste treatment: “On medical waste treatment, strive to achieve the goal of completing and putting into operation medical waste management systems for all sectors by 2015.”

**Implementation results**

In 2011, the Prime Minister approved the Comprehensive project for treatment of medical waste for the period 2011 – 2015 with an orientation to 2020 (Decision No. 2038/QD-TTg) with the goal of ensuring that 100% of medical facilities at all levels treat medical waste according to national technical standards for the environment by 2020.

In 2003, some 84 hospitals (mainly central and provincial) were assessed as severe sources of environmental pollution and were listed in Decision No. 64/2003/QD-TTg on the Plan for thorough resolution of entities causing severe environmental pollution.” By 2013, 74 of the 84 hospitals had moved off this list, leaving only 10 still considered as severe sources of pollution. Decision No. 1788/QD-TTg proposed a concrete detailed plan for waste treatment to resolve the remaining 10 polluting hospitals, and another 65 newly identified health facilities (Central, provincial, private hospitals and Ministry of Labor centers for treatment, education, labor, and society) with the deadline set for 31 December 2015. For the period 2016 – 2020 the plan continues to implement measures to treat medical waste in 118 district hospitals.

Currently about 54.4% of hospitals have a wastewater treatment system (central: 73.5%, provincial: 60.3%, district: 45.3%). On solid medical waste, currently over 95% of hospitals implement sorting and daily collection of hazardous solid medical waste. The proportion of hospitals treating solid waste by dual chamber incineration, microwave/wet heat for disinfection of hazardous medical solid waste is 29.4%; the proportion contracting out waste treatment is 39.8%; the proportion treating waste using single chamber incineration or manual burning or burial in the hospital garden (mainly at district hospitals and some mountainous provincial specialist hospitals) is 30.8% [35].

During the period 2011 – 2015, a World Bank loan totaling 150 000 000 USD was invested to support hospital waste treatment. Of particular interest is the support from the project for grassroots level waste treatment in Dong Thap, Quang Binh, Quang Tri, Da Nang, Binh Dinh, Phu Yen, Binh Thuan and Hai Phong provinces.

**Difficulties, shortcomings**

Currently there is a clear plan for resolving severely polluting medical facilities, however, it is unclear whether adequate capital will be mobilized to implement the plan.

Besides investing in infrastructure for medical waste treatment, there is also the important requirement to allocate adequate recurrent expenditures for its operation, and for surveillance of compliance with standards.
3B.2.3. Tasks related to quality of medical equipment

Task 1: Strengthen domestic manufacturing of quality medical equipment

The Five-year plan laid out the task: “Strengthen domestic production of medical equipment, initially for common medical equipment, while gradually promoting high tech medical equipment manufacturing, investing in advanced technology production lines for production of medical equipment; ensure that 60% of common medical equipment needs of healthcare facilities are satisfied through domestic production.”

Implementation results

Prime Ministerial Decision No. 18/2005/QD-TTg approved the project “Research to fabricate and produce medical equipment to the year 2010.” Medical equipment manufacturing, distribution and importation have been expanded. Nationally at present there are 48 units studying the fabrication and manufacture of medical equipment with 621 domestically produced products that have been issued certificates of free sale by the MOH.

Difficulties, shortcomings

Domestic medical equipment manufacturing capacity is weak. The domestic industry can only produce medical equipment with simple technologies. The current domestic manufacturing capacity consists of 625 types of equipment/devices with certificates of free sale, which means it is difficult to achieve the target of meeting over 60% of domestic need for common types of medical equipment. In addition, determination of what constitutes “common types of medical equipment” and creating the list of these common medical equipment for use in the strategy for domestic medical equipment manufacturing development remains unclear, with no clear plan.

Task 2: Support procurement of medical equipment appropriate with need

In order to strengthen effectiveness of the health sector, the second task in the area of medical equipment is to “implement evaluation of the current situation and needs for medical equipment in medical facilities at all levels; review and update the list of essential medical equipment for medical facilities. Develop databases on medical equipment (along with reference prices) to aid medical facilities in procurement of appropriate medical equipment.”

Implementation results

In addition to the state budget funds for procurement and investment in upgrading medical equipment as part of Government projects, currently the MOH is also managing 400 204 479 USD in 20/35 ODA projects involving investments and procurement of technical medical equipment for provincial hospitals involved in various ODA funded projects and in central level facilities such as Hue Central General Hospital and the Central ENT hospital. In addition, support is being provided to procure basic medical equipment (equipment for intensive care, surgery, pediatrics and obstetrics, operating theatre, diagnostic imaging, infection control, ENT, dentistry, ophthalmology, ambulances and other vehicles) in district and provincial hospitals belonging to various ODA projects. Concretely, by 2014, 72 958 824 USD were used to strengthen the ability of the preventive medicine system to respond including the following items:
Chapter II: Implementation of the Plan for the protection, care and promotion of the people’s health 2011 – 2015

- Laboratory equipment for research institutes: HCMC Pasteur Institute, Nha Trang, Quy Nhon, National Institute of Hygiene and Epidemiology/Central Highlands.
- Basic equipment for provincial and district preventive medicine centers.
- Specialized vehicles including vehicles for epidemic outbreak control, prevention and control of HIV/AIDS, TB, malaria, and supervision of health sector activities.
- Laboratory equipment for provincial HIV/AIDS control centers.
- Upgrading information system for provincial TB control.
- Equipment to support malaria control in the provinces: Cars, motorcycles, office equipment, IEC and laboratory equipment.

By 2014, some 23,066,000 USD had been used to procure equipment to support training and practice in health human resources training establishments at medical universities through health support projects in the North Central Coast (World Bank), and the Health human resources sector development program funded by the Asian Development Bank (ADB).

During the period 2013 – 2014, the Medical Equipment and Infrastructure Department of the MOH collaborated with the Health Strategy and Policy Institute to undertake a national survey on the situation and need for medical equipment for diagnostic and therapeutic equipment needed nationally including: ventilators, monitors and ultrasounds to serve the purpose of developing the plan for investing in domestic manufacturing of medical equipment. In 2015, the Health Strategy and Policy Institute again collaborated with the Medical Equipment and Infrastructure Department to implement a national survey on investment in and use of MRIs, CT scanners and mammograms. Then, in collaboration with the Medical Services Administration, national-level information on distribution and use of MRIs and CT scanners was analyzed. Both of these activities were intended to provide information for health technology assessment activities on effective use of MRI.

Difficulties, shortcomings

Some of the lists of medical equipment required by various types of facilities were developed and issued prior to 2010, but have not been updated. These equipment lists include: essential medical equipment for district and regional hospitals receiving investments from Project 47/2008/QD-TTg (Decision No. 333/QD-BYT in 2008); medical equipment for regional polyclinics (Decision No. 431/QD-BYT in 2009); medical equipment at the commune level related to the national health benchmarks to 2010 (Decision No. 2271/QD-BYT in 2002); equipment following national standards for provincial preventive medicine centers for the period 2008 – 2015 (Decision No. 4696/QD-BYT in 2008); equipment for district preventive medicine centers following technical standards (Decision No. 2367/QD-BYT in 2007); various documents on technical standards for hospital construction.

The medical equipment information reporting system has several limitations. There is no administrative database and there are no monitoring and evaluation indicators appropriate for managing and planning of investments and use of medical equipment. In addition, there is also no mechanism or regulation on sharing data for management of investments and use of medical equipment, particularly for high tech equipment. Even though there are some surveys in some provinces and regions to assess the medical equipment situation or for health technology
assessment, there is no national level survey and there are no data for developing a national database on medical equipment in Vietnam.

**Task 3: Development of health technology assessment (HTA)**

The task of building and developing health technology assessment is aimed at determining which technical solutions and equipment are appropriate for different types of medical facilities, ensuring economical and efficient investments, and at the same time effectively meeting healthcare needs of the population. The Five-year plan also calls for implementing HTA to determine which medical interventions are valid, effective, low cost, and at the same time ensuring quality of medical services.

**Implementation results**

At the end of 2014 and beginning of 2015, with technical assistance from The Health intervention and Technology Assessment Program (HiTAP) Thailand and National Institute of Health and Care Excellence (NICE) in the UK, HTA was formally applied in the evaluation of investment and effective use of MRI in public hospitals for the period 2014 – 2015. This is the prerequisite for continuing to apply the HTA approach for prioritizing investments and effective use of medical equipment in Vietnam, particularly for high cost medical equipment.

**Difficulties, shortcomings**

Decisions to invest and use expensive, high tech medical equipment are not yet based on estimation of cost-effectiveness criteria or HTA, which leads to inappropriate and expensive investments and use of medical equipment. Preliminary survey data on distribution, investment and use of MRI shows that the density of equipment is uneven across localities and not consistent with population density. In addition, physician requests for MRIs varies substantially across equipment with different sources of funding (state budget, joint ventures or mobilization of investments from individuals). The proportion of people having MRIs performed is similar in mountainous and disadvantaged areas with low capacity for post-MRI service provision and in major urban areas with concentrations of specialist hospitals, which are able to perform necessary post-imaging therapeutic services.

**Task 4: Strengthening the maintenance and repair of medical equipment**

The Five-year plan also called for the health sector to “strengthen the preservation, maintenance and repairs of medical equipment. Localities need to establish teams for maintenance and repairs of medical equipment to strengthen effectiveness of investments in medical equipment and quality of medical services. Units must allocate adequate funds for maintenance and repairs of medical equipment. Funds must be set aside from fee revenues into a depreciation fund in order to re-invest in medical equipment when necessary. Strengthen the capacity of the network of centers for standardization and quality control of medical laboratories; develop regional centers for standardization and quality control of medical equipment.”

**Implementation results**

**Strengthen maintenance and repairs of medical equipment**

In recent years the health sector has made several efforts to strengthen the maintenance of medical equipment with a focus on training technical manpower specializing in medical
equipment. The MOH has recently cooperated with Hanoi University of Technology to train a cadre of electronic biomedical engineers. Basic content of management, technology and use of medical equipment has been integrated in the training curriculum. The training program has also been expanded and enhanced both in terms of quantity and quality of trainees. However, there are limitations due to caps on enrollment, unclear mechanisms related to identifying the group of people who should be trained, the source of funding and mechanism for student recruitment. The MOH has also invested in upgrading the new facility of the Vocational College of medical equipment technology in Hanoi and College of Medical Technology in Hai Duong province.

Ensuring that medical equipment is up-to-date and only used during its useful life can contribute to quality and safety for patients. If we want to apply the gold standards used by OECD and other developed countries, we would have to ensure that 60% of medical equipment is used for 5 or fewer years, 30% from 6 to 10 years and only 10% for more than 10 years. However, currently in central hospitals, only 2.2 to 6.75% of medical equipment is used less than 5 years, while 10 to 23.6% of equipment is being used more than 15 years. Similarly for provincial hospitals, less than 20% of medical equipment is used for less than 5 years, while at the district hospitals less than 10% of equipment is used for less than 5 years [94]. On the other hand, in three central hospitals surveyed, up to 30% of medical equipment is not regularly serviced. At the provincial level from 36.3 to 63% of equipment are not regularly serviced, while at the provincial level this ranges from 36.3 to 63% and in the district hospitals 10.4% of medical equipment is not regularly serviced. The main reasons for this are that medical facilities lack adequate human resources and funds for maintenance and repairs of medical equipment.

The development of a cadre of technicians for maintenance and repair of medical equipment in health facilities has shown much progress. So far, 62% of provincial general hospitals, 26.1% of provincial specialist hospitals and 31.9% of district general hospitals have established technical teams for maintenance of medical equipment. However, the number of staff who went through training courses on maintenance of medical equipment is very limited (of the total 412 staff working in the medical equipment maintenance teams in 261 hospitals only 295 (71%) staff were professionally trained). The medical equipment maintenance training needs are very high in the context where health facilities are strongly promoting social mobilization of capital for equipment investments to expand delivery of services. Survey results indicate that among 261 hospitals interviewed, there is a need for 777 employees to receive training on medical equipment maintenance [95].

**Strengthening capacity of the standardization and quality control network; develop regional quality control centers**

Currently, the Ministry has been focusing investment on the Center of Medical Equipment Calibration and Standardization under the administration of the National Institute of Medical Equipment and Construction. It serves as the focal point for quality management of medical equipment and supplies, implementation of activities concerning the inspection of the quality of medical equipment and supplies in manufacture and trading; testing, verifying the quality of the medical equipment at the request of the MOH; verifying and certifying the quality and safety of medical devices being produced, circulated, imported and exported; participating in the process of medical equipment standards development; researching on medical equipment

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15 Medical equipment with life from 6 to 10 years is equipment that is still usable, but needs repairs, replacement parts; medical equipment with life over 10 years is considered obsolete and no longer appropriate, so it should be replaced.
technology transfer. Along with the health sector, a number of facilities under the administration of other sectors are also involved in the testing, calibration and verification of the quality of medical equipment such as agencies under the administration of the Atomic Energy Institute-Ministry of Science and Technology, Centers of Measurement No. 1, 2, 3-General Department of Measurement-Ministry of Science and Technology, and the Medical Equipment Calibration Unit-Department of Army Health.

So far, the MOH and stakeholders have developed and promulgated a total of 135 sectoral standards and 35 Vietnamese standards in the field of medical equipment including standards related to the construction of hospitals, the provincial preventive medicine centers, the technical blocks (operating theater, x-ray room, radioactive diagnosis and treatment rooms and laboratories, etc.).

Difficulties, shortcomings

Currently, several groups of equipment with important patient safety implications are not yet included in the list of equipment requiring mandatory external quality assurance as there is no specific legal framework (operating theater, treatment, diagnostic and intervention).

Safety and quality assurance of medical equipment is not adequately implemented due to low capacity for calibration and external quality assurance. Although more than 150 sets of National Standards on medical equipment have been established, the use of these standards for evaluation, verification, calibration and validation is still limited.

There is a lack of policy and training mechanisms for development of professional staff for maintenance and servicing of medical equipment in medical facilities, especially at provincial and district health facilities.

3B.3. Priority issues

3B.3.1. Inadequate planning and regulation of medical infrastructure and equipment investments

Fragmentation in master plans and out-of-date master plans for health system infrastructure and medical equipment that do not respond adequately to population health care needs or lead to excess capacity given current and forecast healthcare needs. Private sector investments are inadequately considered in existing master plans and private sector investments generally do not follow master plans.

3B.3.2. Inadequate quality assurance, calibration and standards for utilization of medical equipment at health sector facilities

Currently quality control activities (calibration, external assessment) are not implemented regularly in all medical facilities.

The system of treatment guidelines and protocols has been developed by the MOH and issued in 2014 and 2015. However, these technical guidelines are not yet widely used in decision-making about when use of a technology (including equipment) is appropriate, or when it is not cost-effective. These treatment guidelines and protocols are also not yet used in determining need for investment in new medical equipment to meet the healthcare needs of the population. (HTA).
Quality of domestically produced medical equipment is often inadequate to meet local demand and facilitate exports by meeting regional (ASEAN) and international standards.

4. Health service delivery

4A. Preventive medicine and public health

4A.1. Five-year plan (2011 – 2015) objectives and their implementation

The Five-year plan of the health sector laid out the objective to: “Promote preventive and PHC activities that are appropriate to the new situation to ensure all people can access quality PHC services; effectively implement health NTPs to prevent outbreaks of major epidemic diseases; strengthen inter-sectoral cooperation for people’s health care; gradually control factors that are harmful to people’s health. and ensure all medical facilities treat hazardous medical waste according to standards.”

By 2015, Viet Nam will have achieved almost all Five-year plan and MDG targets related to preventive medicine (Table 13).

Table 13: Results of implementing 2015 plan targets and MDGs in the field of preventive medicine and public health, 2011 – 2015

<table>
<thead>
<tr>
<th>Target</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014 (est.)</th>
<th>2015 goal</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five-year plan targets 2011 – 2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Proportion fully vaccinated among children under 1 year of age (%)</td>
<td>96.0</td>
<td>95.9</td>
<td>91.4</td>
<td>&gt;90</td>
<td>&gt;90%</td>
<td>National EPI</td>
</tr>
<tr>
<td>2 HIV/AIDS prevalence in the community</td>
<td>&lt;0.3</td>
<td>&lt;0.3</td>
<td>&lt;0.3</td>
<td>&lt;0.3</td>
<td>&lt;0.3%</td>
<td>Administration of HIV/AIDS Control</td>
</tr>
<tr>
<td>Millennium Development Goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Malaria incidence rate</td>
<td>51</td>
<td>49</td>
<td>39</td>
<td>27</td>
<td>0.35/100 000</td>
<td>NCD Statistics Year Book</td>
</tr>
<tr>
<td>4 Malaria mortality rate</td>
<td>0.02</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02/100 000 people</td>
<td>NCD Statistics Year Book</td>
</tr>
<tr>
<td>5 TB prevalence rate</td>
<td>227</td>
<td>218</td>
<td>209</td>
<td>200</td>
<td>187/100 000 people</td>
<td>WHO. Global TB report</td>
</tr>
<tr>
<td>6 Proportion of household members using improved sources of drinking water (national)</td>
<td>92%</td>
<td>92%</td>
<td>78.5%</td>
<td></td>
<td></td>
<td>Multi-indicator cluster survey (MICS) 2011, 2014</td>
</tr>
<tr>
<td>7 Proportion of household members using improved sanitation facilities which are not shared (national)</td>
<td>78%</td>
<td>79%</td>
<td>68.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4A.2. Assessment of implementing Five-year plan tasks on preventive medicine

4A.2.1. Prevention of epidemics and infectious disease

Implementation results

Prevention of infectious epidemic diseases

In the period 2010 – 2014, Vietnam has basically controlled infectious epidemic diseases (Table 14) and prevented large epidemics from occurring. No communicable disease outbreaks met the strict criteria for being declared an epidemic according to Decision No. 64/2010/QD-TTg regulating conditions for declaration of epidemic, declaration of end to communicable disease epidemic.

Table 14: Morbidity and mortality due to communicable diseases, 2010 – 2015

<table>
<thead>
<tr>
<th>Communicable diseases</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza A(H5N1)</td>
<td>7</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Mortality (case)</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Cholera</td>
<td>0.69</td>
<td>0.002</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Mortality/100 000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Viral Encephalitis</td>
<td>1.27</td>
<td>1.42</td>
<td>1.28</td>
<td>0.97</td>
<td>1.09</td>
<td>1.00</td>
</tr>
<tr>
<td>Mortality/100 000</td>
<td>0.03</td>
<td>0.03</td>
<td>0.02</td>
<td>0.01</td>
<td>0.04</td>
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<td>78.08</td>
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<td>74.78</td>
<td>31.7</td>
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<tr>
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<td>0.12</td>
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<td>0.09</td>
<td>0.05</td>
<td>0.02</td>
<td>0.06</td>
</tr>
<tr>
<td>Viral Hepatitis</td>
<td>11.11</td>
<td>12.58</td>
<td>11.16</td>
<td>10.64</td>
<td>6.04</td>
<td>..</td>
</tr>
<tr>
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<td>0.00</td>
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</tr>
<tr>
<td>Hand, foot and mouth disease</td>
<td>- 126.39</td>
<td>177.45</td>
<td>89.63</td>
<td>76.35</td>
<td>62.2</td>
<td>..</td>
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<tr>
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<td>0.03</td>
<td>0.01</td>
<td>0.006</td>
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</tr>
<tr>
<td>Measles</td>
<td>8.61</td>
<td>10.91</td>
<td>1.74</td>
<td>3.64</td>
<td>33.47</td>
<td>..</td>
</tr>
<tr>
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<td>0.00</td>
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<td>0.145</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>..</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>..</td>
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<tr>
<td>Malaria</td>
<td>62</td>
<td>51</td>
<td>49</td>
<td>39</td>
<td>27</td>
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</tr>
<tr>
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<td>0.01</td>
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<td>0.01</td>
<td>..</td>
</tr>
<tr>
<td>Streptococcus suis</td>
<td>0.13</td>
<td>0.15</td>
<td>0.13</td>
<td>0.13</td>
<td>0.07</td>
<td>..</td>
</tr>
<tr>
<td>Mortality/100 000</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>..</td>
</tr>
</tbody>
</table>

Vietnam succeeded in preventing the incursion of epidemic-causing infectious diseases, emerging and dangerous diseases such as Ebola hemorrhagic fever, MERS-CoV, plague, influenza A (H7N9). The country has effectively prepared itself to respond and has prevented Influenza A(H7N9) from entering Vietnam, even though it has led to heavy and continuous outbreaks in China since 2013, with cases detected in Quang Tay province, at Vietnam’s northern border.

Morbidity and mortality due to various communicable diseases has fallen over time. Dengue morbidity fell from 147 to 32 per 100 000 people and mortality rates from 0.12 to 0.02 per 100 000 people between 2010 and 2014. The number of dengue patients in 2014 nationwide decreased by 63.8%, while the number of deaths from dengue decreased by 77.8% compared to the average numbers in the period 2006 – 2010 [97]. For hand, foot and mouth disease, morbidity fell from 126 to 76 per 100 000 while mortality fell from 0.19 to 0.01 per 100 000 between 2011 and 2014 [96] and in comparison with the average in the period 2011 – 2013, the number of hand, foot and mouth disease cases in 2014 fell by 31.9%, while the number of deaths fell by 90% [97]. From 2003 to 2010, the country recorded 119 cases of influenza A(H5N1), of which 59 were reported to have died; however, since 2011, Vietnam has recorded only 8 cases and 5 deaths from influenza A(H5N1) [96].

At present, the EPI includes vaccines preventing 12 communicable diseases. The proportion of children fully immunized in the years from 2011 to 2014 has remained above 90%. Vietnam continues to maintain achievements in elimination of polio and neonatal tetanus. Whooping cough incidence has fallen 937 times, diphtheria 585 times, and neonatal tetanus 59 times compared to 1984 when EPI was not yet implemented [97]. In 2012, two identical cases of type 2 vaccine-derived mutated poliovirus (VDPV) were detected in southern Vietnam, with a system response of immunization to halt further transmission. Since then no new cases of importation or VDPV have been detected. When the measles outbreak occurred in 2014, which had more than 15 000 confirmed cases and 146 deaths, Vietnam organized a campaign to vaccinate against measles and rubella from October 2014 through March 2015, targeting 20 million children aged 1 to 14 years of age, vaccinating 98.2% of the target population. Japanese encephalitis vaccination has been implemented in the form of campaigns in areas with outbreaks since 1997. In 2015 the Japanese encephalitis vaccine was adopted into the routine EPI nationwide. In order to assess the burden of disease from vaccine preventable diseases and the impact of immunizations, the EPI set up a surveillance system for congenital rubella, encephalitis and meningitis and has restructured surveillance of measles (fever with rash) when rubella was added to the EPI.

The roadmap for developing a national regulatory authority (NRA) for vaccines in Vietnam has been promoted through strong commitments of the MOH in 2012 with in-depth technical support from WHO experts. In April 2015, WHO implemented a formal evaluation and accredited the system as achieving WHO standards in June 2015.

Vietnam achieved the MDG for malaria prevention with reductions in both morbidity and mortality in the past decade. In the period 2010 – 2014, the malaria incidence rate fell from 62 to 27 per 100 000 people; the mortality rate fell from 0.02 to 0.01 per 100 000 people. Compared to 2010, malaria morbidity in 2014 decreased by 10% and malaria mortality decreased by 71% [96].
Strengthening capacity of epidemic disease surveillance system; strengthening inter-sectoral coordination for prevention of epidemic disease

Vietnam has achieved all International Health Regulations (IHR) core capacities in 2014 through implementing the Asia Pacific Strategy for Emerging Diseases (APSED) with the strong commitment of the Government and support from the WHO and other international organizations. The MOH has consolidated national capacity and international cooperation in order to undertake surveillance, prevention, warning and response to emerging diseases and other public health events. According to results of an assessment, Vietnam has achieved core capacities according to requirements of the IHR including 13 core capacities achieving from 70% of criteria or higher, with 6 capacities achieving 100% of criteria.

To date, the epidemic surveillance and response system has been established from central to commune levels with participation from preventive and treatment units. Application of information technology in reporting, surveillance, processing and storage of data has been implemented. Focal supervision has been set up for some dangerous epidemic diseases, such as influenza, hand, foot and mouth disease, dengue, malaria, bubonic plague, and Japanese encephalitis. Event based supervision (EBS) has been officially operating since July 2014 to collect and analyze information for early identification of public health events that contain epidemic risks and affect people’s health. Capacity for evaluation of public health event risks have been improved for health workers, leading institutes, provincial preventive medicine centers and central and provincial veterinarians with support from WHO and US Centers for Disease Control.

Through activities of the Steering Committee on Epidemic Prevention, the MOH has cooperated with ministries and agencies such as the Ministry of Agricultural and Rural Development, Ministry of Education and Training, Ministry of Defense, Ministry of Public Security, Ministry of Finance, Ministry of Communications and Transportation and other relevant units for prevention of epidemic disease, strengthening of communication activities, and implementation of measures to prevent epidemic disease transmission from abroad via border gates. In 2013, the MOH coordinated with the Ministry of Agriculture and Rural Development to issue Joint Circular No. 16/2013/TTLT-BYT-BNN&PTNT to enhance cooperation from central to local level in prevention of zoonotic diseases.

In 2013, the MOH enacted Decision No. 1424/QD-BYT establishing an Emergency Operations Centre (EOC) located in the General Department of Preventive Medicine with participation of relevant units of the MOH, Ministry of Agriculture and rural Development and representatives from WHO, Food and Agricultural Organization, and the US-Centers for Disease Control in Vietnam in order to strengthen coordination, information sharing and mobilization of resources for supervision of, responses to epidemic disease. In the long term, this center will be the focal point for information sharing and close cooperation with relevant units of various sectors and international organizations to manage public health emergencies that affect not only people’s health in Vietnam, but also global health, such as the outbreak of communicable diseases.

Investment in development of modern science and technology for detection and study of pathogens has been intensified, including especially the development of a system of advanced and modern laboratories appropriate to meet the needs for disease prevention in different regions.
Vietnam has two laboratories achieving biosafety level 3 in the National Institute of Hygiene and Epidemiology and the HCMC Hospital for Tropical Diseases and a mobile biosafety level 3 laboratory in the Pasteur Institute in HCMC. At present, the National Institute of Hygiene and Epidemiology and Pasteur Institute in HCMC are capable of providing testing for such diseases as Ebola, influenza A(H5N1), influenza A(H7N9), MERS-CoV as well as emerging pathogens.

From 2011 to 2014, an additional 20 provincial preventive medicine centers achieved national standards for preventive medicine centers, bringing the total number of accredited centers to 23 out of 63 units [98].

**Program on HIV/AIDS prevention and control**

In 2012, the Prime Minister signed Decision No. 608/QD-TTg approving the National Strategy on HIV/AIDS Prevention and Control to 2020 and vision to 2030. By the end of 2014, 94,693 patients were receiving ARV treatment. The number of infants born to HIV-infected women who received ARV prophylaxis to reduce early mother-to-child transmission was 1,854, and the number of HIV-positive pregnant women who received antiretroviral drugs during the past 12 months to reduce the risk of mother-to-child transmission during pregnancy and delivery was 1,733 out of a total 3,039 HIV-positive pregnant women who delivered in the past 12 months [99]. Methadone substitution therapy for opiate addicts is being carried out in 41 provinces/cities, with more than 25,000 patients receiving Methadone maintenance treatment, which contributes to reduction of HIV infection, stability of social protection and social order and contributes to general socio-economic development. The condom program has been continued in 63 provinces, cities; the needle and syringe program has been carried out in 88% of provinces. In the whole country, there are 1,345 HIV testing laboratories, of which 96 laboratories are authorized for HIV confirmatory testing. Totally, around two million people received free HIV counseling and testing [35].

In order to increase efficiency and at the same time increase access to HIV/AIDS services for the targeted populations, in the context of declining international funding for HIV/AIDS, services such as HIV counselling and testing, ARV treatment and methadone replacement therapy are being integrated and decentralization to the PHC level (district and commune).

Sustaining HIV/AIDS prevention and control activities is one of the priorities of the National Program on HIV/AIDS Prevention and Control. The Project on Financial Sustainability for the HIV/AIDS Prevention and Control Program was approved, as a result, the local budget for HIV/AIDS prevention and control activities has increased considerably.

**Program on Tuberculosis prevention**

In 2014, the Prime Minister approved the National Strategy on Tuberculosis Prevention to 2020 and vision to 2030 (Decision No. 374/QD-TTg). At present, the program covers 100% of the nation’s territory. It has improved detection with a focus on AFB positive diagnosis using direct spectrum illumination technique and TB diagnosis in children. It currently applies the 8-month DOTS regimen. Effectiveness of TB control has maintained the TB treatment success rate at over 90% since 2010. Prevalence of TB of all types decreased from 353 (in 2000) to 198/100,000 in 2014 [34]. Thus, if current efforts continue, the 2015 target of reducing TB prevalence to 187/100,000 is achievable.
Difficulties, shortcomings

Although the incidence of some common infectious diseases, such as dengue or hand, foot and mouth disease, has decreased over time, incidence rates remain high, and increases have been seen in some provinces. Without effective preparedness and response for timely prevention, the risk of extensive outbreaks will continue to exist. Control of hand, foot and mouth disease has not been very effective due to lack of specific preventive methods, unhygienic habits and behaviors and low population awareness of disease prevention. Control of the growing incidence of dengue fever has been impeded by the lack of approved vaccines for dengue prevention, lack of treatment drugs, population practice of storing potable water in uncovered containers in the Mekong River delta, and frequent rainstorms and floods and rapid urbanization in large areas of Vietnam’s territory resulting in retention of stagnant water, which is a favorable environment for mosquitos to breed and spread disease.

The national endgame plan for poliomyelitis has been developed in line with the Global Polio Elimination Initiative, with actions including the introduction of a single dose inactivated polio vaccine (IPV) and switching from the current trivalent oral polio vaccine (OPV) to bivalent OPV. In addition, the MOH needs to consider the future plan of full dose IPV introduction into EPI, as well as combination vaccines as primary doses. This change will be one of the biggest challenges for the EPI.

Epidemic diseases that can be prevented by vaccination continue to pose a risk of outbreaks, such as measles, diphtheria, whooping cough, and Hepatitis B. The main reason is low immunization rates in some region leading to gaps in herd immunity resulting from several factors including: reluctance of some parents to allow their child to be immunized for fear their child will have an adverse reaction; difficulties in managing the EPI target population in large cities and provinces; lower access to immunization services in remote, ethnic minority regions due to long absences from home during certain agricultural seasons. Problems of vaccine safety in recent years have become a major concern of the public and of health workers, hindering routine immunization activities and leading to reductions in vaccination coverage and increased numbers of children left without vaccine protection. In addition, delayed vaccination when families do not follow the national immunization schedule or when they obtain vaccines in private vaccination facilities without stable supplies of vaccines, leads to the risk of children suffering from vaccine preventable disease, particularly in major cities.

Epidemic surveillance and response systems are extensive, but are not yet highly responsive, as infectious disease reporting by hospitals is not pro-active, particularly in private facilities, leading to delays in detection of epidemic diseases until many people in the community are infected, which impedes elimination of disease clusters.

Although the implementation of HIV/AIDS prevention interventions has been effective in controlling the current infection rate to below 0.3%, the HIV epidemic remains high in some provinces, especially in the Northern midlands and mountains provinces, and cities/provinces with a high density of at-risk population groups. Vietnam’s HIV epidemic is concentrated among high risk population groups including people who inject drugs, female sex workers and men who have sex with men, yet access to and implementation of intervention activities in these populations have faced many challenges. In addition, due to actual or anticipated discrimination and stigma, the proportion of at-risk population groups who have been tested for HIV and know their results in the past 12 months is low (around 30%). A high proportion of patients initiate
ARV treatment late (36% start treatment when CD4 count is already below 100). A high number of patients are diagnosed with HIV infection but do not register for treatment. HIV services are mainly provided at district and provincial level facilities, which limits access to services by at-risk populations, particularly in remote areas [100].

Tuberculosis remains a major challenge, with Vietnam ranked 12th of 22 countries with high TB burden, and stands at the 14th of 27 countries with high drug resistant TB burden [34]. The main difficulties include poor management of TB treatment in some localities, limited awareness and behavior change among the people and low compliance with the treatment regime, particularly in remote and isolated areas.

Vietnam is one of the five countries in the Greater Mekong Sub-region that has detected plasmodium falciparum malaria parasite resistant to Artemisinin—a drug considered highly effective for malaria treatment at present. In Vietnam, drug-resistant malaria has been detected in the South central coast and Central Highlands provinces bordering Cambodia and Lao PDR, including Binh Phuoc (in 2010), followed by Dak Nong and Gia Lai (2011 – 2012), Quang Nam (2013), and recently in Khanh Hoa (2014) [97]. Drug resistant plasmodium is at risk of spread to other localities. A big challenge in malaria prevention at present is that areas with endemic malaria infection tend to be mountainous, forested, remote and isolated and poor, with high and growing population mobility across the border. This is combined with low use of personal protection among ethnic minority populations due to their lifestyle and agricultural practices involving frequently sleeping away from home in the forest or fields without a mosquito net.

Rabies in Vietnam is still one of the main causes of mortality among infectious diseases in recent years. Between 2011 to 2013, the rabies mortality rate increased compared to 2010 and remains at 0.11 – 0.12/100 000 [96]. In 2014, the rabies mortality rate fell to 0.07/100 000 people but this is still considered high. The reason is that canine rabies has not been well controlled in rural areas, particularly in mountainous and remote areas where the percentage of dogs vaccinated against rabies is low, the number of dogs raised for food is high, and import of dogs from neighboring countries has not been strictly managed. Furthermore, awareness of people on the risks of rabies is limited; in some cases, there has been a lack of budget for vaccination or traditional medicines have been used for treatment of bites from dogs or cats suspected of having rabies [97].

Funding for the majority of programs on infectious disease prevention is from NTPs. However, the Government has recently drastically cut this source of funding with strong effects on ability to implement program activities.

4A.2.2. Tasks related to implementation of environmental health, food safety activities

Implementation results

Health environment management

In 2012, the Prime Minister approved the Rural Water and Sanitation Program for the period 2012 – 2015 (Decision No. 336/QD-TTg), assigning responsibility for managing and implementing the rural sanitation sub-project to the MOH, in collaboration with other ministries and sectors, with a focus on implementing IEC and BCC activities. Through collaboration between the MOH and other agencies and mass organizations, like the Youth Union, the Women’s Union and the Fatherland Front, and international agencies, IEC and BCC activities
aimed at improving awareness and mobilizing people to implement correct personal hygiene behaviors, and to build and use sanitary toilets have been implemented strongly in all localities. The proportion of the population using improved sanitation facilities not shared with other households in 2014 reached 79.2%, slightly lower in rural areas at 73.8%. Regarding clean water, in 2014 the proportion of the population using improved water sources reached 92.0% overall, 89.1% in rural areas [20]. The Ministry of Agriculture and Rural Development leads implementation of the Project on provision of improved water and sanitation in rural areas.

Vietnamese cities continue to implement plans for providing clean water using new approaches intended to control risks arising through the water supply chain (from water source through production and distribution to consumers) with the support of the WHO, gradually improving water quality and contributing to community health protection. Nevertheless, the national safe water program is still being developed, so there is still not yet a sustainable, systematic program that could be scaled up nationally, including in rural areas. Currently national drinking water quality standards have been assessed as infeasible because their application at all water supply facilities is facing many difficulties, particularly the inability of labs to analyze all water safety indicators. In addition to improving water quality, attention is also being paid to implementing wastewater treatment in urban areas, at industrial sites and medical facilities. However, up till now, only about 10% of waste water nationally is being treated prior to being released into the environment.

The disposal of medical waste has improved. By the end of 2014, around 54.4% of hospitals had wastewater treatment systems (of which, central level: 73.5%, provincial level: 60.3%, district level: 45.3%), an increase of 12 percentage points compared to 2010. For treatment of medical solid waste, currently more than 95% of hospitals sort and appropriately dispose of hazardous medical waste, with 29.4% using dual chamber incineration or microwave/wet heat for disinfection of hazardous medical solid waste; the remaining hospitals use single chamber incinerators, traditional burning or burying or contract out these services [35].

Regarding injury prevention, in 2011, the MOH issued the health sector plan for prevention and control of accidents and injuries in the community for the 2011 – 2015 period (Decision No. 1900/QD-BYT). In 2013 the Prime Minister approved the program for prevention of injury among children for the 2013 – 2015 period (Decision No. 2158/QD-TTg). To implement these policies, 54 out of 63 provinces have established a Steering Committee on Injury Prevention; all 63 provinces carry out surveillance and statistical reporting on injuries. Currently 121 communes have been certified as safe communities [101]. The injury mortality rate in the community in 2014 was 43.37/100 000 people, lower than in 2011 (44.73/100 000) but higher than in 2010 (42.69/100 000)[102].

Response to emergencies, natural disasters, catastrophes, emerging and new diseases

To actively prevent health impact of climate change, in 2010, the MOH issued the Action Plan on the Health Sector Response to Climate Change in the period 2010 – 2015 (Decision No. 3557/QD-BYT), and established a Steering Committee on Implementation of the NTP for the health sector response to climate change. In the period 2011 – 2014, the MOH carried out activities focusing on three main areas: assessment of climate change effects on disease incidence and trends; interventions for health sector response to climate change; and communication to raise awareness among health workers and the community about health protection and adaptation to climate change [103].
Regarding control of diseases with unclear causes and emerging diseases, in the 2011 – 2012 period in Quang Ngai province, 216 cases of palmoplantar keratosis were detected, including six ending in death. The cause of this syndrome was eventually identified as microfungal contamination of moldy rice consumed by a population with micro-nutrient deficiencies. To control the disease, the main intervention was the use of rice that was not infected by this fungus, combined with strengthening nutrition and environmental sanitation. Upon successful implementation of active and effective interventions, the number of infected persons decreased dramatically. In 2013 only 18 cases were detected, and in 2014 only 4 scattered cases have been found [104].

**Food safety**

Inter-sectoral coordination in state management of food safety has been strengthened through issuance of joint circulars. Joint Circular No. 20/2013/TTLT-BYT-BCT-BNNPTNT regulates conditions and procedures to assign responsibility for food testing for state regulatory procedures and Joint Circular No 34/2014/TTLT-BYT-BCT-BNNPTNT provides guidance on labeling food, food additives, and substances used in processing packaged foods. Communication activities have been diversified; inspection and audit activities are being implemented strictly at the same time at the central and local levels; mass organizations, such as the Farmers’ Union, Women’s Union, Fatherland Front, and the Youth Union, have been mobilized.

The health sector has made progress in implementing the National Strategy on Food Safety in the period 2011 – 2020. In 2012, the MOH enacted 50 national technical standards on food safety (compared to 20 standards in 2010) and 35 Vietnamese standards on testing methods. The Intersectoral Steering Committee on Food Safety was consolidated and established at all three levels: provincial (100%), district and commune (over 99%). Programs on international testing proficiency were organized for central, regional and provincial laboratories. By the end of 2014, 34 out of 63 provinces were certified as ISO 17025. A certificate of conformity was granted to two facilities: The Center for Application of Science and Technology in Food Safety and the National Institute of Food Safety Testing.

Enhancement and close cooperation between the health sector and relevant sectors in inspection and audit activities have brought about positive effects, contributing to the restoration of order and discipline in food production and trade: the proportion of facilities with food safety violations fell from 21.2% (2012) to 20.1% (2013) and 19.5% (2014).

Surveillance and prevention of food poisoning and food-borne diseases have been strengthened, focusing on: IEC on prevention of food poisoning for population groups at risk; surveillance, detection, early warning of risks, warning of food poisoning prevention in the community, focusing on reduction of incidents (due to food poisoning in collective dining rooms); reduction of morbidity and mortality (due to food poisoning in households, related to alcohol and poisonous mushrooms); early detection of food poisoning; strict and uniform investigation and treatment to minimize food poisoning impact. In 2014, the Food Safety Administration first coordinated with the HCMC and Nam Dinh province Food Safety Offices to organize two training exercises on investigation, treatment and resolution of food poisoning incidents affecting many people. All 63 provincial food safety offices and functional agencies participated to improve skills of provincial health departments and food safety offices in the area of investigating and resolving food poisoning incidents, especially in industrial parks and
export processing zones. As a result, in the period 2011 – 2014, there was only one case of mortality due to collective food poisoning (i.e. incident involving more than 30 persons).

In the 2011 – 2014 period, the Food Safety Administration implemented a plan on surveillance and assessment of the main contaminants of food commonly sold in the market. Monitoring was carried out by seven facilities including six professional institutes (National Institute of Food Safety Testing, National Institute of Nutrition, Pasteur Institute in Nha Trang, Institute of Epidemiology in the Central Highlands, Pasteur Institute in HCMC, Institute of Public Health in HCMC) and Center for Drug, Cosmetic and Food Testing in Thua Thien Hue. In total over four years, 5482 food samples were tested, and the sub-standard share fell over time from 28.8% in 2011 to 10% in 2014.

**Difficulties, shortcomings**

There remain 18 provinces with coverage of sanitary latrines below 50%, mainly in the North midlands and mountains area and Central Highlands provinces. More than 7% of the rural population still practice open defecation [20], which affects the environment and increases risks of diarrhea, gastrointestinal disease and under-five malnutrition. The proportion of households using sanitary latrines is relatively low due to limited awareness of people about hygiene, long-held habits of not using latrines, inadequate attention and engagement of local authorities and insufficient investment resources for sanitation. In addition, there are difficulties in workforce, monitoring, supervision and evaluation of the program in some localities.

The system of regulatory documents related to protection of the health environment are inadequate to meet actual needs, and are in need of supplementation and amendment. The capacity for hazardous waste management, environmental controls and pollution control at health facilities is limited. The health environment surveillance system has not yet been consolidated.

The food poisoning situation remains complicated and household meal safety has not yet been effectively controlled. From 2011 – 2014, there were 677 scattered food poisoning incidents affecting 21,002 victims. On average each year there are 38 food poisoning incidents affecting 30 or more victims and 131 incidents affecting fewer than 30 victims (Table 15). The case fatality rate from food poisoning has fluctuated at around 0.5 – 0.8% in the past four years. Cases of death from food poisoning are usually related to natural toxins, such as pufferfish toxins, toad toxins, fungal toxins in corn dumplings, and especially toxins in poisonous mushroom, fruits and trees in the forest. Sporadic poisoning cases mainly occur in households in remote, ethnic minority regions where educational attainment is low leading to difficulties in surveillance and treatment.

**Table 15: Morbidity, mortality and hospitalization due to food poisoning, 2011 – 2014**

<table>
<thead>
<tr>
<th>Order</th>
<th>Indicator</th>
<th>Surveillance reports</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>2011</td>
</tr>
<tr>
<td>Total cases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Poisoning incidents</td>
<td>148</td>
</tr>
<tr>
<td>2</td>
<td>Morbidity</td>
<td>4700</td>
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<tr>
<td>3</td>
<td>Mortality</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>Hospitalization</td>
<td>3663</td>
</tr>
</tbody>
</table>
Chapter II: Implementation of the Plan for the protection, care and promotion of the people’s health 2011 – 2015

<table>
<thead>
<tr>
<th>Order</th>
<th>Indicator</th>
<th>Surveillance reports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2011</td>
</tr>
<tr>
<td>Cases with ≥ 30 persons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Poisoning cases</td>
<td>32</td>
</tr>
<tr>
<td>2</td>
<td>Morbidity</td>
<td>3585</td>
</tr>
<tr>
<td>3</td>
<td>Mortality</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Hospitalization</td>
<td>2787</td>
</tr>
<tr>
<td>Cases with &lt;30 persons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Poisoning cases</td>
<td>116</td>
</tr>
<tr>
<td>2</td>
<td>Morbidity</td>
<td>1115</td>
</tr>
<tr>
<td>3</td>
<td>Mortality</td>
<td>26</td>
</tr>
<tr>
<td>4</td>
<td>Hospitalization</td>
<td>876</td>
</tr>
</tbody>
</table>

Source: Food Safety Administration

Food safety violations have not been handled strictly. At the commune level, most violations lead to warnings rather than fines. Local authorities have paid inadequate attention to checking and handling of food advertisement violations, particularly the common violations related to food supplement advertisements.

A project to develop rapid warning and risk analysis on food safety was approved by the Prime Minister, but the budget for the project has not been approved; thus project implementation is slower than planned (Prime Ministerial Decision No. 518/QD-TTg).

4A.2.3. Tasks related to promotion of IEC, reduction of behavioral risk factors and health care for high-need groups

Implementation results

Prevention of NCD risk factors

Tobacco harm prevention activities in Vietnam entered a new phase when the Law on Tobacco Control was enacted by the National Assembly in 2012 and put into effect in 2013. On that basis, the MOH has taken the lead to coordinate with relevant ministries and sectoral agencies to develop guiding documents for implementation of the Law on Tobacco Control by relevant agencies. The tobacco control program has been widely implemented through health IEC activities, smoke-free areas and other measures. Vietnam has implemented regulations for printing graphic warnings on tobacco packages starting in 2013, and at the same time has banned advertising tobacco in the mass media and tobacco sponsorship of cultural and sport events.

Prevention of harm from alcohol consumption has been bolstered in 2014 by the approval of a National policy to prevent harmful effects of alcoholic beverage consumption to the year 2002 (Prime Ministerial Decision No. 244/QD-TTg). In 2015, the Prime Minister established the national steering committee for prevention and control of harm from alcohol use (Decision No. 1081/QD-TTg), chaired by the Minister of Health, with deputies and members being leaders of relevant ministries and sectoral agencies. For the organization, direction and implementation of relevant policies, the sectoral agencies, mass organizations and local authorities have intensified communication activities about the prevention of harmful effects.
of alcoholic beverages through various channels and in diverse forms. The MOH and other Ministries have issued several regulations on prevention of harm from alcohol consumption; some localities and sectors have banned the drinking of alcohol during office hours (e.g. Hai Phong, Nghe An, Vinh Phuc, Ha Noi, Long An provinces). Alcohol harm prevention models have been implemented, including developing hospital counseling programs to prevent drunk driving, building safe communities and prevention of drunk driving in the commune. The public security sector has strengthened breathalyzer checks of drivers.

Vietnam has developed the National Nutrition Strategy for the period 2011 – 2020 and a Vision to 2030 aiming to “gradually and effectively control overweight, obesity and risk factors of chronic, non-communicable nutrition-related diseases in adults.” In 2013 the MOH issued guidelines and ten recommendations on proper diet (Decision No. 189/QD-BYT). To direct and organize the implementation of appropriate nutrition, the MOH has launched “Breastfeeding Week” and “Nutrition and Development Week”, while friendly hospitals are participating in innovating guidelines for “Ten Steps to Successful Breastfeeding”. Clinical nutrition departments have been set up in hospitals. The National Institute of Nutrition organizes training programs on preschool nutrition.

Health communication and education activities for disease prevention

In 2011, the MOH issued the Action Program on Health IEC in the period 2011 – 2015 as a basis for implementing IEC activities in a more systematic way. To date the communication network covers the whole country with health IEC centers in all provinces, and IEC teams in all districts.

School health

School health entered a new stage when the Government included a school health sub-project in the NTP in 2011 and again in the period 2012 – 2015. Many policies have strengthened the roles and responsibilities and inter-sectoral collaboration between the health sector and the education and training sector. In 2012, the MOH and Ministry of Education and Training signed the Coordination Program and Plan for the protection, education and care of the health of children and students in public educational establishments in the period 2012 – 2020 (Program No. 993/CTr-BYT-BGDDT and Plan No. 997/KH-BYT-BGDDT). The program and project activities have contributed to developing the network and improving staff competencies in school health activities, with initial efforts focused on improving quality of school sanitation. Currently more than 40 provinces have set up school health steering committees chaired by leadership of the provincial people’s committees. Nearly 60% of schools nationally have set up pupil health care committees (increase of 26% compared to 2010); 29% of provinces have allocated funds from the provincial budget to implement school health activities. The proportion of secondary schools with a health office has increased from 28.9% (2010) to 59.6% (2014). By the end of 2014, 100% of full-time school health staff and 80% of specialized education staff have been trained on school health. Classroom and sanitation conditions in schools have improved, currently 77.5% of schools have adequate water for washing, 82.8% of schools have adequate drinking water for pupils and 61.9% of schools have school kitchens meeting food safety standards. In 2010, the proportion of schools organizing routine health checkups for the students and the percentage of school keeping health records of students was 37% and 32%; by 2014 that proportion has increased to 70% and 55% respectively [105].
Difficulties, shortcomings

Many indicators indicate increases in behavior harmful to health, not a decrease, or only a slow decrease. Despite the enactment of the Tobacco Control Law, smoking prevalence remains high, with a slow rate of reduction of only 0.5 percentage points per year. Vietnam is one of the few countries with rapidly rising alcohol consumption per capita. WHO estimated that in the period 2003 – 2005, average annual consumption of pure alcohol equivalent among Vietnamese people reached 3.8 liters in the period 2008 – 2010. Per capita consumption of alcoholic beverages in pure alcohol equivalent among people over 15 years of age (for both sexes) is projected to reach 8.7 liters in 2015, 10 liters in 2020 and 11 liters in 2025. The proportion overweight and obese among adults (BMI≥25) in 2010 was 10.9%, and without effective intervention this proportion is expected to increase to 21% by 2015. Currently, Vietnam still lacks policies and interventions to control behavioral risk factors (such as increasing physical activity or controlling salt intake). The underlying causes include the absence of intersectoral coordination and lack of strong policies and interventions outside the health sector to reduce risk factors. In addition, people’s awareness and compliance with the Law and regulations on tobacco control and control of harm from alcohol consumption remain low; communication and advocacy activities are not yet effective.

Health communication and education activities are lacking systematic direction and instructions for effective implementation. Community IEC and BCC in some localities is unsuitable and inflexible, lacking extensive campaigns on hygiene and health promotion. Collaboration with mass media agencies is limited and passive.

Sanitary conditions of schools in some areas, especially in rural, mountainous and remote areas, do not meet requirements. School health staff in educational facilities are insufficient in number, inadequately trained, and frequently changed because many staff do not have health background or teachers take up the work concurrently with other tasks. Collaboration between the health sector and the education sector in some localities is not tight. A third of provinces has not yet established a school health steering committee and more than 30% of schools do not have a health care committee for pupils. Operational funding is insufficient and is being cut back. There is a shortage of funds to organize examinations/screening and health care for school pupils, while funds allocated from school health insurance (about 41 000 VND per pupil) are insufficient to cover costs activities, and in some localities available health insurance funds are not exploited to pay for school health activities.

4A.2.4. Tasks related to prevention and control of non-communicable diseases (NCD)

Task: Develop models for management of chronic disease such as hypertension, diabetes, COPD and asthma, in the community

Implementation results

In 2012, the Prime Minister approved the health NTP for the period 2012 – 2015 (Decision No. 1208/QD-TTg) including projects on NCD prevention and control. By the end of 2014, all 63 provinces had implemented hypertension and diabetes projects, 37 out of 63 provinces had implemented cancer prevention projects and 25 out of 63 provinces had implemented

16 National Strategy on prevention and control of cancer, cardiovascular disease, diabetes, COPD, asthma and other NCDS in the period 2015-2025
the project on the prevention of COPD and asthma. Project activities have focused on IEC to raise people’s awareness, development of health services network, capacity building, and organization of screening activities for early detection, management and treatment of diseases. In four years, according to reports from the NTP, the project contributed to the detection and management of disease for about 600 000 people with hypertension, 236 000 people with pre-diabetes and diabetes, and 10 000 people with COPD and asthma. Currently over 10% of communes implement hypertension management.

Executive and management activities shifted in 2014 when the MOH assigned the Department of Preventive Medicine the focal mission to monitor and prevent NCDs (Decision No. 468/QD-BYT), and at the same time handed over the task of prevention of NCDs to provincial preventive medicine centers (Circular No. 51/2014/TT-BYT).

In 2015 the Prime Minister approved the National Strategy for the prevention of cancer, cardiovascular diseases, diabetes, chronic obstructive pulmonary diseases, asthma and other NCDs, for the period 2015 – 2025 (Decision No. 376/QD-TTg) as a framework orientation for NCD prevention activities in Vietnam in the coming years.

**Difficulties, shortcomings**

Rates of detection, treatment and management of NCDs in the community are still low. It is estimated that only about 50% of people with hypertension or diabetes have been diagnosed; and among the patients whose disease has been detected, the proportion receiving treatment and management in compliance with official treatment guidelines is very low. The delivery system of medical services has not met requirements. Projects are vertically implemented with multiple focal points, lack of integration and an approach that fails to consider the entire life cycle. At the commune level few services are available to manage and provide long-term care, an important requirement for NCDs. Ineffective IEC activities means a low proportion of people have proper knowledge about monitoring their own health to detect disease, and low adherence to treatment regimes. The health workforce able to deal with NCDs is inadequate in number and quality, particularly at provincial, district and commune levels. The NCD monitoring system is fragmented. The collected information is not standardized and is often incomplete or not updated. Health financing is very limited even though NCDs account for two-thirds of the disease burden and mortality. Since 2012 the NTP budget, which is the main financial source for NCD prevention activities, has been cut, particularly in 2014 when funding for these programs was cut by 50 – 70%.

**4A.3. Priority issues**

**4A.3.1. NCDs cause high and increasing burden of disease and mortality, however they are not effectively controlled and have received inadequate investment**

- Activities are not well integrated, nor has a comprehensive approach covering the full life cycle been used.
- Risk factor control and prevention are not yet effective.
- The proportion of people whose disease is diagnosed, managed and treated is still low; in particular grassroots health services do not yet meet the need for continuous and long-term management and care for people with NCDs.
Funding for NCD control activities is insufficient and has been cut substantially over the past few years.

4A.3.2. Some infectious diseases and epidemics have a large impact on health, but have not yet been effectively controlled

- Some vaccine preventable diseases could continue to affect the population due to non-compliance with the EPI.
- Some diseases have high prevalence, yet there are no effective means for prevention, particularly hand, foot and mouth disease and dengue fever. Rabies mortality remains high.
- The number of people living with HIV and the cumulative number of AIDS patients are growing. HIV/AIDS remains a serious public health problem. Hepatitis prevalence is also high and a major cause of liver cancer in Vietnam.
- Sustainable control of tuberculosis and malaria is threatened by drug resistance.
- Dangerous and emerging diseases are constantly surfacing and there is a risk that they could enter Vietnam, especially with increasing international trade, tourism and labor exchange. Travel time between countries can be within a day, making it very difficult to completely control disease at the border crossing points.

4A.3.3. Health risk factors related to environment and people’s lifestyle are not well controlled

- Geographic disparities in the proportion of population using improved sanitation facilities persist. The Northern midlands and mountains area, Central Highlands, North Central and Central coastal areas and Mekong River Delta have lower coverage of sanitary toilets than the national average. A significant proportion of the rural population still practices open defecation (over 7%).
- Food poisoning fluctuates unpredictably with no downward trend, particularly for incidence and mortality from poisoning cases of fewer than 30 people.
- School health is still very limited and has not received adequate investment despite the large number of children and students accounting for nearly one third of the population; the need for IEC on lifestyle behaviors, health care and health promotion in this group is substantial. The increasing burden and stress of studying, environmental pollution, and changes in economic conditions are causing new risks such as overweight, obesity, and school mental disorders. In addition, the proportion of children with school-age medical conditions and disabilities remains high such as refractive eye disorders, scoliosis of the spine and dental diseases. Behaviors harmful to health are also increasing such as smoking, alcohol use, physical inactivity and infrequent hand washing with soap.
- Complex and unpredictable climate change and natural disasters require adequate preparation for effective response; industrial development requires measures to deal with industrial sanitation.
4B. Medical examination and treatment, traditional medicine and rehabilitation services


The overall Five-year plan objective related to medical services delivery is to “Continue to develop and improve quality of medical services with a balance between general services for common medical conditions and specialized, high technology services.” Numerous tasks were laid out to achieve this objective.

4B.2. Assessment of implementing Five-year plan tasks on medical services

4B.2.1. Tasks related to strengthening the medical services network

Task 1: Strengthen and develop the medical services network

The Five-year plan set out the detailed task to “Continue consolidating and completing the medical service network at all levels, particularly at the provincial, regional and specialist hospitals (oncology, obstetrics, pediatrics,) to strengthen the ability of hospitals at all levels to respond to the people’s healthcare needs. Implement the master plan for the medical services network appropriate with the needs for medical services among the population in different regions. Strengthen effectiveness in use of quality improvement investments, particularly in district and regional hospitals that have received investments in recent years. Combine development of common medical services with development of high tech, specialized services, and collaboration between public and private sectors… Consolidate the organizational system for traditional medicine from the central to local levels.”

The specific target set out was to increase the number of beds per 10 000 people from 20.5 in 2010 to 23.0 in 2015 (not including beds at CHSs) (Table 16, 17).

Implementation results

Table 16: Number of public hospitals and hospital beds at the provincial and district levels nationwide, 2012 – 2014

<table>
<thead>
<tr>
<th>Assessment indicators</th>
<th>2012</th>
<th>2013</th>
<th>June 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total provincial hospitals</td>
<td>468</td>
<td>480</td>
<td>492</td>
</tr>
<tr>
<td>Total beds at provincial hospitals (actual beds)</td>
<td>118,449</td>
<td>123,200</td>
<td>128,663</td>
</tr>
<tr>
<td>Total district hospitals</td>
<td>613</td>
<td>618</td>
<td>620</td>
</tr>
<tr>
<td>Total beds at district hospitals (actual beds)</td>
<td>78,226</td>
<td>84,379</td>
<td>88,997</td>
</tr>
<tr>
<td>Total newly built or completely rebuilt hospitals put into use</td>
<td>52</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>Total beds in newly built or completely rebuilt hospitals put into use</td>
<td>5,315</td>
<td>4,986</td>
<td>5,234</td>
</tr>
</tbody>
</table>

Chapter II: Implementation of the Plan for the protection, care and promotion of the people’s health 2011 – 2015

Table 17: Number of hospitals, hospital beds and professional services provided, 2010 – 2014

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hospitals reporting</td>
<td>1 119</td>
<td>1 119</td>
<td>1 102</td>
<td>1 278</td>
<td>1 264</td>
</tr>
<tr>
<td>Total planned beds</td>
<td>184 702</td>
<td>196 351</td>
<td>189 283</td>
<td>227 847</td>
<td>235 214</td>
</tr>
<tr>
<td>Total actual beds</td>
<td>206 108</td>
<td>218 807</td>
<td>210 831</td>
<td>271 653</td>
<td>286 017</td>
</tr>
<tr>
<td>Total medical examination visits (1000)</td>
<td>123 557</td>
<td>131 961</td>
<td>124 596</td>
<td>134 451</td>
<td>137 113</td>
</tr>
<tr>
<td>Total inpatient admissions</td>
<td>14 487 856</td>
<td>16 249 675</td>
<td>11 819 176</td>
<td>12 883 415</td>
<td>13 370 959</td>
</tr>
<tr>
<td>Total surgeries of all kinds</td>
<td>2 220 656</td>
<td>2 465 742</td>
<td>2 638 328</td>
<td>2 705 616</td>
<td>2 736 026</td>
</tr>
</tbody>
</table>


The total number of beds continue to increase over time through Project 47 and Project 930 and new construction, renovation and upgrading of some central hospitals to address overcrowding and doubling up in hospital beds. Up till 2014, the number of beds per 10 000 people increased to 28.1, up 3.4 beds compared to 2012. The target set in the Five-year plan was to reach 23.0 beds per 10 000 people by 2015.

The number of private hospitals has also increased rapidly. In 2010, nationally there were just over 100 private hospitals, by 2014 there were 170 private hospitals (accounting for 11% of all hospitals), including six foreign-invested hospitals. In 2014 a total of 9501 private beds accounted for 4% of all hospital beds nationwide, reaching a ratio of 1 private bed per 10 000 people. In addition, there were more than 30 000 private general practice and specialty clinics. Based on reports from 106 private hospitals, only 5% of private hospitals have bed occupancy ratios over 100%, while 56% of private hospitals have low bed occupancy ratios ranging from 20% to less than 60%. Hospitals and private clinics are unevenly distributed geographically; they are mostly concentrated in the cities, especially major cities like HCMC, Hanoi, Hai Phong, Da Nang, and Vinh.

The grassroots healthcare network extends throughout the country, including village health networks, creating favorable conditions for people to access health services. Some 99% of communes have a CHS, 78% have a physician, 98% of CHSs have midwives or pediatric-obstetric assistant doctors; 78% of villages are served by village health workers, while this proportion rises to 95% when considering only villages in rural and mountainous areas. The proportion of communes achieving national benchmarks for commune health is 55%. About 80% of CHS are qualified to provide services reimbursed by health insurance. In 2014, the MOH issued new national commune health benchmarks for 2011 – 2020 (Decision No. 4667/QD-BYT) to develop commune-level healthcare appropriate with the needs for the people’s healthcare in different regions and areas. The Ministry has also developed and submitted to the Government a draft resolution to strengthen health care in the new situation. Maritime health is receiving attention. The Government has set up a national maritime medicine steering committee and is researching the situation and developing models for service delivery on island districts. The Prime Minister has approved the Maritime Medicine Development Project under Decision No. 317/QD-TTg.
Traditional medicine facilities have been set up and developed at all levels of the health system, with 61 traditional medicine hospitals, 13.7% of all hospital beds being in traditional medicine departments or clusters, 90% of all general hospitals having a traditional medicine department or cluster, and 73.4% of CHS having traditional medicine capacity. The proportion of communes qualified for health insurance reimbursement for traditional medicine services reached 61.5%, while those qualified to provide finished herbal products reached 67.1%, and those authorized to provide herbal preparations (thuoc nam) was 44.6%. Some 83.9% of CHSs have a traditional herbal medicine garden. The quality of services using traditional medicine or combining traditional and modern medicine techniques has increased thanks to investments and standardization of techniques, professional mentoring, technology transfer and application of quality assessment indicators for traditional medicine hospitals. The Prime Minister issued Decision No. 362/QD-TTg in 2014 approving an investment project to upgrade the system of traditional medicine hospitals nationwide for the 2013 – 2025 period [35].

Substantial changes have occurred in rehabilitation activities during the 2011 – 2015 period with the issuing of Circular No. 46/2013/TT-BYT in 2013, which specifies functions, duties and organizational structure of rehabilitation facilities and thus establishes an important legal basis for rehabilitation services in hospitals and in the community. In 2012 the Prime Minister approved the project to support people with disabilities for the period 2012 – 2020 (Decision No. 1019/QD-TTg) and the health NTP including the community-based rehabilitation project (Decision No. 1208/QD-TTg). The rehabilitation network consists of 63 hospitals/nursing-rehabilitation centers, rehabilitation departments at 100% of general hospitals and specialized hospitals at the central and provincial levels, rehabilitation services integrated into the clinical departments at district hospitals, and a health worker assigned responsibility for rehabilitation work at almost all CHSs [107]. In 2014, the MOH approved the National Plan for Rehabilitation Development 2014 – 2020 (Decision No. 4039/QD-BYT), showing the importance it attaches to the rehabilitation network and activities. In 2012, the Prime Minister approved the National Action Plan for overcoming the consequences of Agent Orange/dioxin (Decision No. 651/QD-TTg) and in 2014 the MOH approved the project for organizing rehabilitation services in the community for victims of Agent Orange/dioxin (Decision No. 4039/QD-BYT (2014)).

**Difficulties, shortcomings**

Inadequate professional competencies exist in some specialties: oncology, cardiology, pediatrics, etc. in lower level medical facilities. The cancer treatment network only meets about one-third of demand, especially for radiotherapy, leading to serious overcrowding at national cancer facilities.

Substantial disparities in professional and technical capacities exist between provinces and districts with uneven development across regions. The insufficient capacity to provide services in some localities is evident in the regular surpluses in the health insurance fund in mountainous provinces, largely attributed to the inability to provide certain technical services in these localities. Shortcomings also exist in the development of lists of medical services and pharmaceuticals that are supposed to be available and are eligible for health insurance reimbursement at different level facilities.

Continuity of care for patients is adversely affected by the lack of linkages between medical facilities at various levels related to the hospital autonomy policy.
The network for providing traditional medicine services has seen substantial development, but is not yet very strong. In addition, the strengths of traditional medicine have not yet been adequately promoted.

The network for rehabilitation service provision is limited in terms of professional capacity and techniques, and lacks incentives for further development. The project for community-based rehabilitation, despite the attention it has received, is obtaining only limited results.

4B.2.2. Tasks related to improving people’s access to medical services

General implementation results

The proportion of the population using any medical services during the year has increased from 34.2% in 2008 to 40.9% in 2010 then declined slightly to 39.2% in 2012. The proportion of people using outpatient care increased from 31.0% in 2008 to 37.1% in 2010 and falling slightly to 36.0% in 2012. The proportion of people using inpatient services has also increased from 6.5% in 2008 to 8.1% in 2010 and fell to 7.3% in 2012 Urban-rural disparities in the proportion of people using medical services are not great, with 40.2% of urban residents using services compared to 38.7% of rural residents. However, when comparing between regions, there are clear disparities, with the lowest rate of service utilization in the Northern midlands and mountains area and highest in the Mekong Delta. Despite the disparities, the rate of utilization has risen in all regions, particularly in the Central Highlands, Southeast and Mekong Delta, increasing by about 5 to 10 percentage points between 2008 and 2012. When comparing between living standards quintiles in 2012, substantial disparities exist between the richest (42.9%) and the poorest (35.5%), while in the remaining 3 middle quintiles there is little difference in the rates. Some 43.6% of females used medical services compared to only 34.6% of males in 2012 [108].

Health insurance coverage increased from 60% in 2010 to 71.0% in 2014, and 75.3% in 2015.

General difficulties and shortcomings

Difficulties remain in access to medical services in some regions and some specialties in terms of the availability of services, particularly in the Northern midlands and mountains areas, for the poor and ethnic minority people.

Financial difficulties also negatively affect access with almost 30% of the population still uninsured, especially the near poor population.

Customs, beliefs and habits of health seeking among some ethnic minority groups in the Northern midlands and mountains areas and the Central Highlands inhibit use of services, particularly with a large share of women delivering babies at home and many people not seeking healthcare at all when sick.

Task 1: Implement the family doctor model

Implementation results

The family doctor project and family doctor clinic model was piloted in 8 provinces according to the project and guidelines in Circular No. 16/2014/TT-BYT. From March 2013 to
December 2014, 160 family doctor clinics were set up. They have provided medical examinations for 491,052 people, screening for more than 277,000 people, first aid for 2,930 cases and made house calls for 2,688 cases.

**Task 2: Implement the model for health care for the elderly in the community**

*Implementation results*

Healthcare for the elderly has received attention and investments. In 2012, the Prime Minister approved the National Action Program for the elderly in Vietnam for the period 2012 – 2020 (Decision No. 1781/QD-TTg). In 2011, the MOH also issued Circular No. 35/2011/TT-BYT on healthcare for the elderly. Up till now, the system for healthcare of the elderly has improved. There are four large hospitals specializing in geriatric medicine and providing healthcare services for the elderly. Forty-six out of 63 provinces have established geriatric units at hospitals. More than 2 million elderly people have undergone periodic health checkups. Health management records are being set up for more than 1.7 million elderly people to monitor their health. Almost all hospitals have implemented a policy to prioritize the elderly in provision of healthcare services. Healthcare for the elderly in the community has been implemented in 160 communes of 23 provinces. The network of volunteers to support healthcare for the elderly has been set up in these communes.

**4B.2.3. Tasks related to improving quality of medical services**

**Task 1: Implement the directive on improving medical services quality and eliminating overprovision of services not needed by patients**

Specific tasks related to medical services quality were mentioned in the Five-year plan including: “Continue to promote implementation of MOH Directive No. 06/2007/CT-BYT (2008) on improving quality of medical services. Particular attention should be paid to eliminating overprovision of drugs, paraclinical services and high tech services that are costly and not needed by the patient... Strengthen medical ethics education, impose penalties to overcome negative consequences of violations of professional ethics.”

*Implementation results*

The hospital quality management system is taking shape. In 2010, the MOH established the office for hospital quality management in the Medical Services Administration. In 2013, the Hospital quality management office advised the MOH in the issuing of Circular No. 19/2013/TT-BYT to establish a quality management system in hospitals, according to which all hospitals would have to set up a quality management system including quality management committee, quality management office/unit, network of quality management and other related regulations. The provincial health bureaus have officials responsible for quality management. By May 2015, 55.4% of all hospitals nationally have established an office or unit for quality management [76]. A system for standardization and quality control of laboratory testing has been formed with three centers established and put into operation, including one in HCMC set up in 2007 and 2 centers in Hanoi Medical University and HCMC Medical and Pharmaceutical University established in 2010. By December 2014, nearly 1,400 laboratories participate in the standardization and quality control program of these three centers. MOH Circular No. 01/2013/
TT-BYT guiding medical laboratory testing quality management provides an important legal basis for this activity and forms the basis for laboratories to improve quality of lab testing. The MOH has issued the national action program on improving lab test quality following Decision No. 3701/QD-BYT in 2010, which sets out the objectives and roadmap aimed at improving medical lab testing quality.

Methods for quality assessment in hospitals have been reformed. In 2013, a set of hospital quality assessment indicators was issued and piloted. In 2014, this set of indicators included 83 criteria divided into 5 groups, with each criteria divided into 5 levels of performance. In total there are 1487 sub-categories of quality requirements hospitals are expected to implement. In 2014, some 1233 hospitals nationally have applied these criteria and had positive results and improvements in quality of services compared to 2013 [109].

Improvements to the outpatient examination department of hospitals through improving procedures for medical examination and reforming administrative procedures have received MOH attention. Decision No. 1313/QD-BYT guiding examination and treatment procedures at hospital outpatient wards in 2013 was assessed after one year of implementation and indicated promising results with the total number of examination desks almost doubling, the procedures for examinations improving by reducing the number of steps, reducing total waiting time for examinations to 48.5 minutes per visit [110].

Practitioner competency standards are being developed and applied. The nursing competency standards were developed by the Vietnamese Nursing Association and were approved and issued by the MOH with Decision No. 1352/QD-BYT in 2012, including 25 standards and 110 criteria. Competency standards for midwives were issued in Decision No. 342/QD-BYT in 2014. Standards for general practitioners were issued in MOH Decision No. 1854/QD-BYT in 2015.

Quality standards for stroke care have been developed and were promulgated in 2014 for pilot application (Medical Services Administration Decision No. 86/QD-KCB). This consists of fifteen standards including both clinical and service standards. This is the first step for the application of quality assessment methods contribute to improving clinical management of stroke in Vietnam.

The system for the population to provide feedback on quality of medical diagnosis and treatment services has been consolidated and further developed. Hotlines at hospitals have been set up since 2004. However, in 2013, the hotlines for feedback on medical service quality were strengthened and consolidated at 3 levels (MOH, provincial health departments and hospitals), with uniform management, formally going into operation from November 2013 (MOH Directive No. 09/CT-BYT in 2013). In 2014, a total of 35,934 calls were made to hotlines, including 25,506 calls to the general switchboard at the number 1900 – 9095 (Viettel directly receives and forwards the feedback to the relevant units) accounting for 70.9% of the total. The number of calls directly to the hotline at the MOH, provincial health bureaus and hospitals amounted to 10,428 calls, accounting for 29.1% (including 1738 calls to the MOH accounting for 16.6% of the total) [111]. In 2013 the MOH approved the project “Evaluation of people’s level of satisfaction with government health services” (Decision No. 4448/QD-BYT (2013)), which is being piloted in several fields, including medical services, according to a roadmap calling for formal introduction of the system starting in 2015.
The professional code of conduct and professional ethics continue to receive attention. The MOH has issued Circular No. 07/2014/TT-BYT (2014) specifying the code of conduct for physicians and has implemented 11 training courses for approximately 1000 health of the physician and has implemented 11 training courses on communication skills for about 1000 government health workers.

**Difficulties, shortcomings**

The medical service quality management system at the national, provincial and facility levels has limitations. Although there are regulations for the establishment of quality control, more than 44% of hospitals have not yet established quality management offices/units.

No independent quality assessment and accreditation organizations has been set up yet, even though there is a legal basis for this (Law on Examination and Treatment (2009), Decree No. 87/2011/ND-CP).

There is still no clear linkage between quality and price of services and there is no financial or non-financial mechanism to incentivize service quality improvements.

Professional quality has not yet been evaluated nor is it tightly managed. The mechanism for clinical quality accreditation has not yet been implemented. The absence of mutual recognition of lab tests between medical facilities remains widespread. The number of clinical lab tests and diagnostic imaging services increases by about 10% per year.

The quality of practitioners remains limited and there is no effective system in place to motivate practitioners to improve professional competencies for continuous professional development.

The medical service quality feedback information system is being developed but needs to be completed.

**Task 2: Complete the system of guiding documents**

The specific task set out in the Five-year plan is to “Complete the system of legal documents guiding implementation of the Law on Examination and Treatment, guidelines for procedures and professional protocols for medical services, protocols on safe and rational use of drugs, comprehensive patient care, infection control. Expand implementation of the comprehensive patient care model.”

**Implementation results**

The MOH has completed the development and is implementing documents guiding implementation of the Law on Examination and Treatment and the amended Health Insurance Law, is forming a system and issuing operational licenses for hospitals and other medical facilities and practice certificates for medical practitioners.

Professional guidelines such as: diagnosis and treatment guidelines and technical procedure guidelines have been developed and issued in large numbers (Table 18).
Table 18: Diagnosis and treatment guidelines and protocols

<table>
<thead>
<tr>
<th>Type of professional guidelines</th>
<th>By 2011</th>
<th>By 2012</th>
<th>By 2013</th>
<th>By 2014</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidelines for technical procedures</td>
<td>-</td>
<td>351</td>
<td>1,427</td>
<td>2,096</td>
<td>3,874</td>
</tr>
<tr>
<td>Guidelines for Diagnosis and Treatment</td>
<td>40</td>
<td>23</td>
<td>90</td>
<td>416</td>
<td>569</td>
</tr>
<tr>
<td>Professional instructions for communes</td>
<td>59</td>
<td>59</td>
<td></td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Clinical quality standards</td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>


During the period from 2012 to 2014, guidelines for almost 4000 technical procedures were developed covering nearly all specialties. For the first time, professional guidelines were developed specifically for the commune level with appropriate professional contents, primarily in the areas of obstetrics, gynecology, emergency first aid, surgery, pediatrics and diagnosis and treatment for common conditions (MOH Decision No. 2919/QD-BYT in 2014). By 2014, the number of diseases for which diagnostic and treatment guidelines have been developed has increased dramatically.

**Difficulties, shortcomings**

There is a lack of regulations and guidelines in management if a physician requests use of medical equipment for diagnosis and treatment, particularly for expensive equipment leading to difficulties in controlling rational and safe use of medical equipment, particularly in preventing abuse and protecting against financial burden on patients.

**Task 3: Implement national traditional medicine policy**

The specific tasks mentioned in the Five-year plan is to “Continue to implement the national traditional medicine policy, develop legal documents, promote development of traditional medicine and medicinal materials; develop and issue guidelines for treatment protocols using traditional medicine and combining traditional and modern medicine for specific diseases where traditional medicine has potential for effective results. Develop standards and strengthen control over quality of traditional pharmaceuticals.”

**Implementation results**

By 2015, 52/63 (82.5%) of all provinces had approved the Plan for implementing the Action Plan to develop traditional medicine in Vietnam to the year 2020 (Decision No. 2166/QD-TTg approved in 2010). Some legal documents are being developed such as the Circular regulating issuing of traditional medicine practice certificates, circular stipulating traditional medicine prescribing in medical facilities, the circular guiding competitive tendering for herbal medicines and traditional medicine, the list of traditional medicines that don’t require clinical testing, the protocol guiding diagnosis and treatment that combines traditional and modern medicine, materials guiding use of traditional medicine at the grassroots level and national standards on post-processing medicinal materials.

**Difficulties and shortcomings**

Even though many legal documents have been developed, many documents have not yet been approved or issued. Quality of traditional medicine has not been adequately checked.
Checking and supervision of implementation of legal documents in the provinces is limited due to the lack of human resources with professional knowledge of traditional medicine. State management of facilities providing traditional medicine treatment services in the provinces is weak, many people inappropriately use traditional medicine to provide medical services that violate laws, including use of lead in traditional medicines, leading to lead poisoning, particularly in remote and disadvantaged regions. The people still lack knowledge about use of traditional medicine.

4B.2.4. Tasks related to reducing hospital overcrowding

Specific tasks mentioned in the Five-year plan include “Implement comprehensive and effective measures to gradually reduce overcrowding in hospitals, ensure appropriate use of hospital services and gradually reduce utilization of hospital services… reform the hospital financing mechanism and hospital service price policy; change the hospital provider payment mechanism from fee for service to package pricing, gradually moving towards case mix and other modern hospital financing models appropriate for Vietnam; consolidate and improve quality of medical services at the grassroots level; strengthen preventive medicine activities, primary care; expand the hospital network appropriate with needs for health care of the people…” Many of the above-mentioned policies have already been discussed in other sections of Chapter 2 in this report, for example in section 2 on health financing measures, section 4A on preventive medicine and section 4B.2.1 on expanding the hospital network. Below the discussion focuses primarily on improving capacity to provide medical services by lower level facilities.

Task: Continue to improve capacity of providing medical services at lower level facilities

The five-year plan mentioned the specific task of “Continue to promote professional mentoring, implement MOH Decision No. 1816/QD-BYT (2008) approving the project to rotate medical professionals from higher level to lower level hospitals in order to improve quality of medical services in the provinces and districts. Adjust the assignment of responsibility for providing technical services to expand services and medical techniques, particularly at the lower level facilities to facilitate access by the population with medical services of good quality near home.”

Implementation results

The assignment of responsibility for implementing different types of medical technical procedures has been adjusted. The transfer of technology to lower levels has been strengthened. The capacity of higher level facilities to provide technical services has been developed and provincial and district hospitals have benefitted from technology transfer and improvements through the Satellite hospital project and the project on rotations of medical professionals from higher to lower level facilities. Through the Satellite hospital project, 46 provincial hospitals have received technology transfers from 14 leading hub hospitals. After two years of implementation (2013 – 2014), 224 techniques have been transferred and 1701 hospital staff in satellite hospitals have learned these techniques. The referral rate from satellite hospitals to higher level facilities has fallen by 37.5%.

The project for rotation of medical professionals from higher to lower level facilities was initiated in 2008 (Decision No. 1816/QD-BYT (2008)). It assigned 60 central hospitals
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and provincial tertiary hospitals in Hanoi and HCMC responsibility to rotate their staff for temporary periods of secondment in provincial health facilities. Implementation of this policy has achieved some positive results. In the period 2012 – 2014, the rotation policy of health workers underwent a qualitative change. Instead of simply dispatching staff for 3-month rotations leading to minimal changes, the policy is now more oriented towards technology transfer and is regulated by Decision No. 14/QD-TTg (2013) with detailed guiding instructions in Circular No. 18/2014/TT-BYT. In 2014, central hospitals sent 238 health professionals to lower levels, where they transferred 2439 medical techniques to provincial hospitals and trained 38 460 students. Provincial hospitals sent 4661 staff on rotations to support district hospitals, in 1367 periods of secondment at lower level hospitals they transferred 3299 technical procedures. District hospitals sent 11 261 medical professionals in 9791 periods of secondment at CHSs transferred 8073 technical procedures and trained 45 626 commune health workers. As a result, 58% of central hospitals and 47% of provincial hospitals achieved a downward trend in the number of hospital wards in which patients had to double up in beds and 25% of district hospitals were able to increase bed occupancy ratios from 40% to 60 – 70% [106].

Difficulties, shortcomings

The Satellite Hospital project was only implemented in 37 provinces while there is need for this model to be applied in all provinces.

A number of solutions in the Project to reduce hospital overcrowding have not yet received adequate attention.

4B.2.5. Tasks related to hospital management

Task: Improve hospital management capacity

In the Five-year plan the related task is specified as “Strengthen management and effective use of resources at hospitals. Develop and apply information technology in hospital management. Organize long-term and short-term training on hospital management for various individuals working in management related to hospital finances, human resources, equipment, infrastructure, pharmaceuticals and quality assurance. Develop green, clean, beautiful hospitals.”

Implementation results

Centers for developing medical service management capacity were established at the Medical Services Administration in 2010. The Health Management Training Institute, a unit of the Hanoi School of Public Health has been established. The requirement that hospital managerial staff have management training has been incorporated into the hospital quality assessment criteria. Training in management has received attention and has been strengthened in recent years. Each year, dozens of training courses on health sector management are organized.

Difficulties, shortcomings

The management mechanism for public hospitals continues to have shortcomings that require solutions and reforms. The mechanisms for public-private partnerships and social mobilization require careful action to avoid negative effects on equity and efficiency.
4B.3. Priority issues

4B.3.1. Current organization of medical services does not facilitate effective and efficient satisfaction of the population’s healthcare needs

- The organization of the medical services delivery network (including traditional medicine and rehabilitation) is not yet entirely appropriate for ensuring service provision that effectively responds to health care needs of the people with the principles of comprehensive, continuous, people-centered care.

- Vietnam is one of the nations with the most rapid aging of the population, yet social protection is not yet assured. Health care for the elderly has not received adequate attention in terms of societal investments. The health system has not prepared itself adequately to meet the healthcare needs of the elderly. Currently a majority of the elderly live in rural, remote and isolated areas and do not have pensions or social security for their old age, many policies are not appropriate for the elderly and an old population. The need for counselling, support and care of the elderly is substantial, but so far only 160 communes in 23 provinces have implemented a program for healthcare of the elderly in the community. At the same time, attitudes of the community do not yet encourage the elderly to participate, while support and assistance activities provided by elderly assistance workers (cong tac vien) do not yet meet needs. A large share of the elderly feels embarrassed or inferior because they feel like they are unneeded, so participation in community activities is limited. Staff involved in implementing the models lack knowledge, experience, and training leading to limitations in their contacts with the elderly, including their ability to provide counselling and care leading to low performance of activities.

4B.3.2. Uneven ability to provide basic medical services across geographic areas

- Professional technical capacity and ability to provide services at the provincial and district levels, particularly in the Northern midlands and mountains area and other disadvantaged areas cannot yet guarantee quality and effectiveness. There remain gaps between actual capacity and medical techniques that the MOH stipulates should be provided in medical facilities at specific levels. This leads to limitations in the ability to access medical services of good quality among certain population groups in disadvantaged regions.

4B.3.3. Inadequate medical service quality management

The system of medical service quality management is being developed, but many institutions and mechanisms have not yet been developed or implemented:

- Independent assessment of quality has not yet been implemented to use in planning investments, health insurance reimbursements, referral system and to provide the people information to help them choose the medical facilities to use.

- The mechanism to issue medical practitioner licenses does not ensure quality because it is issued for life, without an examination to test knowledge and skills and is not linked with responsibility to undertake continuing medical education.

- There is a lack of basis for evaluating clinical quality because of the lack of clinical guidelines and standards for many diseases.
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- Lack of mechanism (competition, transparent information on quality and patient satisfaction) needed to encourage medical facilities to improve the quality of their services.
- Inadequate monitoring and evaluation of safety and effectiveness of traditional medicine services and rehabilitation services.

4B.3.4. Hospitals remain overcrowded at higher levels and underutilized at lower levels

- Hospital overcrowding has not yet been fully resolved at higher level hospitals. This is not only a problem of hospitals, but a problem of the overall health system related to the need to reform and improve capacity to provide and the quality of medical services at lower level facilities and the need to change health-seeking attitudes and behaviors of the population.

4C. Delivery of population and family planning and reproductive health services

4C.1. Five-year plan (2011 – 2015) objectives related to population and family planning and reproductive health

The objective in the 5-year health sector plan in the area of population, family planning and reproductive health is stated as:

“Strengthen population and family planning and reproductive health activities, ensure a stable population, maintain an appropriate fertility rate; limit rapid growth in the sex ratio at birth; improve physical quality of the population.17”

4C.2. Assessment of implementing Five-year plan tasks on population, family planning and reproductive and maternal and child health services

4C.2.1. Refine the system of policies and legislative documents

Task: Refine the system of policies and legislative documents to create a legal basis and convenient environment to effectively implement population-family planning and reproductive health activities.

Implementation results

During the period 2011 – 2015, many policies and legal documents in the area of population-family planning and reproductive health were issued:

- The Vietnam National Strategy on Population and Reproductive Health for the period 2011 – 2020 and the National Action Plan for Reproductive Health (focused on safe motherhood and neonatal care) for the period 2011 – 2015 created important strategic orientations for population, family planning and reproductive health. Almost all basic indicators of reproductive health and maternal and child health were incorporated into the Plan for the Protection, Care and Promotion of the people’s health for the period

17 Understood as antenatal and neonatal screening for congenital anomalies and diseases and preventive interventions such as appropriate nutrition during pregnancy.

- The National Nutrition Strategy 2011 – 2020 and a vision to 2030, the National Action Plan on Nutrition to the year 2015 and the Action Plan on Infant and Young Child Feeding for the period 2012 – 2015 were all approved or put into effect during the past 5 years.

- In the context of the socio-economy facing many difficulties, the NTP on population-family planning, the national target project on reproductive health and child nutrition have all been maintained. The NTP on population-family planning contains several sub-projects: ensuring logistics and supply of family planning services; controlling congenital anomalies and diseases and reducing imbalance in the sex ratio at birth; strengthening behavior change communication; improving capacity for organization and implementation of the program; and the project to control population in maritime areas.

In addition, many policies considered as supporting conditions for population-family planning, reproductive health and maternal and child health were issued:

- Revised Labor Code extended maternity leave from four to six months.
- The National Program on Gender Equality for the period 2011 – 2015 was approved with Prime Ministerial Decision No. 1241/QD-TTg (2011).
- Government Resolution No. 05/NQ-CP (2014) focuses on strengthening implementation of the health-related MDGs.
- Decree No. 39/ND-CP (2014) regulating the policy to support poor ethnic minority women when they give birth according to the population policy.
- MOH Directive No. 01/CT-BYT (2015) on strengthening healthcare for mothers and newborns aims to reduce the maternal mortality rate and neonatal mortality rate.
- MOH Circular No. 07/2013/TT-BYT (2013) issuing standards, functions, tasks of village health workers. For the first time, village birth attendants are included as a form of village health worker.
- MOH Decision No. 711/QD-BYT (2012) on the list of medical equipment for mobile family planning teams at the district level for the 2012 – 2015 period.
- MOH Decision No. 573/QD-BYT (2010) issuing the protocols for prenatal and neonatal screening and diagnosis.
- MOH Decision No. 25/QD-BYT (2011) professional guidance for pre-marital counselling and examination.
- MOH Decision No. 818/QD-BYT (2015) approving the project for social mobilization to provide contraceptives and family planning/reproductive health care services in urban areas and developed rural areas for the 2015 – 2020 period.
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- Many other new policies are also supportive of nutrition work including Decree No. 100/2014/ND-CP on the sale and use of nutrition products used for young children, bottles and synthetic nipples to replace Decree No. 21/2006/ND-CP; the project to improve physical stature and fitness of the Vietnamese people; Program for milk in schools.

**Difficulties, shortcomings**

Some MDG monitoring indicators such as the proportion of women in childbearing age with unmet need for family planning and the adolescent birth rate are not yet part of any national health sector plans. Some other indicators that have been developed do not have a scientific basis or are not feasible.

The organizational model for population and family planning services has been unstable, changing multiple times at the district and commune levels, negatively affecting leadership, management, particularly employment security of the staff. The remuneration policy for population and family planning workers is still not consistent with that of other health workers, which is also negatively affecting population and family planning worker morale and willingness to continue working in the field.

Development and issuing of the National Strategy and Action Plan on Nutrition were delayed. Although the target of reducing child malnutrition has become a national and provincial socio-economic development target, in some localities leadership and collaboration for implementation has not received adequate attention. The Law on Population is being developed, but the original plan to submit it for approval to the National Assembly in 2015 has been cancelled.

Even though Circular No. 7/2013/TT-BYT recognizes village birth attendants are a type of village health worker, in ethnic minority areas facing difficulties in providing reproductive health services, the stipend for this group is funded mainly from the local budget, mountainous provinces face substantial difficulties in funding the stipend. Therefore, among 1575 village birth attendants that have been trained and are performing their tasks (by end December 2014) only 688 (44%) are receiving village health worker stipends, the remaining number are only receiving some support of 200,000 VND per month from the NTP on reproductive health.

4C.2.2. Consolidate the network by investing in infrastructure, equipment and training to increase access to population, family planning and reproductive health services

**Task 1: Consolidate the network, invest in physical infrastructure, equipment to increase access of various groups to population, family planning and reproductive health services, particularly the essential package of services**

**Implementation results**

Population, family planning and reproductive health services are mainly provided by the public medical facility network including the provincial population and family planning offices, reproductive healthcare centers, population and family planning centers, obstetrics department of provincial general hospitals or specialist obstetrics hospitals, the population-family planning center and reproductive healthcare departments of district health centers and district general hospitals and health or family planning staff at the commune level. Up till now, obstetrics
departments, hospitals and centers almost all have conditions to implement family planning and reproductive healthcare services including male and female sterilization and contraceptive implants. At the commune level, 98% of CHSs have a midwife or obstetrics/pediatric assistant doctor, and almost all of them have received training and have basic skills to provide family planning and reproductive health care services following national standards, including the ability to insert intra-uterine devices or provide injectable contraception [112].

A Maternal and Child Health Department survey indicates that between 2010 and 2013 the ability to provide services of the district and commune healthcare networks has improved considerably (Table 19).

Table 19: Availability of reproductive health services at the district and commune levels, 2010~2013

<table>
<thead>
<tr>
<th>Services provided</th>
<th>2010</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of district hospitals providing:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 C-sections</td>
<td>406</td>
<td>465</td>
</tr>
<tr>
<td>2 Blood transfusion service</td>
<td>356</td>
<td>388</td>
</tr>
<tr>
<td>3 C-section and blood transfusion services (Comprehensive essential obstetric care)</td>
<td>328</td>
<td>373</td>
</tr>
<tr>
<td>4 Emergency supracervical hysterectomy</td>
<td>321</td>
<td>372</td>
</tr>
<tr>
<td>5 Emergency ectopic pregnancy surgery</td>
<td>387</td>
<td>425</td>
</tr>
<tr>
<td>6 Use of MgSO₄</td>
<td>260</td>
<td>566</td>
</tr>
<tr>
<td>7 Vacuum extraction abortion up to 12 weeks of gestation</td>
<td>374</td>
<td>489</td>
</tr>
<tr>
<td>8 Care and treatment of newborns &gt;1,500g</td>
<td>160</td>
<td>394</td>
</tr>
<tr>
<td>9 Neonatal jaundice treatment</td>
<td>214</td>
<td>400</td>
</tr>
<tr>
<td>10 Treatment for respiratory distress using Continuous positive airway pressure (CPAP)</td>
<td>99</td>
<td>228</td>
</tr>
<tr>
<td>Number of CHSs providing:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Birth attendance for cephalic presentation deliveries</td>
<td>9185</td>
<td>9546</td>
</tr>
<tr>
<td>2 Number of CHSs providing intensive care for stage 3 of labor</td>
<td>8171</td>
<td>9197</td>
</tr>
<tr>
<td>3 Basic neonatal resuscitation</td>
<td>8542</td>
<td>9435</td>
</tr>
<tr>
<td>4 Number of CHSs providing mortality control</td>
<td>7110</td>
<td>8247</td>
</tr>
<tr>
<td>5 Number of CHSs providing vitamin K1 injection for newborns</td>
<td>6794</td>
<td>8859</td>
</tr>
<tr>
<td>6 Number of CHSs providing vacuum extraction abortion up to 7 weeks of gestation</td>
<td>3484</td>
<td>4735</td>
</tr>
<tr>
<td>7 Number of CHSs using MgSO₄ in treating preeclampsia and eclampsia</td>
<td>1857</td>
<td>6453</td>
</tr>
<tr>
<td>8 Number of CHSs providing protein urine test</td>
<td>2072</td>
<td>8187</td>
</tr>
<tr>
<td>9 Number of CHSs providing cervical cancer early detection service using acetic acid (VIA) or Lugol's iodine (VILI)</td>
<td>1426</td>
<td>3701</td>
</tr>
<tr>
<td>10 Number of CHSs providing diagnostic obstetric ultrasonography</td>
<td>742</td>
<td>1853</td>
</tr>
<tr>
<td>11 Number of CHSs providing sample taking service to forward to higher level for PAP Smear test</td>
<td>940</td>
<td>2336</td>
</tr>
</tbody>
</table>

Source: Maternal and Child Health Department. 2010 [113]; 2013 [114]
Coverage of almost all important reproductive healthcare services has increased at the district and commune levels, particularly services aimed at saving the lives of mothers and newborns such as C-section, blood transfusion, feeding and treatment of underweight premature newborns (at the district level) and prevention and resolution of obstetrics complications (at both district and commune levels).

The quality of services has also gradually improved. Many effective interventions for maternal and child health that have been recommended by WHO have received attention and been implemented uniformly at all levels, including active management of third stage labor, early essential newborn care (EENC), training of skilled birth attendants (SBA) to meet standards, care of underweight and premature newborns using kangaroo mother care (KMC), integrated management of child illness (IMCI), intensive neonatal care units (INCU) at district hospitals, injection of vitamin K to prevent brain hemorrhage in newborns, use of MgSO4 in treatment of pre-eclampsia, implementation of a comprehensive essential obstetrics care package (including C-section and blood transfusion) in district hospitals.

In order to overcome the problem of home deliveries without a skilled birth attendant, which remains prevalent in disadvantaged regions, the MOH has taken the initiative to train village birth attendants from ethnic minority groups. By the end of 2014, 1737 village birth attendants had received training, including 1575 who are currently active. In the year 2014 alone, they have provided 12,146 antenatal care exams, detecting and transferring 1,193 high risk pregnancy cases to medical facilities, safely delivering 2,236 babies at home, supporting 219 cases of delivery before arriving at a medical facility, implemented 10,609 postnatal/postpartum visits at home, detected 205 cases of newborns with danger signs and transferred them to higher levels. The village birth attendants have contributed substantially to reducing obstetric complications, reducing maternal and neonatal mortality in ethnic minority and disadvantaged areas.

Prevention and control of malnutrition has been implemented by two networks: (i) the reproductive healthcare network, responsible for implementing interventions such as strengthening capacity of the IEC network, guiding implementation of proper nutrition, monitoring growth charts, advising on breastfeeding, providing supplementary nutrition products when needed and (ii) the preventive medicine network, responsible for monitoring the nutrition situation and providing Vitamin A through periodic Vitamin A campaigns.

**Difficulties, shortcomings**

The networks providing population-family planning, reproductive health and maternal and child health still have many limitations, in terms of limited finances, human resources, physical infrastructure, equipment, essential medicines and capacity to provide services.

In terms of finances, funds from NTPs and projects have been cut, leading to priority actions no longer being implemented.

In terms of human resources, currently only 1575 trained village birth attendants are currently providing services in about 6500 villages in disadvantaged regions that require village birth attendants [115]. Even though Circular 07/2013/TT-BYT was approved in 2013, only 44% of village birth attendants have formally been put to work in the health system and receive monthly stipends through jointly implementing other tasks of village health workers. Currently there is a lack of data on geographic and transportation conditions in ethnic minority areas,
which leads to difficulties in developing and defending projects for development and retention of village birth attendants in the provinces. Management, monitoring and supportive supervision after training for village birth attendants in some localities is not adequately implemented and is receiving insufficient attention.

In the state health system, currently there are only 0.36 obstetricians and 0.25 pediatricians per 10,000 people. Nationally 21.3% of district hospitals lack obstetricians (this proportion is 26% in 225 districts with difficult geography and 39.4% in the 62 poorest districts). Similarly, nationally up to 57% of district general hospitals lack pediatricians, (this proportion is 70.2% in 225 disadvantaged districts and 83.1% in the 62 poorest districts) [114].

Regarding capacity to provide services, implementation of C-section and blood transfusion in disadvantaged regions is particularly important for saving mothers and newborns. However, among 225 districts with difficult geography there are still 33 districts unable to implement C-section, 48 districts are unable to provide blood transfusions. In particularly, among the 62 poorest districts, there are still 23 districts that are not yet able to provide C-section and blood transfusion.

Likewise, in the 225 districts with complicated geography, there are still 73 districts without a neonatal intensive care unit able to care for underweight and premature newborns; 81 districts are not yet able to treat neonatal jaundice using Bili light therapy and 137 districts unable to treat newborns with respiratory distress using CPAP respirator. The main reason for these shortcomings is the lack of physical infrastructure, equipment and trained staff.

In the 25 years of implementing the NTP to prevent and control child malnutrition, IEC, weighing and monitoring children using growth charts has been implemented mainly by community nutrition workers. In recent years, because of cuts in funding, the policy on stipends for these nutrition workers has changed, leading to disintegration of the network in many localities.

In addition, the organization of the network for providing services does not yet respond to cultural and gender sensitivities, which has contributed to reducing access and use of services among some clients like adolescents, youth and ethnic minority people.

**Task 2: Implement training for population and reproductive health workers towards greater specialization, strengthen capacity and implement research on population and reproductive health.**

**Implementation results**

In recent years, to serve training to strengthen professional capacity in the fields of population-family planning and reproductive health for health workers at all levels, many training programs and materials, including continuing medical education, have been developed and issued by the MOH including the following subjects: IEC for population and reproductive health; University and junior-college level curriculum for midwifery; National guidelines on reproductive health care; Village birth attendants; Health workers to meet ASEAN standards of skilled birth attendant; emergency obstetrics care; neonatal care team at district neonatal intensive care unit; emergency obstetrics surgical team; Community-based referral team and development of a curriculum and training for a public health bachelor’s degree oriented to population services at Hanoi Medical University.
Between 2011 and 2015, many government officials and staff at different levels have improved their knowledge and professional skills and competencies to meet the needs of the national population and reproductive health strategy. The main group of trainees are dedicated population and family planning officers/workers at all levels, including provincial, district and commune levels, and especially the large number of community population workers. The organization of training was decentralized, with the central level responsible for developing the curriculum and training materials and organizing basic training in population and family planning and training of trainers at the provincial level. The provinces were then responsible to organize short-term training for district and commune level population and family planning workers.

The General Office of Population and Family Planning has collaborated with related agencies to develop and issue curricula and training materials from elementary to secondary to university levels, covering management of population and family planning programs for provincial to commune levels, appropriate for the Population and Reproductive Health Strategy for the 2011 – 2020 period. Additional materials were also developed related to gender equality and for strengthening skills of trainers.

Training curricula have been standardized and made appropriate for each type of trainee, including 2 months of basic training for government population officials (organized by the Central level), government population and family planning workers received 3 months of training mainly provided by provincial medical schools. Community population workers were trained in basic management of population and family planning program at the grassroots level with a 5-day program organized by the locality. Other training courses were organized for central, provincial, district and commune officials and workers. The number of staff trained over 5 years is estimated at 1 million trainees, primarily grassroots level and community population workers.

In recent years, funding for the NTP to provide training has focused resources on implementing programs to upgrade population and family planning professional skills to meet standards for government employees working in the field of population and family planning. In addition, training responsibility has been shifted to provincial medical schools for implementation. By 2015, all commune and district level population and family planning workers have received this basic training. The shift in responsibility towards provincial medical schools has contributed importantly to completing the training of nearly 16 000 district and commune level population and family planning workers in all 63 provinces.

Through implementation of the NTP on reproductive health and projects supported by domestic and international organizations, tens of thousands of health workers at all levels have received training to update their knowledge and practical skills in reproductive health. The contents that have received the most attention in training includes: training in implementation of safe motherhood and neonatal care interventions, provision of family planning services, safe abortion following national guidelines for reproductive health, training of village birth attendants in disadvantaged regions, training on obstetric emergency care at the province and district levels, training for the neonatal care team, emergency surgery team at district hospitals in areas with difficult geographic conditions, training of health workers to meet standards of skilled birth attendant (SBA) and implementation of early essential newborn care (EENC), training in direct IEC skills and safe referrals for community members.
Research in reproductive healthcare has also been promoted with hundreds of scientific reports being disseminated in the Vietnam-French Obstetrics Conference organized regularly in the north and south of Vietnam and other scientific conferences. Many scientific advances have been and continue to be applied widely such as fertility treatments, endoscopic surgery in obstetrics, high tech services in emergency care for mothers and newborns.

Data on population and family planning is being gathered comprehensively, accurately and in a timely manner. The gathering of and updating of information on changes is being reported in forms and electronic databases following regulations. The routine reporting regime is strictly followed to ensure reliable data on population and family planning. By end of December 2013, 100% of provinces were implementing electronic reporting of population information, completely replacing the paper-based reporting in order to provide data on population and family planning to serve planning at all levels.

The organization of the Survey of Population Change and Family Planning on the first of April every year and the organization of other surveys in the fields of reproductive health, maternal and child health such as the Multi-Indicator Cluster Survey (MICS) have continued to be implemented.

Difficulties, shortcomings

The proportion of staff providing population-family planning and reproductive health services that have been trained with a specialist orientation remains low. The capacity of health workers remains weak, particularly at the commune and district levels (see also Task 1 in this section). There is a lack of funding to implement surveys and comprehensive research on population-family planning and reproductive health.

New contents related to the population and reproductive health strategy have been implemented by the provinces, but need to be further intensified and made more appropriate for the specific conditions in each region. The quality of training, particularly in localities that have paid inadequate attention to these issues, has not adequately followed the procedures for quality monitoring and supervision. Funding cuts for training have had large impacts on achievement of goals, particularly on improving quality of training to be appropriate with the targets, characteristics of the region and individuals being trained.

Because of the high turnover in population and family planning workers, about 15 – 20% of population-family planning officials at the provincial level and 10% of population staff at the district and commune levels have not yet received the full basic training on management of the population and family planning program. These training needs must be met in the 2016 – 2020 period.

4C.2.3. Effectively implement the NTP on population-family planning

Task 1: Provide population-family planning services; reduce unwanted pregnancy

Implementation results

The quality of population-family planning services has regularly been improved in public health facilities through purchase of new equipment, training to update knowledge and family
planning techniques for health workers, ensuring adequate number and quality of essential medicines, materials and contraceptives according to regulations.

IEC encouraging groups and individuals to actively participate in population-family planning has been strengthened with many different forms to leaders and people with high reputations in the community, to each household, married couple in reproductive age with the participation of news agencies, ministries, sectoral agencies, mass organizations and the network of population workers.

Units participating in population-family planning activities have provided family planning services close to the people in 5700 communes with high fertility and in disadvantaged regions through two major IEC campaigns each year that integrate reproductive health and family planning.

The General Office of Population and Family Planning and provincial branches have ensured provision of sufficient contraceptive methods for free according to regulations. They have also promoted social marketing for contraception. The network of contraceptive logistics warehouses at the provincial and district levels regularly receives, stores and transports contraceptives according to regulations. Information for management of contraceptive logistics has been consolidated and expanded.

**Difficulties, shortcomings**

In recent years, funding from the central state budget for the NTP on population-family planning has been drastically cut, leading to inadequate resources to ensure implementation of essential activities aimed at achieving program goals. In 2014, funds invested in the program amounted to only 65% of the amount provided in 2013, and only half of what had been provided in 2012. Local budgets can only support an additional 10%, while international funding has also mostly been cut as Vietnam has become a lower middle income country [116].

The number of women entering reproductive ages (15 – 49 years) continues to increase and is expected to peak at 26 million women by 2030. By 2020, the proportion of women aged 20 – 29 years (the group with highest fecundity) will account for all women in reproductive ages, creating the potential for a very large number of births.

Unmet need for contraception is currently quite high, accounting for 11.2% of married women [20]; 22.7% among unmarried women and about 35% among adolescents and youth [117]. The reduction in international aid for family planning has also caused difficulties in finding sources for procurement and supply of contraceptives for people who have need. There are not yet regulations in place and concrete sanctions related to controlling quality of contraceptives.

The number and type of contraceptives used cannot ensure maintenance of replacement fertility. Modern contraceptive prevalence currently does not meet requirements. The proportion of couples relying on the two most effective and least cost contraceptive methods (sterilization and intra-uterine device) has been falling. The proportion of couples using traditional contraception (rhythm method and withdrawal) or with shorter-term effects (injections and implants) has been increasing.

The physical facilities of health facilities do not yet meet requirements for improving quality of family planning services. Medical and family planning equipment and devices are
insufficient in number (particularly low cost instruments that need to be frequently replaced),
are not uniform or consistent with need or are of poor quality. The number of workers providing
family planning services who have received training and professional technical skills at the
CHS is still insufficient.

The contents and forms of IEC on population and family planning are not yet appropriate
with the particular regional characteristics of each region. The new contents have not yet
received much attention from localities nor have they been fully implemented.

After achieving replacement fertility, Vietnam’s fertility rate appears to be increasing
again. The economy is still poor, and cannot ensure conditions to sustainably support
implementation of small families while customs and habits still strongly pressure families to
have many children and to prefer sons. Figure 22 shows the fertility rate in Vietnam has stayed
below replacement level (2.1) since 2006. However, since 2011, total fertility rate has begun
to increase again from 1.99 children per woman in 2011 to 2.05 in 2012, 2.10 in 2013, 2.09 in
2014 and 2.1 in 2015.

Figure 23: Total fertility rate in Vietnam, 2001 – 2015

![Figure 23: Total fertility rate in Vietnam, 2001 – 2015](image)

Source: GSO. Survey of Population Change and Family Planning, various years. Statistical yearbook various years
[16]. GSO, Socio-economic situation 2015 [2].

Figure 23 shows that 4 out of 6 regions have not achieved replacement fertility; three of
these are regions with the highest poverty rates. There are still 18 provinces with high fertility
(TFR over 2.2 and smaller than 2.5) and 9 provinces with very high fertility (TFR over 2.5).
Seven provinces\(^{18}\) had previous achieved replacement fertility, but in 2013 fertility rates rose to
above replacement levels.

\(^{18}\) Tuyen Quang, Phu Tho, Hung Yen, Ninh Binh, Thanh Hoa, Da Nang, and Quang Ngai provinces.
Figure 24: Total fertility rate by region, 2010 – 2014

Source: GSO Statistical yearbook 2014 [44]

**Task 2: Delivery of prenatal and neonatal screening of congenital disorders**

**Implementation results**

The General Department of Population and Family Planning has developed a network providing prenatal and neonatal screening and diagnostic services for early detection of congenital disorders such as major fetal malformations, Down’s syndrome, congenital hypothyroidism, lack of G6PD enzyme and congenital adrenal hyperplasia, including:

- Investment in developing four regional antenatal and neonatal screening and diagnosis centers\(^{19}\) that are responsible for research, technical and professional guidelines, technology transfer to obstetrics/pediatrics departments in provinces and districts in the provinces in their jurisdiction.

- Gradually developing a network for delivering services through investing in medical equipment and technology transfer, technical training for health workers in obstetric and pediatric hospitals at the province level and the district level departments of reproductive health and CHSs according to the system assigning responsibility for providing different prenatal and neonatal screening services at various levels of the health system. By the end of 2015, 87% of communes could provide basic screening and diagnostic services.

- Intensify IEC and mobilize the Communist party, government authorities and the people to be aware of and participate in implementing prenatal and neonatal screening and diagnostic services.

The National Pediatrics Hospital has researched and tested interventions to minimize Thalassemia, congenital heart disease and congenital hearing loss in some localities.

\(^{19}\) At the Central Obstetrics Hospital, Tu Du Obstetrics Hospital, Hue Medical University Hospital and Can Tho Obstetrics Hospital.
Pre-marital counselling and health checks for couples preparing to marry are being implemented in 1464 communes in 58 out of 63 provinces.

Interventions to minimize child marriage and consanguineous marriage are currently being implemented in 192 communes of 26/63 provinces.

**Difficulties, shortcomings**

The program to control congenital anomalies, malformations and diseases (counselling, pre-marital health checks, interventions to reduce child marriage and consanguineous marriage, prenatal and neonatal screening and diagnosis) cannot be expanded despite the rapidly growing need among the population to use these services. The situation of child marriage and consanguineous marriage, if not halted soon, could leave serious consequences for future generations.

The proportion of the population with physical or mental disabilities accounts for about 1.5% of the population; the proportion of newborns with congenital anomalies accounts for 3%. It is necessary to implement preventive measures starting during pregnancy through appropriate maternal nutrition and early interventions to enable all children to live healthy lives and fully participate in society.

**Task 3: Implement a combination of effective measures including technical measures combined with checking, controlling and strengthening IEC to gradually reduce the rate of increase in the imbalance in sex ratio at birth to below 113 boys per 100 girls.**

**Implementation results**

Interventions to minimize the imbalance in sex ratio at birth through IEC, behavior change communication, and application of measures to halt sex discrimination and sex selective abortion have been implemented. IEC has been strengthened and awareness has been raised at all levels of the Communist Party, government authorities and health workers, among women and girls and other target groups about regulations that strictly prohibit sex selection of the fetus, and about the harm caused by imbalance in the sex ratio at birth, measures to stop sex discrimination, sex selection of the fetus and state policy interventions.

The health sector has strengthened inspections, periodic and random checking and supervision of compliance with regulations that strictly prohibit sex selection of the fetus at medical facilities that provide ultrasound, abortion and family planning services. Publishing facilities and book, newspaper and cultural item vendors have also been inspected regarding strict prohibitions on disseminating and communicating methods to “have babies according to preferences.”

**Difficulties, shortcomings**

The sex ratio at birth has reached high levels, and will continue to increase in the coming period, which is a very serious situation. The sex ratio at birth is increasing in both urban and rural areas. By 2013, the imbalance in sex ratio at birth had spread to provinces with high fertility such as the Central Highlands or regions with specific customs and practices like the Mekong River Delta (Table 20 and Figure 25). By 2050, it is predicted that Vietnam will have a shortage of from 2.3 to 4.3 million women if effective interventions are not implemented in
time. The imbalance in sex ratio at birth will increase gender inequality, lead to early marriage for women, high rates of marriage and remarriage, sexual abuse and violence and trafficking in women and children.

**Table 20: The sex ratio at birth by region, 2010 – 2014**

<table>
<thead>
<tr>
<th>Region</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nationwide</td>
<td>111.2</td>
<td>111.9</td>
<td>112.3</td>
<td>113.8</td>
<td>112.2</td>
</tr>
<tr>
<td>Red River Delta</td>
<td>116.2</td>
<td>122.4</td>
<td>120.9</td>
<td>124.6</td>
<td>118.0</td>
</tr>
<tr>
<td>Northern midlands and mountains area</td>
<td>109.9</td>
<td>110.4</td>
<td>108.2</td>
<td>112.4</td>
<td>116.1</td>
</tr>
<tr>
<td>North Central and Central coastal areas</td>
<td>114.3</td>
<td>103.3</td>
<td>112.1</td>
<td>112.3</td>
<td>105.5</td>
</tr>
<tr>
<td>Central Highlands</td>
<td>108.2</td>
<td>104.3</td>
<td>98.4</td>
<td>114.1</td>
<td>108.0</td>
</tr>
<tr>
<td>Southeast</td>
<td>105.9</td>
<td>108.8</td>
<td>111.9</td>
<td>114.2</td>
<td>108.9</td>
</tr>
<tr>
<td>Mekong River Delta</td>
<td>108.3</td>
<td>114.9</td>
<td>111.5</td>
<td>103.8</td>
<td>114.1</td>
</tr>
</tbody>
</table>

Source: GSO Statistical Yearbook 2014 [44]

**Figure 25: Trends in sex ratio at birth by region, 2007 – 2014**

Note: The plan target is to maintain the sex ratio at birth below 113 by 2015, which is represented by the dark green line, the natural sex ratio at birth is around 104 – 107 and is indicated by the lighter green line.


**Task 4: Ensure that all population-related targets are met; maintain fertility decline at 0.2‰ per year, control growth in population to below 1% per year.**

**Implementation results**

Many important population and family planning targets set for 2015 in the Five-year plan and the Resolution of the XI\textsuperscript{th} National Party Congress are likely to be achieved, including:
Population size to not exceed 93 million people (population in 2015 reached 91.7 million people); annual population growth in 2015 at about 1.07%, maintain total fertility rate below replacement level (2015 it reached 2.1 children per woman) (Table 21).

Table 21: Results of implementing of objectives, targets of Five-year plan, 2011 – 2015

<table>
<thead>
<tr>
<th>Targets</th>
<th>Unit</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2015 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population size*</td>
<td>Million people</td>
<td>87.86</td>
<td>88.81</td>
<td>89.76</td>
<td>90.73</td>
<td>91.7</td>
<td>&lt;= 93</td>
</tr>
<tr>
<td>Population growth rate*</td>
<td>%</td>
<td>1.05</td>
<td>1.08</td>
<td>1.07</td>
<td>1.08</td>
<td>1.07</td>
<td>= 1</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>child/ woman</td>
<td>1.99</td>
<td>2.05</td>
<td>2.10</td>
<td>2.09</td>
<td>2.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Average reduction of annual birth rate in the</td>
<td>‰/year</td>
<td>fell</td>
<td>rose</td>
<td>rose</td>
<td>rose</td>
<td>fell</td>
<td>fall 0.2 or *fall 0.1 on average (2011 – 2015)</td>
</tr>
<tr>
<td>period 2011 – 2015</td>
<td></td>
<td>0.5</td>
<td>0.3</td>
<td>0.1</td>
<td>0.2</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>The number of provinces that did not reach</td>
<td>Pro-vinces</td>
<td>29</td>
<td>26</td>
<td>33</td>
<td>31</td>
<td>..</td>
<td>&lt;= 17</td>
</tr>
<tr>
<td>replacement fertility rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modern contraceptive prevalence rate</td>
<td>%</td>
<td>68.6</td>
<td>66.6</td>
<td>67.0</td>
<td>68.0</td>
<td>..</td>
<td>70.10</td>
</tr>
<tr>
<td>Sex ratio at birth</td>
<td>male /100 female</td>
<td>111.9</td>
<td>112.3</td>
<td>113.8</td>
<td>112.2</td>
<td>112.8</td>
<td>&lt;= 113</td>
</tr>
<tr>
<td>Prenatal screening rate among pregnant women</td>
<td>%</td>
<td>1.5</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>15</td>
<td>&gt;= 15</td>
</tr>
<tr>
<td>Newborn screening rate</td>
<td>%</td>
<td>6</td>
<td>10</td>
<td>18</td>
<td>22</td>
<td>30</td>
<td>&gt;= 30</td>
</tr>
</tbody>
</table>

Note: * indicates target is from 5-year health sector plan. Other targets are taken from the National Strategy for Population and Reproductive Health for the period 2011 – 2020.


Difficulties, shortcomings

Some Five-year plan targets were not achieved, including keeping TFR at or below 1.9 children per mother, reducing fertility by 0.1‰ per year, number of provinces that have not yet achieved replacement fertility at less than or equal to 17, modern contraceptive prevalence rate 70.1%, sex ratio at birth below 113.

Awareness of all levels of the Communist Party and government authorities about the importance of population-family planning, reproductive health and maternal and child health care is not even across localities. Some localities are exhibiting a slacking off as they feel satisfied with their performance so the guidance by the leadership for supervision and checking to adjust policies and plans appropriate with the changes in the actual situation. Many targets on population-family planning, maternal and child health have not received adequate attention as they have not been put into socio-economic development plans of localities, this has led to investment budget for these activities being inadequate to meet need.
4C.2.4. Ensure achievement of targets set out in the area of reproductive health

Task 1: Reduce maternal mortality ratio and infant mortality rate, strive to achieve the MDG on maternal and child health. Narrow the regional and demographic group gaps in health indicators related to reproductive health, maternal and child health.

Implementation results

The infant mortality rate continues to fall reaching 15.8‰ in 2010 and falling further to 14.9‰ in 2014. Vietnam is likely to have achieved the target of 14.8‰ by 2015 (Table 22).

Table 22: Implementation status of maternal and child health targets, 1990 ~ 2015

<table>
<thead>
<tr>
<th>Target</th>
<th>MDG</th>
<th>1990</th>
<th>2010</th>
<th>2014</th>
<th>2015</th>
<th>2015 Target</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMR (‰)</td>
<td>MDG4.1</td>
<td>44.4</td>
<td>15.8</td>
<td>14.9</td>
<td>14.7</td>
<td>14.8</td>
<td>Target achieved</td>
</tr>
<tr>
<td>U5MR (‰)</td>
<td>MDG4.2</td>
<td>58</td>
<td>23.8</td>
<td>22.4</td>
<td>22.1</td>
<td>19.3</td>
<td>Target not achieved</td>
</tr>
<tr>
<td>MMR (per 100 000 live births)</td>
<td>MDG5.1</td>
<td>233</td>
<td>69 (2009)</td>
<td>56 (2014)</td>
<td>58.3</td>
<td>58.3</td>
<td>Target achieved</td>
</tr>
<tr>
<td>Percentage of deliveries attended by trained health staff</td>
<td>MDG5.2</td>
<td>96.9</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>Target achieved</td>
<td></td>
</tr>
<tr>
<td>Percentage of pregnant women having 3 antenatal care (ANC) visits throughout 3 trimesters</td>
<td>MDG5.5</td>
<td>79.1</td>
<td>90.6</td>
<td>&gt;90</td>
<td>87</td>
<td>Target surpassed</td>
<td></td>
</tr>
<tr>
<td>Percentage of mothers and newborns receiving postnatal care within 42 days after delivery (%)</td>
<td></td>
<td>87.8</td>
<td>91.2</td>
<td>..</td>
<td>85</td>
<td>Target surpassed</td>
<td></td>
</tr>
<tr>
<td>Ratio of abortions to live births (%)</td>
<td></td>
<td>27.4</td>
<td>18.1</td>
<td>25</td>
<td></td>
<td>Unreliable data</td>
<td></td>
</tr>
</tbody>
</table>


The maternal mortality ratio (MMR) has rapidly fallen from 233 maternal deaths per 100 000 live births in 1990 to 69 in 2009. Estimated results suggest that Vietnam has achieved the MDG of reducing MMR to 58.3 per 100 000 live births by 2015 [17]. Recently recent figures from an international taskforce on maternal mortality estimated MMR in Vietnam in 2013 at around 56.6 deaths per 100 000 live births [120], in 2014 at 56, and in 2015 at 54, much lower than countries with similar levels of income per capita such as Indonesia and the Philippines, about one half of the level for the ASEAN region [18]. Thus, Vietnam is one of the nations that the United Nations has assessed as being on track in implementing the MDG on reducing maternal and child mortality.
The proportion of women receiving antenatal care, the proportion being assisted at delivery by a trained health worker, the proportion of mothers and newborns receiving postpartum/postnatal care all exceed the targets set for 2015.

Table 23 shows that all 3 child nutrition indicators have achieved the 2015 targets set out in the National Nutrition Strategy for the period 2011 – 2020.

**Table 23: Implementation of child nutrition targets, 1990 ~ 2015**

<table>
<thead>
<tr>
<th>Target</th>
<th>MDG</th>
<th>1990</th>
<th>2010</th>
<th>2014</th>
<th>2015</th>
<th>2015 Target</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child malnutrition rate (underweight) (%)</td>
<td>MDG1c</td>
<td>41</td>
<td>17.5</td>
<td>14.5</td>
<td>14.1</td>
<td>15</td>
<td>Achieved, need to maintain results</td>
</tr>
<tr>
<td>Child malnutrition rate (stunting)* (%)</td>
<td></td>
<td></td>
<td>29.3</td>
<td>24.9</td>
<td>24.2</td>
<td>26</td>
<td>Achieved, need to maintain results</td>
</tr>
<tr>
<td>Proportion of newborns &lt;2500g* (%)</td>
<td></td>
<td></td>
<td>12.5</td>
<td>8.2</td>
<td></td>
<td>&lt;10</td>
<td>Achieved</td>
</tr>
</tbody>
</table>

Note: "Goals for stunting and low birthweight are from National Nutrition Strategy to 2020.

**Difficulties, shortcomings**

After a period of effective prevention and treatment of infectious disease and other simple causes of death, child malnutrition, maternal mortality, infant mortality have all fallen to relatively low levels, but the pace of reductions is likely to slow down if targeted interventions are not undertaken to resolve remaining causes of death. The rate of decline in maternal mortality and infant mortality have already shown indications of slowing down, particularly for the under-five mortality rate. In the period 2011 – 2014, on average each year the U5MR has only fallen by 0.35 deaths per 1000 live births compared to 0.6 deaths per 1000 live births in the period 2006 – 2011 [16]. This has led to non-achievement of the MDG to reduce the U5MR to 19.3‰ by 2015.

Figure 26 shows the different causes of deaths for children below 5 years of age. Over half of the deaths occurred in the neonatal period (before 28 days of life), mainly due to preterm birth and congenital anomalies, but also due to birth asphyxia and infections. Among children past the neonatal period, pneumonia, diarrhea and injuries, particularly drowning, are major causes of death.
Figure 26: Causes of child death, 2012

Many health facilities have paid more attention to development of high technology rather than simpler, inexpensive but effective technologies like breastfeeding, kangaroo care of underweight and premature newborns, implementing early essential newborn care. IEC activities focus on somewhat superficial topics, rather than getting into more complex topics to increase awareness, attitudes and change behavior of the people in relation to maternal and child healthcare, particularly in ethnic minority and disadvantaged remote areas. Accidents and injuries such as traffic accidents, drowning, burns and poisoning, contribute substantially to mortality among children below 5 years of age and seem to be showing a growing trend. In the current period, almost all causes of child death require interventions with contributions from outside the health sector. Health and nutrition interventions for mothers and children in mountainous areas face many difficulties because of complicated geography and difficulties in transport, while some ethnic minorities still have customs and practices such as not seeking antenatal care, not delivering babies at medical facilities, which may adversely affect their health. There are still large disparities in maternal and child mortality across regions. In 2009, MMR in the high mountainous areas was higher by about three times compared to the delta areas (108 and 36/100 000 live births respectively) [122], with the highest MMR in the Northwest region at 242/100 000 live births, followed by the Central Highlands at 108 per 100 000 live births [123]. Results of a survey on maternal mortality in 7 northern mountains...
provinces in 2015 showed that MMR in these 7 most disadvantaged provinces of the country was 98/100 000 live births, which shows that the regional disparities in MMR have fallen, but remain high. Similarly, child mortality in 2013 in rural areas is 2 times higher than in urban areas; in the Central Highlands and Northern Mountains, child mortality rates are 1.5 times higher than the national average (Table 24).

Table 24: Child mortality rates by region, 2014

<table>
<thead>
<tr>
<th>Area/region</th>
<th>IMR (%)</th>
<th>U5MR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>14.9</td>
<td>22.4</td>
</tr>
<tr>
<td>Urban</td>
<td>8.7</td>
<td>13.1</td>
</tr>
<tr>
<td>Rural</td>
<td>17.8</td>
<td>26.9</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red River Delta</td>
<td>11.8</td>
<td>17.7</td>
</tr>
<tr>
<td>Northern midlands and mountains</td>
<td>22.4</td>
<td>33.9</td>
</tr>
<tr>
<td>North Central and Central coastal areas</td>
<td>16.6</td>
<td>24.9</td>
</tr>
<tr>
<td>Central Highlands</td>
<td>25.9</td>
<td>39.5</td>
</tr>
<tr>
<td>Southeast</td>
<td>8.8</td>
<td>13.1</td>
</tr>
<tr>
<td>Mekong Delta</td>
<td>11.6</td>
<td>17.4</td>
</tr>
</tbody>
</table>


Neonatal mortality (NMR under 28 days of life) still accounts for a high share of child mortality. The fifth Vietnamese Multi-Indicator Cluster Survey (MICS) shows neonatal mortality in the period 2010 – 2014 at 11.95‰, similar with the estimates of the United Nations at 12‰ [124]. Thus, it is estimated that every year in Vietnam about 15 000 to 17 000 newborns die before reaching 28 days of age. The latest report from the Global Burden of Disease Study 2010 found in the Lancet [125], indicating that neonatal mortality accounts for 71% of deaths to children under 1 year of age and 51% of deaths to children under 5 years of age, particularly early neonatal death, in the first week of life, accounted for 72% of total neonatal mortality and 52% of total infant mortality under 1 year of age and 35% of total child mortality under 5 years of age. This shows that quality of perinatal care and neonatal care in the Vietnamese health network still has many limitations.

The goal of ensuring universal access to reproductive health is quite difficult to achieve in disadvantaged regions because a large share of women in these regions do not seek antenatal care or do not delivery at a medical facility. In 2014, there were still 10 provinces with the 10% or more of women delivering at home without health worker assistance, this was focused in the northern mountains and the Central Highlands.

The quality of antenatal care also has shortcomings. The proportion of women seeking antenatal care whose blood pressure was measured was only 82.3%, the proportion with a urine test was only 72%. The proportion who had blood tests was only 61.8%. The proportion of women receiving all three of the above services was only 56.2%, and this share was particularly low in the Central Highlands (25%) and the northern mountains (28.4%). Only 22.5% of pregnant ethnic minority women have received all the services of blood pressure measurement, urine and blood testing [20].
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The proportion of women delivering with a skilled birth attendant is very low because most health workers do not yet meet standards for skilled birth attendant.

The abortion to pregnancy ratio reflects quality of family planning services and IEC on reproductive health. According to data reported by the provinces, the ratio of abortions to live births has been declining, from 27.44% in 2010 to 17.45% in 2013 [60], however data on abortion currently is mainly collected in state health facilities, while there is a rising trend for patients to seek private reproductive health services for abortions.

Implementing nutrition targets

The child rate of underweight malnutrition remains quite high compared to more developed nations in the region like Malaysia, Thailand and Singapore. The malnutrition rate has fallen unevenly across regions, and remains particularly high in the Northern midlands and mountains, the North Central and Central coastal areas and the Central Highlands. About 1.3% of children are severely malnourished (2nd or 3rd grade malnutrition, while 1.3% of children suffer from wasting.

The child rate of stunting malnutrition remains very high, on average for every four children under age 5, one child suffers from stunting. Up till 2014, five provinces still had stunting rates over 35%, a very high rate according to WHO classifications. The main cause is the lack of micronutrients among mothers and children, particularly in disadvantaged regions. According to results of the national nutrition survey 2010, vitamin A deficiency was detected in 14.2% of children whose blood was tested. The share of breastmilk with low vitamin A content reached 35%. Anemia in pregnant women reached 36.5% (71.8% of which was due to iron deficiency), while in children under age 5 anemia affected 29.2% (52.9% of which was due to iron deficiency). Zinc deficiency in pregnant women reached 90%, while in children under age 5 it reached 81.2%.

The proportion of newborns born underweight is quite high, particularly among ethnic minorities (12.3%), indicating that nutrition care for pregnant women still faces many limitations. This has a large effect on physical stature and strength, as well as disease prevention among people when they become adults.

In contrast to the problem of undernutrition, which is prevalent in mountainous and disadvantaged regions, the problem of overweight and obesity is increasing in urban areas.

Task 2: Reduce reproductive tract infections and sexually transmitted disease

Implementation results

Although funds from health NTPs are quite limited, every year the health sector still organizations screening for reproductive tract infections for about 13 million visits of women in childbearing ages, and provides treatment for about 5 million people. The proportion of women requiring treatment has fallen slightly from 43.4% in 2010 to 41.4% in 2014, this indicates that the situation of reproductive tract infections in women has improved [20].

Difficulties, shortcomings

A large number of female patients is screened for reproductive tract infections annually, but the quality remains somewhat limited. The screening campaigns are mainly organized

20 Compilation of routine reports from the provinces 2010 – 2015. Maternal and Child Health Department MOH.
by the district health center and the CHSs in conditions of inadequate medical equipment, particularly for performing paraclinical services, for which equipment is insufficient or obsolete. Therapeutic drugs dispensed during these campaigns also only satisfy treatment needs for very basic reproductive tract infections, i.e. those without complications. Because paraclinical services are not yet applied widely for screening and diagnosis of reproductive tract infections, classification of disease is inadequate for purposes of epidemiological reporting.

Screening of female reproductive tract infections should be combined with screening for cervical cancer using VIA/VILI tests or pap smears. However, the proportion of CHSs implementing VIA/VILI tests is only 33.2%, the proportion of CHSs taking cell samples from the cervix for pap smears is also quite low, only 21% [114]. Thus, many women have been screening for reproductive tract infections, but have missed the opportunity to be screened for cervical cancer, even with simple but effective techniques like VIA/VILI tests.

4C.3. Priorities

4C.3.1. Maternal and neonatal mortality require continued attention

Maternal and early neonatal mortality remain at relatively high levels, particularly in disadvantaged regions and among ethnic minority people. The pace of reducing maternal and neonatal mortality has slowed. The underlying causes are difficulties the people face in accessing quality packages of services such as basic, comprehensive emergency obstetrics care, essential early neonatal care effectively implemented, which WHO recommends applying such as skin-to-skin contact, early breastfeeding after birth, care of underweight newborns using Kangaroo mother care. At the same time the referral system for mothers and newborns, including referral from the household to a health facility, is very limited and not really effective.

4C.3.2. Child malnutrition, particularly stunting, remains high

The stunting rate among children remains high due to poor nutrition among pregnant women and early childhood, particularly due to the low exclusive breastfeeding rate, the low nutritional content in the diets of mothers and children, particularly the inadequate protein, vitamins and minerals. In addition, the situation in some regions and among some populations, where utilization of clean water and improved sanitation is low, diarrhea also contributes to poor childhood nutrition.

4C.3.3. Unmet need for population-family planning and reproductive health services, particularly in disadvantaged areas

Access, provision and use of population-family planning and reproductive health services of high quality in some regions and among some demographic groups remain limited:

- Access to and use of antenatal and delivery care of assured quality in some localities (regions inhabited by ethnic minority people and disadvantaged regions) remains limited. Some core interventions are not yet widely implemented.
- Congenital disorders remain relatively common due to inadequate implementation of cost-effective preventive interventions (such as low share of mothers given rubella vaccines prior to pregnancy, the low proportion of mothers supplementing folic acid and
the low proportion of children given vitamin K injections immediately after birth) and due to inadequate screening services and cost-effective interventions prior to and during pregnancy and in the neonatal period. The proportion of pregnant women who have been screened prior to giving birth remains low. The proportion of newborns who have been screened immediately after birth and who have received interventions to overcome detected health problems and congenital anomalies remains very low.

- Unmet need for family planning and unwanted pregnancy result primarily from limitations in access to family planning services, particularly among population groups in disadvantaged regions, ethnic minority populations, among migrants, adolescents, unmarried young adults, the elderly, the disabled and people infected with HIV.

- The need for early detection and treatment for reproductive organ cancers remains high while capacity of the health system is limited.

4C.3.4. Imbalance in sex ratio at birth and maintenance of replacement fertility

The imbalance in sex ratio at birth continues to increase because of social pressure and culture, leading people to prefer sons to care for parents in old age and due to the lack of effective controls on technologies that allow people to sex-select the fetus.

Fertility appears to be rising, while differences in fertility between regions have not yet been reduced. Maintenance of replacement fertility has long term benefits for socio-economic development and competitive advantage in global integration.

5. Health Information Systems

5.1. Five-year plan (2011 – 2015) objectives and targets related to health information

Although the Five-year health sector plan 2011 – 2015, had no specific objectives or targets and monitoring indicators related to Health Information Systems (HIS), nevertheless the importance of health information is reflected in the requirements for monitoring and evaluating implementation of the Five-year plan. Not only is the HIS responsible for monitoring progress of the basic plan indicators, but the Five-year plan 2011 – 2015 calls for monitoring and evaluating health sector activities through a set of indicators set out by the MOH and Health Partnership Group in the Joint Annual Health Review. Within each building block of the health system, HIS are essential for assessing need (for example the need for investing in medical equipment), monitoring implementation of tasks and evaluating impact. The analysis in this section points out the extent to which the current HIS has managed to implement these essential tasks in general and in relation to various building blocks.

5.2. Assessment of implementing Five-year plan tasks on health information systems

5.2.1. Tasks related to developing a legal basis for health information and statistical targets

The Five-year plan 2011 – 2015 stipulates development of broad macro-level HIS plans as well as detailed regulations on operational aspects of the system.
Task 1: Develop a plan for HIS development to the year 2015 with a vision to 2020 in order to consolidate and develop the HIS from the central to local levels including both public and private sectors.

Task 2: Revise and refine the health statistics indicator system, the registers and health statistics reports, guiding documents for the health management information system, information on hospitals, preventive medicine, disease control, and information for teaching and research.

Task 3: Develop regulations and sanctions appropriate for information gathering from private health sector such as the number, type, size, services provided and utilization of services

Implementation results

The Comprehensive plan for HIS development for the period 2014 – 2020 and a vision to 2030 (hereafter “HIS Comprehensive Plan”) was endorsed in MOH Decision No. 3040/QD-BYT (2014). This is the first methodically and scientifically formulated plan for HIS in Vietnam, consistent with recommendations from international organizations. The HIS Comprehensive Plan is one of the most critical activities to ensure a harmonized and strong development of the HIS following an appropriate roadmap and orientation, from central to local levels and in both public and private health sectors.

The system of indicators, information registers and statistical reports for public and private health units has been revised and incorporated into the legal framework for reforming health management information system. The MOH has issued the basic health sector indicator system (Circular No. 06/2014/TT-BYT (2014)) consisting of 88 indicators of different areas, many of which are disaggregated by gender, region and ethnic groups in order to monitor and evaluate gender equity as well as to measure inequality in health service access and utilization. In addition, the basic indicators for provincial, district and commune levels (Circular No. 32/2014/TT-BYT) was issued for collecting and managing basic information required for planning at each respective level. To ensure uniformity of definitions, a health statistical indicator dictionary was issued to standardize concepts, method of calculation, source of data, major disaggregations and interpretation, which will serve as a convenient reference for using and calculating indicators (Circular No. 28/2014/TT-BYT).

Circular No. 27/2014/TT-BYT stipulates the health statistical reporting forms to be applied for public sector healthcare units. In addition, Circular No. 29/2014/TT-BYT stipulates regulations on reporting forms, stipulations about obligations and responsibility for statistical reporting of private health facilities have been issued to ensure uniform national implementation.

For the health information sub-systems, documents have been issued on the indicator system, report forms and guidelines for health information related to traditional medicine, HIV/AIDS and preventive medicine.

Difficulties, shortcomings

While the comprehensive HIS plan has been developed and the basic health indicator system and related guiding documents and forms have been put in place, the development of information sub-systems have fallen short. In addition, actual implementation of the regulations remains weak, particularly compliance by private sector units.
Implementation of national regulations about government statistics remains weak, particularly the Policy on Government statistical information dissemination (Decision 34/2013/QD-TTg) and the Decree on administrative violations in the field of statistics (Decree 79/2013/ND-CP), which have not been operationalized in the health sector. As a result, timeliness, completeness and accuracy of data are compromised. The task of developing regulations and sanctions appropriate for gathering information from the private health sector on items such as number, types, size and services provided by the private sector has not been achieved.

5.2.2. Tasks related to ability to meet statistical data user needs

The Five-year plan 2011 – 2015 specifies detailed tasks as follows:

Task 1: Strengthen dissemination of information in diverse forms appropriate for needs of users; strengthen use of information for management at each facility, each level, and for use in planning and management of the overall health sector.

Task 2: Develop health information databases at all levels; strengthen quality of health information (complete, accurate, timely). Strengthen ability to synthesize, analyze and process data. Develop a mechanism for feedback on quality of health information.

Task 3: Develop a system for monitoring priority health issues, including: monitoring, reporting and forecasting communicable disease; data on NCDs, food safety, strengthening management and sharing information on national health goals.

Implementation results

Various annual publications are important outputs of the health statistical system. The Health Statistics Yearbook features basic targets reflecting the investment situation for the health sector, results achieved from different areas, national health programs and health status of the population. The Joint Annual Health Review (JAHR) makes an important contribution to developing and planning policies of the health sector, which contains thematic analyses for policy recommendations and short-term and long-term solutions. The Communicable disease statistical yearbook is also produced on a regular basis. In addition to the print format, other information products, such as information on new policies, public services, private practice licensing, information for the population on disease prevention and treatment, etc., are disseminated through conferences, press conferences, online news sites or other media channels.

Health information collection is organized systematically from the MOH to commune level. Most of the collected information comes from regular reports through the system of registers and reports regulated by the MOH. Some health-related information is collected from the surveys by the General Statistics Office. Five surveys have been approved by the Government for gathering information to supplement statistical data missing from the regular statistical reports. Currently, only the nutritional surveys are conducted annually. The MOH is preparing a survey on health facilities and human resource as assigned by the Government.

An improvement is noted in the implementation of statistical reporting by the health facilities at all levels and areas. According to the reporting results in the recent years, 100% of the Ministry’s Departments, Administrations, General Departments and the NTPs have
implemented reporting tasks adequately and 61/63 provincial health departments have submitted their reports to the MOH.

The health statistics data are utilized in service management, system governance, planning, communication and policy development, especially at the central level. Based on the European Union recommendation, a number of provinces have taken the first steps to apply results based planning approaches which enables more information utilization and information-based allocation of resources. Moreover, information has been used in supervising, monitoring and evaluating the impacts, coverage and interventions of various programs and projects, as well as in research and training activities.

Data quality has also been gradually improved through statistical officer training and strengthening of monitoring, evaluation, and data utilization at all levels. In 2013, the MOH did a national survey of human resources for and need of training in health statistics. From the survey results, the Ministry have developed training documents and organized training for trainers for 63 provinces as well as for central level agencies in fundamental knowledge of statistics, data collection, report synthesis and calculation of basic health indicators as specified in the Circular by the MOH.

An information system monitoring health sector priorities is being implemented. This includes development of a system for monitoring NCDs and NCD risk factors, implementation of activities to measure disease burden such as use of ICD-10 and ICD9-CM coding, and issuing Circular No. 17/2012/TT-BYT stipulating the issuing and use of birth certificates aimed at improving quality of information on births. Information on deaths and causes of death in the community is being integrated into the health management information system.

**Difficulties, shortcomings**

In relation to dissemination and utilization of information: there are many information sources but there is no clear data dissemination mechanism, there is no single unit charged with disseminating information for the health sector and health-related information from other sectors.

Related to information products and quality: The capacity to analyze and use information is weak both for health statistical officers and health sector managers. Raw data are collected but there are limitations in the capacity for primary analysis of these data for regular use, providing feedback to the lower levels, and deeper analysis of the data to assess trends, make forecasts and estimate disease burden. One reason is the inadequate knowledge and skills of the health staff using data for analysis and evaluation. Another reason is the lack of databases at different levels, which makes information sharing and utilization difficult.

There remain many problems with data quality in terms of completeness, timeliness, disaggregation and ability to satisfy information needs.

In relation to monitoring of priority issues: Even though some NCD intervention programs have been implemented since 2008, and the MOH has issued lists of NCD monitoring indicators, unfortunately most of these indicators must be gathered through specialized surveys. Up till now, data on NCDs is incomplete, unreliable and is not formally released. The set of indicators for NCD monitoring should be reviewed and integrated into the HIS.
Information gathered about mortality and cause of death have been integrated into the period statistical reporting system of the HIS according to Circular No. 27 in 2014. Data on mortality and cause of death continue to have shortcomings because health facilities do not yet apply the death reporting forms according to the WHO and lack funding for implementing training of health workers about diagnosing primary cause of death and coding cause of death according to the ICD-10 codes.

5.2.3. Tasks related to gradual modernization of the HIS and application of information technology in HIS

Task 1: Gradually modernize the HIS appropriate with capacity in terms of funding, technical skills and need to use data at different levels of the health system, including upgrading hardware, developing software, formulating modes for information sharing, transferring information, sending reports and data through the internet.

Implementation results

On hardware: In terms of technical infrastructure for health information technology, a LAN network and high-speed internet connection has been provided to the MOH and 100% of the Ministry’s units, provincial health departments and provincial general hospitals; 100% of officials and staff whose work requires application of information technology (IT) have been provided with computers. A Center for Data Integration was established by the Ministry to meet the basic needs for using servers in IT application by the Ministry’s units.

On software: In terms of applying IT in management and coordination in government offices, all the units under the Ministry use web-based software for document management and governance. The MOH has individual office email addresses for 100% of officials and staff, and office email addresses for agencies directly managed by the Ministry and provincial health departments for use in work exchanges. All managers at the Ministry and its units are provided with digital identification. The Ministry and selected provincial health departments (including Da Nang, HCMC, and Hanoi) have applied information technology for provision of some public services.

In terms of specialized applications: A database on population dynamics covering the population of more than 90 million people was built by the General Department of Population and Family Planning. It is updated regularly and being considered for direct links with the MOH general system. The Medical Services Administration has software for hospital statistical reporting and management of private health sector providers. The Vietnam Administration of HIV/AIDS Control has software for management of people living with HIV/AIDS and an HIV/AIDS database. The Department of Preventive Medicine is implementing software for surveillance of communicable disease and management of immunizations.

Regarding IT applications in medical services management: hospitals at central, provincial and district levels have been applying the hospital management software (HIS). Statistically, 100% of hospitals at central level, 68% at provincial level and 61% at district levels were applying IT systems for hospital management by 2014. These systems can all be used for report extraction for insurance claims processing, however, they lack the capacity for inter-facility exchange of information on individual patient records. Currently, the MOH has been developing a system on electronic medical record exchange. A number of effective
telemedicine systems have been established to connect hospitals, for example those in Bach Mai hospital, Viet Duc hospital, and health departments in major cities.

**On information sharing:** For information dissemination to the community, beside the traditional modes, the MOH and its units, 100% of provincial Health Departments and all agencies under the management of the Ministry, have their website and web portal which provide useful and updated information on management and technical issues.

**Difficulties, shortcomings**

- Incomplete and small scale IT application is observed, except a few information systems of some specific sector areas. The systems which have been developed are not capable of connecting for information sharing, which minimizes the application of IT in collecting, processing, analyzing and disseminating information.

- There is a lack of an essential foundation for a systematic and harmonized IT application to ensure connectivity and information sharing between the systems, such as a common list, general structure and design of HIS, an integrated database, etc.

**5.3. Priority issues**

Based on analysis of the implementation of the Five-year plan 2011 – 2015 and discussion among stakeholders, four priority issues in HIS should be highlighted over the next 5 years. These are:

**5.3.1. Weak oversight and leadership for effective implementation of the activities laid out in the HIS comprehensive plan**

Weak oversight and inadequate leadership for effective implementation of the activities laid out in the HIS comprehensive plan are leading to inability to meet health information needs of planners and policymakers.

- Key HIS, specifically those responsible for compiling information on cause of death and registries for specific chronic diseases/conditions, are not functioning properly despite the importance of this information for planning (HRH, infrastructure, equipment, budgets and even pharmaceuticals).

- Patient records are inadequate to ensure continuity of care, avoid adverse reactions, or ensure efficiency by avoiding duplication of services between facilities, and the information from patient records is not analyzed to improve the health system by detecting medical error or inefficiencies.

- Data available in the HIS are underutilized because they are not disseminated to researchers who could provide appropriate analysis for planning and policymaking.

- Data are not regularly and comprehensively reported from the private health sector.

**5.3.2. Health system activities are not adequately monitored for performance**

- Health system activities are not adequately monitored for performance and accountability of use of resources to achieve outcomes;
Information on performance is not available to allow health system managers to identify areas for improvement.

These key performance indicator monitoring systems are a prerequisite for performance appraisal (in HRH management) and effective pay-for-performance and other health financing policies.

6. Health system governance


The overall objectives of health system governance in the Five-year Health Sector Plan 2011 – 2015 are “to consolidate and improve the health sector network organization at different levels and to build management capacity to respond to the demands of reforming and developing the health system in the new period.” To achieve these objectives, the Five-year Plan proposed specific groups of tasks as follows:

- Improve capacity and quality of health strategies, plans and policies; amend and refine health policies and legislation.
- Strengthen the role and capacity for health sector management and planning at both national and local levels.
- Consolidate and refine the health system institutional organization from central to local levels.
- Strengthen inspection, monitoring and supervision activities; consolidate and develop general and specialized health inspection networks at all levels.
- Strengthen stakeholder involvement in health policy development and implementation processes.
- Promote appropriate social mobilization activities, develop private sector health facilities and public-private partnerships in health.

6.2. Assessment of implementing Five-year plan tasks on health system governance

6.2.1. Tasks related to policymaking and planning

Task 1: Improve policymaking capacity and quality of health strategies, master plans and policies; amend and refine health policies and legislation

Implementation results

During the last 5 years (2011 – 2015), many important health strategies have been promulgated to orient health sector activities. The Strategy on the Protection, Care and Promotion of the People’s Health for the Period 2011 – 2020, with a Vision to 2030 was approved in Prime Ministerial Decision No. 122/QDD-TTg (2013); the National Strategy for the Development of Vietnam’s Pharmaceutical Industry to 2020 and Vision to 2030 was approved in Ministry of Health Decision No. 68/QD-BYT (2014); the National Strategy on Population and Reproductive
Health in the period 2011 – 2020, was approved with Prime Ministerial Decision No. 2013/QD-TTg (2011); and the National Strategy for the Prevention of Cancer, Cardiovascular Disease, Diabetes, Chronic Obstructive Pulmonary Diseases, Asthma and other NCDs in the period 2015 – 2025 was approved in Decision No. 376/QD-TTg (2015).

The Master plan for Health System Development and other sub-sector plans have been developed and promulgated. The health sector is currently implementing the Master Plan for Health System Development in Vietnam to 2010 and Vision to 2020 (Prime Ministerial Decision No. 153/2006/QD-TTg) and has submitted an updated plan for the new period for Prime Ministerial approval. The Prime Minister has promulgated the Master Plan for Medical Care Network Development (Decision No. 30/2008/QD-TTg) and the Master Plan for Medicinal Materials Development (Decision No. 1976/QD-TTg (2013)). The Health Minister has issued health sectoral master plans such as the Master Plan for Tuberculosis and Lung Disease Prevention and Control Network Development (Decision No. 2537/QD-BYT (2011)), the Master Plan for Cancer Prevention and Control Network Development (Decision No. 4595/QD-BYT (2009)), the Master Plan for Health Human Resources Development (Decision No. 816/QD-BYT (2012)), the Master Plan for the Forensic Psychiatric Network (Decision No. 5151/QD-BYT (2014)).

The MOH has helped the Government to develop several laws to submit to the National Assembly for promulgation, including the Law on Tobacco Control (2014) and the Law on the Revision and Amendment of Several Articles in the Health Insurance Law (2014), while the Pharmaceutical Law (revised) is being drafted to submit to the National Assembly in 2016.

The MOH has submitted to the Government several draft legal documents for promulgation: the operational and financial mechanism for state health service facilities (Decree No. 85/2012/ND-CP); on commune, ward and district town health (Decree No. 117/2014/ND-CP); detailed guidelines for implementation of several articles of the Law on Food Safety (Decree No. 38/2012/ND-CP); Malpractice Insurance for the Medical Profession (Decree No. 102/2011/ND-CP)...; projects to reduce hospital overcrowding in the period 2013 – 2020 (Decision No. 92/2013/QD-TTg); maritime health development to 2020 (Decision No. 317/2013/QD-TTg); implementation of the roadmap towards universal health insurance coverage in the period 2012 – 2015 and 2020 (Decision No. 538/2013/QD-TTg); the project on promotion of the training and development of health workers specialized in tuberculosis, leprosy, mental illness, forensics and pathology in the period 2013 – 2020 (Decision No. 319/2013/QD-TTg); and implementation of the policy on temporary secondment of medical professionals to medical facilities (Decision No. 14/2013/QD-TTg). These are important prerequisites for the implementation of specific health policies.

Apart from the above, the MOH has proactively developed guidelines for the implementation of the Law on Examination and Treatment, the Law on Human Organ Transplantation, the Law on the Elderly, the Law on People with Disabilities, the Law on Food Safety, the Law on Legal Health Evaluation, the Law on Tobacco Control. It has also been refining clinical protocols, the classification of procedures by level of facility, assignment of responsibility for professional mentoring and referrals, diagnostic and treatment guidelines, issuing of medical practice certification and quality management.

On an annual basis, the Minister of Health issues the agenda for development of legal documents in the health sector, assigning responsibility to specific departments and
administrations along with deadlines for completion. By 31 December 2013, there were 1159 legal documents on health that had been systematized, including 768 that are currently in effect, 262 in need of revision, amendment, replacement or revocation, or even in need of being issued for the first time [126]. This is a huge amount of work that the MOH has implemented and will continue to implement in the coming period.

Difficulties, shortcomings

Quality of health master plan development is still limited. Most health master plans neglect the geographic distribution (they lack an accompanying master plan map). The master plan contents indicate orientation for development, but are not accompanied by requirements for capital or for their geographic distribution, so feasibility is low. There are overlaps in the concepts of strategy, development master plan, master plan, comprehensive plan, and development plan. Agencies at both central and provincial levels are developing master plans. Contents related to master planning are found in many different types of legal documents (laws, decrees, projects, programs and action plans). The procedures for developing master plans have not yet been standardized, while subsectoral master plans are being developed by different specialized departments and administrations. There is no mechanism for verification, evaluation or sanctions for violations related to implementation of master plans. Resources for implementing master plans are not adequately estimated, but depend on specific investment projects. Monitoring and supervision of master plan implementation is not done systematically so performance in implementing master plans has been limited.

Although many laws, decrees and decisions in the medical field have been issued in recent years, the progress of developing circulars and regulations to guide the implementation of specific policies is sluggish, such as the circulars guiding the implementation of the Law on Examination and Treatment or Decree No. 85/2012/ND-CP on the reform of the operational and financial mechanisms, which has led to delays in the promulgation and execution of policies on the ground.

There are some limitations in the development of strategies, policies and legal documents in the MOH. Policy proposals are subjectively chosen rather than based on some prioritization process. Implementation of plans to develop legal documents is sometimes slow. The scheduled completion rate is not high. For example, in 2014, the percentage of completion on projected documents development at the MOH under official programs only achieved 44% of the plan [126].

The process of developing documents and policies is lack of information and scientific evidence, especially in-depth analysis of socio-economic impact assessment, health economic analysis, cost-efficiency and health technology assessment… due to the focal policy developing institutions are not actively requesting for information from the research agencies or research agencies themselves fail to meet the requirements in terms of capacity. The policy drafting committee and unit at the MOH has not been effective; there has been lack of close coordination between the functional departments of the MOH and between Ministries/sectors.

The implementation of policies and strategies reveals some limitations. Though the dissemination of legal documents and policies has been conducted procedurally, it is evaluated of little effective due to its formality and narrowed target groups. Policies and regulations are in shortage of resources to be implemented and come into real life. For example, the Law on
the Elderly and associated guidelines has provisions on the establishment and management of elderly records, regulations on the organization of separate corners for the elderly in clinics of the general and specialist hospitals, however few have actually implemented. The Circular No. 07/2013/TT-BYT of the MOH has officially recognized village birth attendants as a medical staff position, a type of village health worker who is entitled to stipends like those stipulated by the Prime Minister for village health workers, however, very few provinces allocate funds to pay these stipends.

**Task 2. Improve roles and capacity in health management and planning at both central and local levels**

*Implementation results*

**Improving capacity in health management is one of the priorities of the MOH.** In 2014, the MOH established two training establishments for Health managers at the Hanoi School of Public Health and Public Health Institute in HCMC. The year 2014 also marked the development and innovation of the Health Ministry in the training and retraining of health cadres, workers, officials, leaders and managers. The introduction of these establishments is to equip, update knowledge, skills and methods needed in health leadership, management and administration, especially those concerning planning, management of staff, economic management, infrastructure management, equipment ... to effectively improve management and administration of health facilities. In the past 5 years, the MOH has also organized training courses on management capacity building, health planning and budgeting for health personnel from central to provincial levels under supports from Projects funded by EC, GFATM, GAVI and the Rockefeller Foundation.

**Health planning and budgeting activities have achieved certain improvement.** The MOH has appraised and acknowledged the Planning Framework and Guidelines for provincial health plan development under the Project Health sector capacity building Support funded by the European Commission (EC). Quality of health plans has improved through the development of the Joint annual health report (JAHR). Since 2010, the MOH has conducted a joint evaluation of the 5-year health plan using the JANS21 tool. Then, this toolkit has been updated, revised and gradually apply for reviewing annual provincial health plans in some provinces.

**Difficulties, shortcomings**

**Reforms in health planning and budgeting are not strong.** There is no linkage between planning and allocation of fund based on priorities. Budgeting is mainly based on input indicators such as health personnel and population.

**Health information and data serving the planning process has no significant changes.** The outdated, inaccurate and unreliable data has resulted in the challenges of evidence-based health planning and management.

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21 JANS (Joint Assessment of National Strategy) is a toolkit for the assessment of the national health strategies and plans introduced and implemented by IHP+ (of which Vietnam has been a member since 2011).
Task 3: Strengthen the involvement of stakeholders in health policy development and implementation processes

Implementation results

There is certain progression on strengthening the stakeholders’ involvement in the development of health policies. During the process of developing legal documents, MOH has extensively consulted other ministries, sectors, provincial People’s Committees, Health Departments, development partners and the community. Draft documents and policies have been posted on the web portal of the MOH and web portal of the Government to consult for stakeholders’ comments and reviews.

Strengthening advocacy, communication and clarification of health policy and legislation was also emphasized. For the changes in health policies, especially those policies that directly affect the people as the Law on the amendment and supplementation of several articles of the Law on health insurance, orientation on the adjustment of medical service prices, the MOH has organized workshops, seminars and press conferences to announce and clarify the changes to achieve public consensus. Communication activities on the mass media as “People-Ministers Q&A”, “Policy dialogue”... as well as on other key information channels have been organized to support the implementation of this goal.

Dialogues with international organizations and donors continued to be maintained over the years through bilateral or multilateral contacts. Health Partnership Group meetings (HPG) are maintained regularly every quarter to share information and enhance the development partners’ understanding of the health sector’s guidelines and policies. The Joint Annual Health Report (JAHR) coordinately developed and published by the MOH and Health Partnership Group (HPG) since 2007 has been considered as a useful document for health planning and policy dialogues.

Difficulties, shortcomings

The involvement of other ministries, sectors and civil society organizations in the policy development process is limited. Although during the drafting process of legal documents agencies in charge have fully implemented procedural steps under the provisions of the Law on issuance of legal documents, however, they often received little comments and consideration from concerning Ministries, sectors, civil society organizations and professional associations. Quality comments are small in number.

Explanation and responses of policy making agencies to people’s and enterprises’ comments are unclear and unspecific resulting on the low rate of agreement in the implementation of policies.

6.2.2. Tasks related to organization and implementation of policies

Task 1: Consolidate, refine and stabilize health system institutions from central to local levels

Implementation results

There have been some changes in the health system institutional organization during the past few years in response to managerial needs. Following the Government Decision
No. 63/2012/ND-CP, the MOH has newly established the Department of Health Information Technology, Administration of Communication, Emulation and Reward; transformed the organizational structure of the Department of Traditional Medicine and Pharmacy to the Administration of Traditional Medicine and Pharmacy; and the Department of Health Science and Training to the Administration of Health Science, Technology and Training; renamed the Department of Food Safety and Hygiene to the Food Safety Department; reorganized the Health Legislation Department to focus on the implementation of health legislative duties.

Some regulations concerning local health system organization have also been issued. Notably, the Government has issued the Decree No. 117/2014/ND-CP on commune, wards and township Health, according to which CHS is under the administration of the District Health Centre, established by the administrative units; the Decree also specifies employees who work at the CHSs are officials. The MOH has also promulgated a Circular regulating on the functions, responsibilities, authorities and organizational structure of the Provincial/municipal preventive health centers.

The system of public service agencies has been transformed in terms of operational and financial mechanisms under the provisions of the Decree No. 43/2005ND-CP and Decree 85/2012/ND-CP of the Government in the direction of shifting to models of ordering and mandating the provision of public services instead of the previously mandated allocation based on estimates. These models have linked to the benefits that facilities had actively created through various forms of service delivery and encouraged them to actively increase revenue and decrease dependence on the state budget. Recently, the Government has issued the Decree No. 16/2015/ND-CP on the autonomy of the public service agencies which replaced the Decree No. 43/2005/ND-CP with the direction to boost the implementation of autonomy.

Difficulties, shortcomings

Though the organizational management structure of the health system at central and local levels has been reformed, but it has not met the demand for health system management. The Health Ministry is currently managing 75 direct attached agencies across regions of the country. This number of agencies remains unchanged for many years. Manpower and time for the development and formulation of health policies, monitoring and supervision of the system are limited and fragmented. Locally, organizational and operational capacity for health activities of some provinces is weak; the health sector’s role in advising local Party’s and government committees is weak, therefore unable to involve stakeholders’ participation and mobilize necessary resources for the organization and implementation of health policies and activities.

Health facilities are currently instituted under administrative boundaries and technical classification under the central, provincial, district and commune levels leading to the administrative structure of clinical activities and not encouraging for hospitals to develop and upgrade. People have not been facilitated with favorable conditions in accessing health services at higher levels of care based on their health needs and status of illness but on administrative referral. There are disparities in health services delivery by levels of care as well as lack of connection and continuity of care between different levels in the treatment, care and counseling for the patients.

Health facilities in charge of preventive activities at provincial and district levels are currently dispersed by different focal points (provincial preventive medicine centers, HIV/
AIDS centers, centers for prevention and control of social diseases, reproductive health centers…) causing scattered distribution and allocation of the limited resources, difficulties in the cooperation, coordination and information sharing between preventive and curative systems and between commune, district and provincial health facilities.

The transformation of the organizational structure in the past years has created the instability in the organization, disturbance in manpower and capacity to deliver services throughout the grassroots health network. The organizational structure of health facilities, especially those at grassroots level remains unchanged or un-reviewed in response to the changes in disease patterns, people’s health care needs and aging population trend.

Capacity of facilities in charges of medical equipment testing, quality control of medical tests, drug and food safety testing has not met demands of the health sector in ensuring quality of medicines, equipment, supplies and medical services. There have only been a few institutes in Hanoi and HCMC (Central Institute for Drug Quality Control, HCMC Institute for Drug Quality Control, National Institute for Control of Vaccines and Biologicals) which have capacity to perform in-depth technical tests and investigation. The provincial network of drug, pharmaceutical and cosmetic testing centers are not very effective in the operation due to the lack of staff capacity, equipment and low in number of collected and tested samples.

Task 2: Strengthen inspection, monitoring and supervision activities; consolidate and develop health inspection and specialist inspection networks at all levels

Implementation results

Health inspection activities have undergone changes in terms of legislative regulations and network organization. The Government has issued the Decree No. 122/2014/ND-CP on the organization and operation of the health inspection system, including the organizational and operational responsibilities of the agency in performing health inspection functions; inspectors; people who are authorized with specialist inspection tasks and health inspection collaborators; responsibilities of agencies, organizations and individuals in the health inspectorate. The Prime Minister has issued the Decision No. 2176/QD-TTg approving the scheme to improve health inspection capacity to 2020 as a basis for strengthening the inspection system.

Facing the problems of the health sector, during the past few years, the MOH and local authorities have organized a number of thematic inspections, including inspections of state management on the safety of food, insecticide and chemical products, home appliances, trading and utilization of nutritional products for infants; inspection of water quality in some areas; inspection of non-public medical facilities; inspection on the implementation of law and policies on health insurance, socialization and state management in the field of pharmacy, drug procurement, drug prices and drug use, the practices of user fees collection and spending, financial mechanisms and corruption control, practicing thrift and combating waste. Inspection results have shown the existing limitations and shortcomings, as the basis for the health sector to implement necessary adjustments and modifications in the management and administration of health activities.

The MOH has issued a number of norms and tools to enhance the quality of inspection and supervision in health facilities. In the area of health examination and treatment, the MOH has issued a set of indicators for assessing the quality of hospitals (Decision No. 4858/2014/
Joint Annual Health Review 2015

QD-BYT). The set of indicators is a foundation for hospitals to review for their weaknesses in quality control and identify priorities for improvement. Since the introduction of this newest set of indicators, many hospitals have seen numerous obvious changes such as the implementation of proper code of conduct to colleagues, attentive to the patient; meticulous examination and accurate diagnosis; building patient safety culture, overcoming systematic faults and not individual blaming... For PHC, the Health Ministry has also issued the national benchmarks for commune health in the period 2011 – 2020 (Decision 4667/2015/QD-BYT), as a basis for tracking, monitoring and improving the quality of grassroots health activities.

The MOH has made several efforts to strengthen the monitoring and supervision of health care quality, enhance accountability to the people. Since 2013, the MOH has operated a hotline in the MOH and required facilities as well as localities to maintain and promote the hotline operation to receive people’s feedbacks and comments, to monitor the implementation of the code of conduct of health workers, officials for rewarding and encouraging of decent conducts and strictly handling of violations.

Difficulties shortcomings

Health inspection system and personnel are pervasive. Each province only has a few health inspectors. There is no inspectional function at district level. The current inspection and monitoring activities are mainly passive in nature, which are carried out after the occurrence of the problematic events.

The monitoring of the health sector’s activities has not been considered properly in both central and local levels due to lack of funding and manpower, huge inspection workload and subjects. For example, the monitoring of private medical practitioners is not performed regularly. Most of staff in health professional section of the Provincial Health Department is concurrently in charge of the management of private medical practice, thus leading to difficulties in the process of managing these facilities especially in the areas of supervision and inspection. There are up to 82.5% of Provincial Health Department reporting about their shortage of manpower for issuing practitioner certificates, while there are large number of medical practitioners and establishments that need to be certified and licensed [127].

The responsibility for inspection and supervision of the Party’s and local government committees, social organizations, professional associations for health activities have not been paid with adequate attention in terms of resources and time. For example, the Law on the amendment and supplementation of several articles of the Law on Health Insurance (2014) has many revised contents that require for specific communication, mobilization, advocacy, monitoring and supervision plans. However, many provinces just develop plans and overlook specific monitoring and evaluation of performance results causing the delay in the implementation of compulsory and family health insurance.

Task 3: Promote appropriate social mobilization, developing private health and public-private partnership in health

Implementation results

Socialization of health activities is a key strategy which has been presented in several documents of the Party and National Assembly as well as specified in some of the Government Decrees (Decree No. 69/2008/ND-CP and Decree No. 59/2014/ND-CP, dated 30/5/2008 by the
Government on policies to encourage the socialization of activities in the fields of education, vocational training, healthcare, culture, sports and environment. Implementation of this strategy, in the past few years, has mobilized a number of resources other than from the state budget in the forms of partnership and joint ventures to invest in the construction of infrastructure and procurement of equipment for health facilities, particularly for central and provincial hospitals. Thanks to this policy, technologies for diagnosis and treatment could be developed in medical facilities, especially high technology services, which would have been difficult to do by relying on state budget resources; at the same time this has contributed to increase revenues and provide additional operating funds for health facilities as well as to increase income for health workers.

Socialization of health activities has initially met the increasingly diversified health care needs of different social groups, especially those who afford to pay. People, including the poor, near poor, children and social beneficiaries also benefit thanks to the use of health services, including high-tech and costly services reimbursed by health insurance fund.

Socialization in people’s health care and protection has mobilized sectoral, organizations’ and individuals’ involvement, particularly in PHC. The promotion of patriotic movements on sanitation, population and family planning, nutrition, and maternal and child health care has brought about good results in ensuring healthcare for the people in the community.

Private health continued to be facilitated with favorable conditions in the past years. There are total 183 private hospitals throughout the country, accounting for 11% of all hospitals, including 06 foreign invested hospitals, more than 30 000 private clinics and health service facilities [76]. The private health sector plays an increasingly important role in the health system of Vietnam, contributing to meet the people’s urgent medical needs, enabling people not to travel long distances to seek health care and saving time. The growth of private health sector has started influencing the public health care facilities through competition on service quality. MOH and local authorities have strengthened the management of private medical practice such as communicating and guiding the implementation of the provisions of the law and legislation on medical activities and technical regulations, procedures and processes; accelerating the issuance of certificates and licensing; strengthening inspection and supervision activities as well as organized several interdisciplinary inspections.

Public-private partnership (PPP) investment is encouraged to perform. The Government has promulgated the Decree No. 15/2015/ND-CP on the form of public-private partnership investment (PPP Decree). Recently, the Government issued Resolution No. 93/NQ-CP (2014) on a number of mechanisms and policies for health development to implement investment, joint venture and partnership models to encourage more investment from other economic components for health and to establish public-private partnership health facilities. The transformation of some hospitals with highly socialized conditions to the operational model of public, non-profit enterprises is piloted to reform management mechanism and improve the efficiency of public hospitals.

Difficulties, shortcomings

Management of socialized activities is inadequate. Excessive use of technical services funded by socialized resources still exists due to the absence of proper mechanisms and regular monitoring and supervision activities of authorized agencies.
The private health sector has been facilitated with favorable conditions to develop in recent years. However, *the monitoring and supervision of private health activities have not been fully executed* due to lack of human resources for implementation. Regulations on the reporting and providing information of the activities of private health facilities have not been fully complied with over the past years.

Although the mechanisms and policies on public-private partnership in health care have been issued, the *implementation is still limited* since this is a new field that needs piloting.

**Task 4: Public administration reform**

Administrative reform in general and administrative procedure reform in particular is one of the important contents in the working agenda of the Government. In 2014, the MOH issued Decision No. 436/QD-BYT on the issuance of the administrative reform plan of the MOH for 2014 included 8 areas: organizational reform, administrative procedure reform, organizational structure reform, development and improvement of the quality of government officials, public finance reform, implementation of the project on accelerating reforms of remuneration, and the modernization of the public administration, operational and steering activities. However, the 5-year health plan of 2011 – 2015 has not mentioned this content. Given the comprehensive scope of the administrative reform, the analysis in the JAHR covers only the area of reforms to administrative procedures, which is considered as a breakthrough area in public administration reforms.

**Implementation results**

Currently, the MOH is managing 386 administrative procedures in 15 areas including 91 administrative procedures and procedures for sanctioning of administrative violations related to civil documents and associated databases concerning population management. The MOH also has specific measures to strengthen administrative reforms such as simplifying 211/225 administrative procedures; publicizing all of 362 administrative procedures under the jurisdiction of the MOH [35] and implementing the project “Building approaches to measure people’s satisfaction to public health services” in five hospitals and four provinces/cities.

**Difficulties, shortcomings**

Some facilities are not paying much attention to the control of administrative procedures, leading to the passive deployment or low quality of the activity. Impact assessment of administrative procedures in the draft legal documents has not been taken seriously in to consideration in some facilities. Publicity of administrative procedures is still implemented with delays.

Although there have been several efforts in administrative procedure reform in health care, medical procedures in some facilities are still complicated that need to be improved to meet people’s expectations.

**6.3. Priorities**

**6.3.1. Limited quality, efficiency and effectiveness of health policies and legislation**

Health policy (including strategy, planning, plans and legal documents) was slow to be issued. There is duplication and unsecured consistency in the system of health documents and policies.
Capacity of the agencies in charge of policy development and research units as well as the coordination between these agencies and units is limited. There is a lack of persuasive information and evidence, and health policy impact evaluations to serve as the basis for policy adjustments and refinements.

Effectiveness and efficiency of health policies, especially in the planning and plans, are not high due to unspecified resources for implementation during the development process; there is a lack of specific and detail plans for policy development; awareness of some local governments, especially the local authorities for health activities is still inadequate causing policies to be slowly implemented and come to reality.

6.3.2. Inappropriate organizational structure of the health system to meet the requirements of the new situation

Currently, the MOH at the central level and provincial health departments at local levels (advisors to the Provincial/municipal People’s Committees) are serving two functions, state management related to health and direct management of subordinate facilities. Thus, their workload is enormous making it difficult to promote efficiency in operation. It is therefore necessary to have appropriate adjustment and changes so as to improve the quality and efficiency of management, monitoring and supervision of health activities.

Networks of health facilities are spread by administrative units resulting in the not very high efficiency in the performance of a number of facilities. There is no mechanism to encourage and strengthen the linkages and coordination among facilities of the same level and between upper and lower levels in order to ensure the continuity in health services delivery.

6.3.3. Inadequately effective system and mechanism for inspection, monitoring and supervision of health system activities

The health inspector network is insufficient in number and limited in capacity, thus has not become an effective tool to timely detect and prevent violations of the health policy and regulations.

The supervision role of political organizations, socio-political organizations and professional associations in health policy and legislation tracking, monitoring and reviewing is limited due to unestablished official coordinating mechanisms; the capacity of organizations themselves is also limited that does not meet the requirements.

6.3.4. Insufficient public administrative reform in the health sector

As mentioned in the section of situation analysis, administrative procedure reform is an important content in the annual working agenda of the MOH and health facilities. This is also one of the priorities need to be solved in the coming time.
PART TWO: STRENGTHENING PRIMARY HEALTH CARE AT THE GRASSROOTS TOWARDS UNIVERSAL HEALTH COVERAGE
Introduction

Strengthening the grassroots health network and promoting primary health care (PHC) are considered key priorities in health system development and one of the decisive factors in Vietnam’s health achievements in recent years.

The purpose of this section of the JAHR report is to recommend an orientation and main measures to strengthen the grassroots healthcare network, in order to reform and boost PHC towards universal health care in the long run and in the next five-year health sector plan.

Key contents of this section of the JAHR 2015 include:

- Analysis of achievements and challenges of the grassroots health network in Vietnam;
- Analysis and selection of an optimal service delivery model for grassroots health care;
- Proposed targets and solutions to strengthen the grassroots health network, to reform and improve quality of health service delivery towards universal health coverage.

The concept of grassroots health network used in this report is a network of village, commune, ward, district and township health facilities. This is a system of health organizations and institutions located in the district, with a close linkage between commune and district health facilities, to provide health care to people based on certain PHC principles and values.

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22 Communist Party Central Secretary Directive No. 06-CT/TW dated 22 January 2002.
Chapter III. The grassroots health network and PHC in Vietnam

1. Policy framework to develop PHC in the grassroots health network in Vietnam

General orientation

Strengthening the grassroots health network and promoting PHC have always been prioritized in Vietnam’s health system development.

- In 1975, the Government Council issued Resolution No. 15-CP on improving the organization of local health institutions, including the specification of the strategic role that the grassroots health network plays in providing health care to the people, as it can resolve up to 80% of people’s healthcare needs near home. This orientation continues to be affirmed, and appears in many of the Party’s and Government’s policies, emphasizing the urgent and critical task of strengthening PHC and the grassroots health network and the need for the State to have reasonable and favorable policies for the grassroots health network. This includes also policies to establish mobile medical teams to provide health care for people in disadvantaged, mountainous, remote and isolated areas and strengthening of the military-civilian PHC model (Resolution No. 04-NQ/HNTW of the 4th Conference of the Party Central Committee, VIIth Session, Resolution No. 37/CP in 1996, Prime Ministerial Decision No. 35/2001/QD-TTg approving the Strategy for the Care and Protection of the People’s Health in the period 2001 – 2010). In 2002, the Party Central Committee Secretariat issued Directive No 06-CT/TW on the consolidation and improvement of the grassroots health network emphasizing the responsibility of the Party committees, local governments, authorities and mass organizations at all levels in strengthening and improvement of the grassroots health network. This directive called for consolidating the organization and reforming operational mechanisms, improving the quality and efficiency of the grassroots health network. It had a focus on training grassroots health staff and providing an appropriate remuneration policy, and called for making appropriate investments to strengthen and refine the grassroots health network, and to ensure sufficient funding for recurrent activities of the CHSs.

- Recently, as health care needs grow, disease burden changes, and the service delivery network faces imbalances, the Party, National Assembly and Government have continued to pay more attention to the task of strengthening the grassroots health network as evidenced in the XItth Party Congress Resolution (2011) which emphasized important tasks of: overcoming hospital overcrowding, especially in central and provincial hospitals; completing the organizational model and strengthening the grassroots health network; improving capacity of CHSs; completing construction of district hospitals. The National Assembly has also promulgated a separate Resolution on intensifying implementation of health insurance policies and legislation towards universal health coverage, including completion of CHS investments in disadvantaged areas by 2020 (National Assembly Resolution No. 68/2013/QH13). To operationalize the Party’s policies and orientation towards strengthening the grassroots health network, in 2013
the Government issued the National Strategy on the Protection, Care and Promotion of the People’s Health for the period 2011 – 2020, with a vision to 2030 (Decision No. 122/QD-TTg). This strategy has set out comprehensive tasks and solutions for consolidating and refining the grassroots health network with a target of ensuring 100% of communes have health stations suitable with the socio-economic conditions and health needs in each region; improving quality of PHC service; harmonizing health activities between facilities in the district; effectively implementing the national benchmarks on commune health in the period 2011 – 2020; managing NCDs linked with PHC and care of the elderly in the community; scaling up training and refresher training models to develop grassroots health staff that prioritizes training of ethnic minorities in their origin areas; developing favorable health care policies for people living in mountainous, remote and isolated areas with special emphasis on improving the health of ethnic minority people and accessibility to quality health services; consolidating and reforming operational modalities, improving the effectiveness of People’s health care committees at the grassroots level; enhancing and strengthening PHC awareness and participation of local governments, political organizations and professional associations; integrating programs and targets as well as intensifying IEC activities in the community.

Specific decisions on investments in the grassroots health network

In the implementation of the above-mentioned policies and directives, a series of specific decisions on investments in development of the grassroots health network have been issued in the past few years, particularly:

**Strengthened investment in the grassroots healthcare network and PHC**

- Investment in construction, renovation and upgrading of district and regional general hospitals using government bond funding and other legal funding sources in the period of 2008 – 2010 (Decision No. 47/2008/QD TTg).

- Investment in the construction of CHSs in disadvantaged regions in the period 2008 – 2010 (Decision No. 950/QD TTg).

- Promulgation and implementation of the National commune health standards, 2001 – 2010 (Decision No. 370/QD-BYT) has been replaced in 2014 by the National commune health benchmarks, 2011 – 2020 (Decision No. 4667/QD-BYT) to develop commune-level healthcare in the coming period appropriate with the people’s health care needs in each region and to ensure effective use of health resources.

- Loans from ODA and international development banks (World Bank, ADB) to implement regional health projects including investment for commune and district levels.

**Financial reform policy for the grassroots health network**

- Policies on health care for the poor to ensure health equity according to Prime Ministerial Decision No. 139/2002/QD-TTg, which was subsequently revised and supplemented with a number of articles in Prime Ministerial Decision No. 14/2012/QDTTg.
The Health Insurance Law 2008 stipulates that the registration of first point of contact for insured health care could be at the district or commune level, and expanded the number of people covered by health insurance through state budget subsidies of premiums for the poor, near poor and other vulnerable groups.

**Policies for development and attraction of health personnel to work in the grassroots health network**

- Implementation of human resources development programs with training priorities for rural and disadvantaged areas, including training for health workers from disadvantaged and mountainous areas of the northern mountains and Central highlands areas who commit to returning there to work (Decree No. 134/2006/ND-CP and Decision No. 1544/2007/QD-TTg); Programs allowing people to upgrade from junior college to university training for doctors and pharmacists in a 4 year program to work in the grassroots level (Circular No. 06/2008/TB-YT).

- Implementation of financial incentive policies for grassroots health workers and officials in remote and disadvantaged areas: occupational allowances and remuneration for civil servants and employees working at government health facilities (Decree No. 56/2011/ND-CP); priority and incentive allowances to attract health workers to serve in disadvantaged areas (Decree No. 64/2009/ND-CP); stipends for village health workers (Decision No. 75/2009/QD-TTg); allowances for overnight duty, performing surgery or procedures, participating in epidemic control for civil servants and government employees working in public health facilities (Decision No. 73/2011/QD-TTg).

**Organizational reform of the grassroots health network**

- Since 2004 there have been many changes in the organization of district health facilities following Decree No. 172/2004/ND-CP, Decree No. 14/2008/ND-CP and guiding circulars. However, so far no single organizational model is considered optimal and applied throughout the country. In this context, the Government issued Decree No. 117/2014/ND-CP on commune health stipulating that CHSs are directly managed by district health centers and CHS personnel are civil servants, which has helped the CHS to be officially managed and directed to operate completely within the hierarchy of the health sector.

**2. Grassroots network organization and health service delivery**

**2.1. Achievement and progress**

**Organization of the grassroots health network**

The grassroots health network covers the whole country with 460 out of 693 districts having separate district hospitals for curative care and health centers for preventive medicine service delivery and management of CHSs. Some 233 district health centers in 19 provinces perform both preventive and curative care functions. Some 668 out of 693 districts (96.4%) in 62 provinces have a population and family planning center; 24 out of 693 districts (3.5%) in just
Chapter III. The grassroots health network and PHC in Vietnam

4 provinces have set up food hygiene and safety centers.\(^{23}\) Nationally, 99% of communes have a CHS building; 78% of CHSSs are served by doctors (including some with a doctor present at least 3 days per week); 98% of CHSSs have midwives or obstetric/pediatric assistant doctors; 78% of villages and urban neighborhoods served by village health workers, in rural and mountainous areas this reaches 95% [35].

The family doctor or general practice clinic model is being piloted in some localities. In 2014, there were 97 family doctor clinics in 8 provinces. However, this model has not been evaluated for its effectiveness or for feasibility of scaling up.

**Investment to develop physical facility for the grassroots health network**

*Physical infrastructure in many district hospitals, health centers and regional polyclinics has been upgraded.* By 2014, 598 district hospitals/health centers and regional polyclinics have undergone renovation, expansion, upgrading or new construction of buildings and procurement of equipment using capital from various sources, primarily from government bonds, ODA projects or regional health support projects from development banks (ADB, World Bank). Some 84 regional polyclinics and 487 district hospitals have been completed and put into operation (including 382 totally completed hospitals and 205 partially completed hospitals), contributing to increasing the number of beds and curative care capacity of district hospitals.

*Some CHSSs have been upgraded or newly constructed* using capital from local budgets, grants (World Bank, ADB, EC, Atlantic Philanthropies ...) and the National Target Program on Building a New Countryside. So far, 80% of communes have achieved the national commune health standards in the period 2001 – 2010. Localities continue to invest to achieve national commune health benchmarks under the NTP for 2011 – 2020, with 55% of communes having met standards by 2014 [35].

**Human resource of the grassroots health network**

The number of government health workers in Vietnam has increased remarkably from 259,583 in 2005 to 424,237 in 2013 [60]. Health statistics yearbook data between 2000 and 2010, showed a 44% growth in the grassroots workforce (district and commune level facilities). Between 2010 and 2013, workforce continued to grow 16%, 21% at the district level and 9% at the commune level. Along with the increase in the number, the quality of grassroots level health workers has also improved, with an increase in the proportion with university or higher qualifications. The proportion of staff with university or higher education in districts and communes throughout the country has increased from 17% to 19% between 2000 and 2010, and reached 21.3% in 2013 [60]. The growth in district health workers has been strongest in the past 5 years, which is closely linked to the strategic deployment of sending doctors to work in disadvantaged communes, upgrading and construction of district general hospitals and reorganization of the district health system.

Since 2013, Vietnam has piloted the project to “send newly graduated doctors to work in disadvantaged regions” (Decision 585/QD-BYT), to meet the estimated need to fill posts for 419 doctors to work in 62 poor districts.\(^{24}\) The project has developed 7 training courses

\(^{23}\) Data from Department of Organization and Manpower- MOH

\(^{24}\) Data on the need for doctors in 62 poor districts from the Department of Organization and Manpower-MOH dated 12 December 2012.
and recruited and trained young volunteer doctors. By 2014, 81 students in medical training establishments have so far registered for voluntary participation in the program. There is no official report on the actual number of doctors who voluntarily went to work in the poor districts under this project.

**Grassroots health network financing**

Capital for investments in the grassroots health network in recent years included state budget funding for constructing and upgrading infrastructure and medical equipment of district hospitals and health centers and regional polyclinics (Decision 47, Decision No. 225/2005/QD-TTg ... see Part One, Section 2 and 3B for more details). In addition, financial support from ODA projects and NGOs for the investment and development of the grassroots health network (such as the Health Care Support to the Poor of the Northern Uplands and Central Highlands (HEMA) project, the Northern Uplands Health Support Project, the North Central Coast Health Support Project, the JICA funded project supporting medical services in the Northwest provinces; and the Project supporting disabled people) have all contributed to upgrading capacity of the grassroots health network and increased access to medical services of the people in disadvantaged regions.

In the period since 2004, out of a total of 41 ODA projects managed by the MOH, 14 programs and projects (of which 3 are completed) have activities involving investments and major support for the grassroots level totaling 329 million USD (about 6580 billion VND). Among these are 5 grant projects from the EC, the Global Fund and GAVI and 9 ODA projects funded by the World Bank and ADB. These projects focus on supporting provinces with economic difficulties or weak investment in grassroots healthcare.

The Government has made several efforts at implementing universal health insurance, including subsidies to pay health insurance premiums for various groups, which has contributed to increasing health insurance coverage to 71% in 2014, and an estimated 75.3% by the end of 2015 [17], with the poor and near poor accounting for 26% of the insured [35].

The health insurance premium subsidy rate for near poor households was raised from 50% to 70% and full subsidies for health insurance coverage are now in place for the near poor who newly escaped from poverty in the past 5 years, the near poor living in poor districts (Decision No. 797/2012/QD-TTg and Decision No. 705/2013/QD-TTg).

**Grassroots health network service delivery**

*Preventive health service*

PHC services have been expanded at district and commune health facilities. Preventive medicines and NTPs have been implemented and achieved some important results, specifically:

- *The program on the control and prevention of epidemics and communicable diseases* has been maintained; dangerous infectious diseases are effectively controlled with no major epidemic outbreak (for details please refer to the section of “Prevention of epidemics and infectious diseases in Chapter II, Section 4A of this report). All TB prevention and control targets have been achieved; HIV/AIDS morbidity and mortality rates in 2014 have decreased compared to previous years and most planned targets have been achieved. Harm reduction interventions continue to be scaled up. The incidence and mortality rates
of most communicable diseases such as hand, foot and mouth disease, rabies, and malaria have fallen over the period of 2010 to 2014. The incidence and mortality from dengue fever have been reduced by 50%. The incidence of measles increased in this period, but has been effectively controlled thanks to the largest ever measles-rubella vaccination campaign, which was organized nationwide from September 2009 to February 2015 for 23 million children from 1 to 14 years of age [128].

- **Activities for the prevention and management of NCDs** at the grassroots health network, such as cardiovascular disease, diabetes, cancer and mental illness have achieved promising results (See JAHR 2014 and Part I of this report for an overview of NCD prevention and control). The implementation of the Tobacco Control Law has begun to be implemented in some local grassroots health facilities.

- **Family planning and reproductive health care**: As of 2014, targets were achieved for antenatal and newborn screening and the number of new users of contraceptives such as intra-uterine device, implants, contraceptive pills and condoms. However, some targets have not yet been achieved including increasing the modern contraceptive prevalence rate, reducing unmet need for family planning for some groups and the quantity and mix of contraceptives to maintain replacement fertility.

Many reproductive health tasks have been implemented at the grassroots level including standardization of the essential maternal and neonatal care protocols, improving capacity of health workers to implement emergency obstetrics interventions, implementing C-section, blood transfusions and neonatal resuscitation in mountainous district hospitals, training village birth attendants for disadvantaged regions and training health workers to meet skilled birth attendant standards. Indicators on maternal and child health have continued to improve and targets have been met including: management of 96.4% of pregnant women; antenatal care for 89.6% of pregnant women (3 or more antenatal visits in 3 trimesters); 2 or more doses of tetanus vaccine for 95.7% of pregnant women, trained health worker assisting at delivery for 97.5% of women giving birth; postpartum/postnatal checkups for 89.9% of mothers and children; and reducing underweight malnutrition of children under age 5 to less than 15%.

- **Environmental sanitation and health promotion** have been integrated into the NTPs such as the Program on rural clean water and environmental sanitation in the period 2012 – 2015 including the Rural sanitation sub-project and the National Program and plan on work safety and hygiene for the period 2011 – 2015.

**Curative health services**

_People can access and use a greater range of curative health services in grassroots health network_ thanks to the implementation of measures to upgrade and improve physical facilities, equipment and financing. A number of medical services and drugs that used to be delivered at higher level facilities are now gradually becoming available at district and commune levels. As a result, there is a sharp increase in the use of curative services in district hospitals, regional polyclinics and CHSs. Data from Living Standards Surveys over the years showed that the proportion of people using outpatient services at district hospitals rose from 11.9% in 2004 to
17.6% in 2010; the percentage of inpatient visits at district general hospitals increased from 35.4% in 2004 to 38.2% in 2010. However, the proportion of outpatient visits at CHSs fell from 26% in 2008 to 23.8% in 2012 [108].

As of 2014, health insurance reimburses medical care services in 80% of CHSs and the share of the insured registered at a CHS for first point of care accounted for 41% and at district hospitals for 45% of the insured [129].

Traditional medicine activities continue to grow. In 2014, district and commune health facilities established traditional medicine teams. The proportion of outpatient treatment using traditional medicine at the commune level is now 26.8% [35].

2.2. Challenges, limitations and causes

The grassroots health network has contributed to achievements in the fields of infectious diseases prevention and control, population-family planning and reproductive health care. However, there still exist many limitations and challenges in the provision of PHC services, particularly the prevention and control of some common diseases within the community. These limitations and causes are analyzed by building block of the health system in the section that follows.

2.2.1. Management and governance

The organization of the grassroots health network has been varying over time and across localities: The organizational structure and management mechanism of the grassroots health network have changed 3 times within 10 years, creating instability and lack of uniformity in the system nationwide. This has affected the efficiency of the health workforce and decreased the ability to deliver integrated, comprehensive and continuous health services. Specifically:

- The separation between curative service delivery and preventive facilities hinders the ability of the grassroots health network to coordinate activities to provide integrated, comprehensive and continuous health services, impeding the ability to respond to the rapid changes in disease patterns from infectious to NCDs and the growing health issues related to population aging.

- The splitting of district level health facilities into separate units to serve different functions has resulted in fragmentation and reduction in the effective use of resources. Specifically, it has worsened the never-ending shortage of qualified health human resources in district and commune levels, especially in rural and disadvantaged areas. The limited capital investment in medical infrastructure and equipment of the grassroots health network has been diluted due to the need to invest in constructing and equipping the newly split facilities.

The organization of health service delivery is fragmented, leading to inability to provide integrated, comprehensive and continuous care: Linkages are missing between preventive and curative care, between levels of care and between public and private health facilities leading to low levels of cooperation. Moreover, there are few mechanisms for integrating activities of different NTPs, particularly programs for the prevention and control of NCDs. The implementation of NCD prevention activities is done through vertical programs and managed by differing focal levels.
points across localities [130], leading to lack of coordination between preventive and curative health facilities and between levels of care in detecting, treating and managing patients. Major NCDs have similar risk factors and require common interventions, yet little coordination and integration occurs between programs.

2.2.2. Health Workforce

There is a shortage of health workforce and inadequate training to meet current needs, especially training on prevention and control of NCDs. District hospitals and health centers lack specialists. Only about 69% of VHWs have the required amount of training; the number of village birth attendants only meets about one-fifth of actual need in disadvantaged areas [131].

There is disproportionate distribution of health workers between urban and rural areas. The rural population accounts for 72.6% of the total population, however only 41% of doctors and 18% of pharmacists serve rural facilities, while the urban population accounts for 27.4% of the total population, yet 59% of doctors and 82% of pharmacists work in urban areas.

2.2.3. Health financing

Allocation of financial resources between upper levels of care and the grassroots health network is incommensurate with need. While 72% of insured health care was provided by district and commune levels (in terms of number of visits), only 32% of health insurance reimbursements were at this level, compared to 28% in central facilities and 68% in provincial level facilities. The state budget is insufficient to meet state budget spending norms; only 82% of payroll expenditures in district hospitals are covered by state budget and nearly 30% of CHS receive recurrent expenditure budget allocations below the minimum budget norm. Meanwhile, recurrent cost norms for CHSs according to Circular No. 119/2002/TTLT BTC-BYT guiding revenue, spending and recurrent expenditure of CHS are no longer appropriate and do not ensure adequate funding for routine CHS. State budget continues to be allocated according to inputs, rather than according to population health care needs.

Investments for CHS are inadequate to meet demand. Currently, up to 3.7% of communes have no CHS building or merely a temporary structure, 25.2% of CHSs have fallen into disrepair,25 thus many CHSs are in need of new construction or upgrading, yet during the last 10 years there has been almost no uniform investment in infrastructure or equipment for CHSs. So far no stable funding resource has been identified to implement Prime Ministerial Decision No. 950/2007/QD-TTg on strengthening investment for the construction of CHSs in disadvantaged areas in the period 2008 – 2010. The Project for development of district health centers 2007 – 2010 approved under Prime Ministerial Decision No. 1402/QD-TTg (2007) has not received state budget funds for implementation. CHS investments, mainly funded by local authorities or external assistance projects, lacks funds for regular maintenance or upgrading.

Unfocused investment. While the grassroots health network continues to lack basic medical equipment, medicines and conditions for disease prevention, health promotion, active home-and community-based care, investments continue to be made in expensive high tech equipment such as ultrasound, ECG, and automatic lab test equipment, despite inadequate conditions for their effective use.

25 Statistical reports of 63 provinces/cities on CHS infrastructure. MOH. 2012.
There are gaps and fragmentation in financing for PHC and other health services: NTPs are managed separately and vertically, with earmarked budgets, thus limiting active participation of grassroots health facilities in ensuring integration of professional activities appropriate to meet actual health care needs in their locality. In addition, some health services are not reimbursed, or inadequately reimbursed. Some of the outreach services are not guaranteed such as counselling on treatment, home care, disease surveillance, environmental sanitation and food safety, or even funds for means of transport or gasoline for health staff.

Payment methods do not incentivize productivity or efficiency (both from the state budget and health insurance): The current payment mechanisms applied at the grassroots health facilities are inappropriate, including limitations of capitation payment design and implementation as well as the prices reimbursed by insurance for the same service that varies by level of facility. Allocation of funds for routine activities of the grassroots health network facilities is not based on health care needs and the actual service delivery capacity, but continues to be allocated based on the number of beds (hospitals) or number of health workers (preventive facilities).

Monitoring and cost-effectiveness assessment are not yet implemented when investing in new equipment or technologies in grassroots health facilities, which has been determined to be the key facility for providing PHC services. Currently, growing investment in expensive medical equipment, such as CT scanners, 4D color ultrasound machines in district hospitals and ultrasound machines, ECG and automated lab testing machines in CHSs is occurring in several localities through various programs and projects. However, so far there has been no assessment of their cost-effectiveness in regard to conditions or capacity to effectively use this medical equipment in the grassroots health network where the priority is on providing PHC, disease prevention and health promotion.

2.2.4. Pharmacy and medical equipment

Many CHSs lack sufficient medicines listed in the insurance drug formulary or essential medicines list. In 2011, CHSs had only 30% of medicines required for providing reproductive health care services [132]. Shortcomings in medicine supplies for CHSs in some mountainous provinces include insufficient drugs compared to essential drug lists, especially drugs and chemicals used in epidemic prevention and control. Up to 44.9% of CHSs have chronic shortages of essential drugs. On average, facilities lack 5 of the essential drugs.

Many CHS lack medical devices required to meet health care needs. Up to 45.8% of CHSs lack medical equipment, or have equipment that is obsolete or not working according to the Medical Services Administration [133]. A study on the capacity of CHS in 4 mountainous provinces also showed that, on average 31.2% of CHSs lacked sufficient essential medical equipment, mainly due to untimely maintenance, repairs and reinvestment. Only 25.9% of CHSs had sufficient equipment in good condition according to official CHS equipment lists. Shortages of office equipment were also a problem in 41.1% of CHSs, negatively affecting the general operation of the facility.

One of the main reasons leading to medical equipment shortage is the slowness in updating guidelines and regulations. The lists of CHS medical equipment were stipulated in Decision No. 1020/2004/QD-BYT, but have not yet been updated, hindering the ability of CHSs to provide services considered appropriate for that level of facility according to MOH Circular No. 43/2013/QD-BYT on classification of services by level of facility.
2.2.5. Health service delivery

Capacity to deliver health services (preventive, curative, health management and community-based health care) is weak and largely uneven across regions. The quality of services, particularly at lower levels of care, is poor and unmanaged. CHSs currently can perform only 52.2% of the technical services according to the national classification of technical services by level of facility. Underlying reasons for this situation include the shortage of health personnel or inadequate training of health workers to deliver these services (52.7%), or lack of equipment or outdated and broken equipment (45.8%) [133].

Limited and ineffective curative care service delivery by the grassroots health network leads to hospital overcrowding at higher levels. The bed occupancy rate of many district hospitals is below 60% [134]. From 54 – 65% of patients coming to central hospitals have diseases and health conditions that are diagnosable and treatable at the lower levels. In pediatrics, obstetrics and gynecology, this proportion is more than 80%. Performance of CHSs is poor, even in localities provided with expensive equipment such as ultrasound and ECG machines.

Quality of health service at the grassroots level, especially at CHSs is limited. Apart from the inadequate facilities, equipment and medicines, the limited expertise of health workers at CHSs is considered a critical factor for CHS service quality. The proportion of doctors with inadequate knowledge to provide reproductive health care services, to detect obstetric complications and provide initial care before referral, to manage hypertension or diarrhea remains very high, especially at CHSs in mountainous areas [135]. The problem of irrational prescription and use of drugs at CHSs is also a matter of concern. Another study conducted in 2012 on the use of health insurance medicines at CHSs, found that the percentage of incorrect dosage forms of antibiotics prescribed for children was 21%, this rate is especially high in the Central Highlands at 37.7% [136].

2.2.6. Health information system (HIS)

The HIS of grassroots health facilities provides inadequate support for the effective management, planning and delivery of health services. Currently, information technology has not been applied in the grassroots health network for data collection, storage, analysis, reporting and management of information in a uniform manner. Moreover, the current HIS at the grassroots level is insufficient to support the management, monitoring and treatment of risk groups or patients who need to be monitored and managed for continuous and comprehensive care at all levels of facilities, in the community and in the home.

2.3. Challenges of the grassroots health network

Besides the above-mentioned shortcomings and limitations, health service providers in general and the grassroots health network in particular are facing several challenges, including:

- An aging population and increasing burden of NCDs requires a more comprehensive and continuous integration of care. At the same time, the appearance and unpredictable evolution of some emerging diseases have resulted in the increase in health care needs and costs.
- An increasing number of risk factors due to industrialization, urbanization, unhealthy lifestyles (smoking, harmful use of alcohol, physical inactivity, inappropriate diet), and
environmental pollution are considered the main causes of several diseases in Vietnam. Within the region, Vietnam is among the nations with high smoking prevalence and high consumption of alcohol. Vietnam is also dealt with health issues related to climate change and is considered to be one of the 10 countries most heavily affected by the rise in sea level.

- **Rapid increase in health care costs but limited resources for health**: Health expenditure per capita increased rapidly with an average rate of 10.5% per year in the period 2007 – 2012 (adjusted to real prices using the GDP price deflator for health services). In 2013, the average expenditure per person in Vietnam was estimated at 111 USD which was more than double the number in 2007 (52 USD). Vietnam has become a low middle income country, Vietnam was ranked 132 out of 183 countries in terms of per capita income, estimated in 2013 at 1901 USD when using the average annual exchange rate [137]. Regarding total social expenditure on health, although Vietnam spends up to 6% of its GDP for health care, health spending per capita of Vietnam is only ranked 127 out of 191 countries [14]. State budget spending on health care has fallen in recent years. The proportion of state budget spent on health care reached 8% which was lower than the set target of 10% in 2015.

3. **Priorities**

Based on the analysis of the above-mentioned problems and limitations, in order to strengthen the grassroots health network and improve PHC performance by delivering integrated, continuous and efficient health services to move towards universal health coverage, the following issues should be considered as priorities requiring solutions during the next 5 – 10 years:

3.1. **Grassroots health network capacity for preventive medicine, health management and medical services delivery is limited in terms of quantity and quality**

The grassroots health network has not been able to gain people’s trust in service quality provided. The underlying reason is that necessary conditions for providing services are insufficient, including human resources, health financing, drugs, medical devices, physical infrastructure that would allow grassroots facilities to provide quality PHC services.

- Limitations in expertise and organizational competence in mobilizing community participation in health care due to lack of training for grassroots healthcare staff and lack of a mechanism to upgrade knowledge and professional skills based on PHC needs at the grassroots level.
Chapter III. The grassroots health network and PHC in Vietnam

- Lack of systematic investments in the grassroots health network; inadequate funding for investment in the grassroots health network, lack of monitoring and evaluation of the effectiveness of investments.

- Lack of instruments and measures to guarantee quality and efficiency in health service delivery at district and commune levels (defining the scope of services to be delivered at commune and district levels, technical regulations, clinical guidelines, service quality control …)

- The mechanism for allocating funds and paying providers provide inadequate incentives to encourage them to increase delivery of PHC, disease prevention and health promotion services. In particular, there is no assured stable source of funding for recurrent CHS activities.

3.2. Grassroots health network performance is poor

Grassroots health services do not guarantee the integrated and continuous care, especially for chronic and NCDs. These services do not respond adequately to health care needs of different population groups. The main reasons are due to:

- The operational structure, functions and duties of district and commune health facilities are unstable and inappropriate.

- There is a lack of linkages, coordination and support between different levels of care to guarantee the system’s consistency; the coordination and integration between curative and preventive health systems in delivering PHC services are not well implemented in response to new challenges of changing disease patterns, aging population and people’s health care needs.

- There is no appropriate mechanism to promote highly cost-effective family and community-based health care. Referral mechanisms in health care are inflexible and ineffective.

3.3. Grassroots health network management and governance are limited due to

- The lack of a coherent orientation for grassroots healthcare reform in the new situation and absence of a specific plan for reforming PHC-based health service delivery in provincial health system master plans and socio-economic development plans.

- The PHC Steering Committee has not fully performed its role and responsibilities for planning and monitoring the implementation of PHC and health promotion activities at the local level. Multi-sectoral collaboration for grassroots health care is weak and ineffective.
• Health planning and policy formulation are limited in a context where monitoring and evaluation activities of the network are inadequate due to a lack of effective and relevant tools to evaluate facility and individual performance. Direction, guidance and supervision provided by specialist facilities at higher levels to the grassroots health network have also been limited.

• The health information system is weak and lacks linkages between levels of care.
Chapter IV: Determination of the grassroots health service delivery framework

1. The need for primary-based health service delivery reform to achieve universal health coverage

The ultimate goal sought by the health system is universal health coverage, which means to ensure that all citizens, have access to needed promotive, preventive, curative, rehabilitative and palliative health services, of sufficient quality to be effective, while also ensuring that people do not suffer financial hardship when paying for these services. To achieve this goal, the health system should be based on PHC values, with strengthening of grassroots health care capacity a deciding factor.

PHC is currently understood to encompass a broader scope than 30 years ago. According to the WHO, PHC should be understood to be oriented towards: (i) transforming and adjusting the existing health systems to address health concerns for all citizens in order to achieve universal health coverage and ensure health security; (ii) comprehensively responding to people’s expectations and demands, expanding the scope of concerns to risk factors and diseases; (iii) focusing on improving appropriate technologies and drugs and quality of services; (iv) not separating, but rather, combining primary health and curative care in hospitals with a comprehensive coordination role at all levels of care for implementing continuity of care; (v) PHC is not cheap and requires adequate investment due to its higher efficiency compared to other investment options [138].

PHC is currently viewed as a set of values and principles for guiding the development of health systems [138]. These values and principles include: universal access to care and coverage on the basis of need; commitment to health equity as part of social-justice oriented development; community participation in defining and implementing health agendas; intersectoral approaches to health [139].

In reviewing 30 years of the Alma Ata Declaration in 2008, the WHO recommended countries reform PHC with four major contents that encompass the core values of PHC, consisting of:

i. Universal health coverage reform to improve equity in health care: including reforms to guarantee the health system achieves social and health equity, first of all a transformation of the health system towards universal access, including ensuring availability of health services, elimination of barriers to health services access, and implementation of health security;

ii. Health service delivery reform to orient the health system towards the people, with a people-centered focus: reorganizing the health service delivery system to become PHC-based, oriented towards people’s expectations and healthcare needs; making health services more appropriate with a societal characteristic, with the outcome being improved health for all;

iii. Public health policy reform to protect and improve health of the community; to ensure a healthier community through the integration of public health and primary health activities and an orientation towards multi-sectoral public policies beneficial to health;
iv. Health leadership reform: to replace excessive use of administrative commands or laissez-faire approaches with comprehensive leadership, community and stakeholder participatory approaches to make health authorities more accountable.

Health system development based on PHC is being implemented in several countries [140 – 143], and has become the general trend to improve efficiency, accessibility and quality health services at affordable prices towards universal health coverage.

Health service delivery reform based on PHC values will contribute to preventing and overcoming challenges and shortcomings of service provision, which are lowering equity and efficiency of the health system. These challenges and shortcomings include: inverse care, where people who can afford to pay use more health services than those who cannot pay; impoverishing care due to lack of financial protection and high out of pocket payments, often leading to catastrophic expenditures; discontinuous and fragmented care; excessive specialization of service providers together with health programs with narrow approaches have driven the trends of individual and disease-focused care without paying attention to risk factors; misdirected care where resources are focusing on expensive curative health services and neglecting prevention and health promotion (factors with potential to prevent up to 70% of the disease burden), while lacking the ability to minimize negative impacts on health due to other multi-sectoral factors [138].

Following the United Nation’s recommendations, to effectively and sustainably implement universal health coverage, it is necessary to establish a health system that is “rational, accountable and responsive, that provides comprehensive primary health-care services, with extensive geographical coverage, including in remote and rural areas, and with a special emphasis on access to populations most in need, and has an adequate skilled, well-trained and motivated workforce, as well as capacities for broad public health measures, health protection and addressing determinants of health through policies across sectors, including promoting the health literacy of the population” [144]. In other words, it is necessary to build a PHC-based health system or to develop a health system based on PHC values as recommended by WHO [145].

2. Determination of the grassroots health service delivery framework

The phase “Grassroots health service delivery framework” is used in this chapter to indicate a broad description and to emphasize the characteristics of health care services of the grassroots health network, based on applying the principles and values of PHC. The core values of PHC that a health system should consider include different aspects such as equity in health, which is an important factor of social justice; coverage; people-centered; approach oriented towards community protection; participation of all stakeholders; scientific evidence-based; associated with individual responsibility; self-determination and self-empowerment [145]. Thus, it is possible to broadly define the grassroots health service delivery framework as a “PHC-based service delivery model.”
3. Basic features of the PHC-based service delivery model

In reviewing research papers and results from recent workshops, especially the National Workshop on Strengthening the Grassroots Health Network organized by the MOH in Hue in May 2015, we propose a PHC-based service delivery model with basic features which are closely related and interact with each other as follows:

- People-centered service delivery.
- Ensuring equity in access to health services.
- Comprehensive service delivery, strengthening prevention and control of NCDs.
- Continuous and integrated care.
- Service quality assurance.
- Community participation and intersectoral coordination.
- Managed, professionally guided and effectively supervised performance.

Below is a more detailed analysis on the implications of these features.

3.1. People-centered service delivery

People-centered service delivery is a health care approach aimed at individuals, families, and communities, which considers them both participants in health care activities and clients to be served by the health system [146]. The nature of people-centered health care is to fulfill the needs and expectations of individuals, families and communities in a humane and comprehensive manner targeted towards achieving a healthier population rather than care and treatment of sickness. People-centered service delivery requires the population to have the necessary knowledge and support to be able to make decisions and participate in caring for their own health. The identification of health care needs and health problems in a given locality is essential so the grassroots health care network can have a plan for timely and flexible response. Health care needs to be associated with social welfare improvement, poverty alleviation and safe community development.

3.2. Ensuring equity in access to health services

To ensure equity in access to health services, it is necessary to ensure the availability, accessibility and affordability of health services as well as financial protection mechanisms for vulnerable population groups. The availability of health services should be viewed not only in terms of the health facility, but also in the activeness of bringing health services closer to the people, with a focus on community-based health care services.

3.3. Comprehensive service delivery, strengthening NCD prevention and control

A good health service delivery model should be comprehensive, including the provision of prevention, treatment, rehabilitation, palliative care and health promotion services; with a focus on the interactions between biological, behavioral and social-psychological factors, based on needs of individuals. The grassroots health network should be able to better respond to the increasing trend of NCDs and the unpredictable evolution of emerging diseases.
3.4. Continuous and integrated care

Integrated care refers to the provision of health services in a way that ensures that all people receive continuous health care services, including health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care at different levels of facilities and different levels of care (individual, family and community), according to need and for the entire life cycle [146]. Continuity also refers to the uninterrupted relationship of care and treatment between a patient with one or more physicians, to the sharing, and providing of information concerning health care for the patients and their families, to assist them in decision-making about health care service options and management of health problems, to better meet the changing healthcare needs of the people and patients.

3.5. Quality service guaranteed

Quality of PHC services means the assurance of inputs, including trained health workforce, ensured infrastructure, sufficiency of medical equipment and medicines and an appropriate financial mechanism to meet the people’s health care needs.

3.6. Community participation and intersectoral coordination

The PHC-based service delivery model requires active participation of individuals, families, communities and governments at all levels, as well as mass organizations, in identifying health problems, community health priorities and health risk factors and developing intervention programs/strategies to reduce risk factors and implement of health promotion activities.

3.7. A health service delivery network that is managed, professionally guided and supervised effectively

The PHC-based service delivery model requires a stable health policy and legislative framework, a well-organized health system which is based on technical guidance and supervision to ensure effective and efficient operation and management, and rapid and flexible response to the challenges concerning people’s health.

4. Organizational structure of grassroots health model

With the above-mentioned features of a PHC-based service delivery model, health services should be comprehensively and continuously delivered based on people’s health needs throughout their life; these services not only include primary care services but also services performed at higher level facilities with linkages to primary level care; health care needs to be performed at various levels of care, including individual, family and community.

The organizational structure of the grassroots health model needs to guarantee the following principles:

The organization of the grassroots health network should be a system, organized by communities of people to strengthen accessibility and respond most effectively to the health care needs of the people, ensuring coherent linkages between the health facilities within the territory of a district (including linkages between CHS, district hospitals/health centers and private facilities) and with higher level facilities; based on the principle of supporting the development
of relationships and linkages between treatment and prevention in the organizational model of the district health services (i.e. the model of a district health center providing both curative and preventive medicine functions) and ensuring that service delivery involves continuous cooperation between primary care and higher level care, and with other related sectors.

**Functions and responsibilities of district and commune health facilities.** Integrated and people-centered health service delivery should guarantee the principle of improving accessibility towards universal health coverage, encouraging primary and community-based health care; with tight linkage with higher level and specialist care. Thus, the functions of district and commune health facilities are to coordinate and interact with health facilities at upper levels to provide comprehensive, continuous health care services, including health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care at various levels of care including individuals, families and communities. Functions and responsibilities of CHSs should be developed basing on typical features of the three types of areas defined in regulations about national benchmarks for commune health 2010 – 2020 to respond to people’s expectation and regional health service models.

**Scope of service delivery at each level of care.** It is necessary to determine the scope of the health service package provided at each level of care including family and community levels. The package should include curative and preventive services, which are developed based on disease patterns, people’s health needs and cost-effective analysis. To ensure the rational use of health services, it is necessary to develop and ensure compliance with standard treatment guidelines to serve the diagnosis, treatment and management of common diseases. The determination of a health service package will also be considered as a foundation for payment of medical services. Attention should be paid to active care in the community. Therefore, it is necessary to organize the health system to provide services to individual patients/families not only in the venues of medical facilities but also in the family/community basing on people’s health care needs and expectations.

**Grassroots health personnel.** One of the important principles for implementing a PHC-based service delivery model is to ensure a cadre of well-trained health workforce with adequate knowledge and skills of teamwork and community-based approaches to work at the primary level of care. Training programs should be designed in a way to require trainees to be able to work as a member of multidisciplinary team and focus on family-based medical training approaches. This health team should clearly identify their mandates, specific job descriptions and requirements to be achieved in terms of each team member’s competence through group work approach, community-based health care and technical support. It is necessary to revise the training curriculum basing on requirements of competency, response to health care needs and disease patterns; implementing continuous training programs for health staff working in the field of PHC following new training programs.

**Grassroots health financing.** To ensure PHC-based comprehensive and integrated health service delivery, it is necessary to guarantee sufficient financial resources for grassroots health facilities to operate, with a relevant payment mechanism. Capitation method is recommended to encourage the rational provision of primary health services with a focus on preventive and health promotion services. Financial resources for the operation of the grassroots health network should be ensured by the government and allocated based on performance as an incentive measure.
Drugs, medical equipment and facilities of the grassroots health network. Drugs for the operation of the district and commune health facilities should also be sufficiently supplied based on disease patterns of the community and standard treatment guidelines. Medical equipment must also be provided based on the scope of health services district and commune level facilities are assigned to provide, in order to ensure that health workers have sufficient conditions to work. District and commune health facilities should be upgraded to guarantee good performance of tasks and functions, and to increase the people’s trust in service providers.

5. Preconditions for the implementation of a PHC-based service delivery model

Challenges

A PHC-based service delivery model is a crucial orientation to improve quality, effectiveness and accessibility to health care services at affordable prices to achieve universal health coverage. However, in order to transform health service delivery practices in the direction of integrated, people-centered and PHC-based care, we need to overcome several challenges, namely:

- **Systems-related challenges:** include the current systems of health policy and governance which are mainly based on a disease pattern approach; organizational structure of the healthcare network which is causing fragmentation, lack of connection between levels and impediments to intersectoral cooperation.

- **People-related challenges:** Health staff currently tend to operate in specialties and try their best to make differences in their own field without paying much attention to multidisciplinary and teamwork approaches, through which the patient and the community should be seen as equal partners in the caring process. Another challenge viewed from a people-centered perspective, which also needs to be mentioned, is the lack of consensus on the necessity of the PHC-based service delivery model as a fundamental orientation for health system development to achieve universal health coverage.

- **Organization-related challenges:** Stakeholders do not coordinate closely in performing the joint task of improving social welfare and people’s health.

Operational Preconditions

*Firstly,* improving awareness and capacity of managerial leadership to change their perspective and approach to healthcare service delivery towards a PHC-based, people-centered approach. It is necessary to clearly determine the role and responsibility of different sectors to participate in resolving risk factors harmful to the people’s health and to improve mechanisms that ensure participation of the community in healthcare activities. It is necessary to actively provide individuals and community with relevant knowledge and information so that they can care for and protect their own health, while at the same time linkages and supporting conditions need to be put in place so they can participate in healthcare activities and planning.

*Secondly,* consolidate managerial functions and accountability, including consolidating the policy system to ensure consistency at both national and local levels towards the goal of delivering integrated and people-centered health services to meet people’s health care needs.
Perform regular checking and monitoring of policy implementation as well as operation of the health service delivery system.

Thirdly, it is necessary to revise the health service delivery model to ensure that comprehensive health services are provided with a better balance of primary and hospital-based care; health services are appropriately and efficiently provided as well as reimbursed in a way that encourages the delivery of preventive, primary, health promotion and community-based care. It is important to shift from inpatient-focused curative care to outpatient care and apply the principles of providing integrated services with an effective referral system.

Fourthly, it is necessary to focus on the principle of collaboration in the provision of health services based on people’s needs at all levels of care to ensure continuity of care and to encourage activities aimed at coordinating and integrating the work among physicians (physicians in the same medical facility, physicians in public and private facilities or physicians at different level facilities) and to create an effective network between the health and other sectors.

Fifthly, it is important to create a favorable environment for the transformation of the service delivery model oriented towards an integrated and people-centered model. This kind of environment includes changes in policy frameworks, financial mechanisms and reorientation of the health human resources development. In addition, there should be strong political commitment, participation of all stakeholders and managerial leadership at all levels. Without this kind of environment, the four preconditions mentioned above cannot be realized.
PART THREE: PRIORITY ISSUES AND RECOMMENDATIONS
Chapter V: Priority issues and recommendations for the Five-year plan 2016 – 2020

1. Health status and determinants

1.1. Summary of priority health issues

Health priorities are selected based on criteria including disease burden, scope of impact, feasibility of intervention and equity. For the next five years, the health sector priorities are:

- The disease and mortality burden caused by NCDs is increasingly rapidly, particularly hypertension and cardiovascular disease, cancer, diabetes, COPD and asthma. Awareness and behavior of the population towards prevention and management of NCDs remains limited, the health system’s capacity does not yet effectively meet this growing need.

- Infectious diseases remain a challenge for the health system, particularly HIV/AIDS, tuberculosis, malaria, dengue fever, hand, foot and mouth disease, rabies, vaccine preventable diseases and emerging diseases. Control of these diseases is complicated by inadequate surveillance systems, anti-microbial resistance, climate change, globalization and the unpredictable nature of emerging diseases.

- The growing impact of health risk factors outside the scope of health sector authority and ability to respond, such as population aging, climate change and associated issues of urbanization, industrialization and globalization, including the increasing environmental pollution, changes towards lifestyles and behavior harmful to health and social vices. Solutions require more effort for inter-sectoral coordination in the implementation of preventive strategies and health promotion even for healthy people.

- Geographic and socio-economic disparities in health status, disease burden and accessibility to health services have not narrowed. It is necessary to target disadvantaged and remote regions and vulnerable people with more effective and appropriate solutions. Of highest priority should be disparities in maternal and child health, particularly maternal mortality, infant mortality, especially neonatal and perinatal mortality, child malnutrition and stunting.

1.2. Orientation for solutions

- Implement a strategy for comprehensive access including control of risk factors, early detection and treatment, continuous and long-term management in the community in order to predict future need for services for NCDs. Interventions need to be developed that are appropriate with the specific context of each locality on the basis of promoting an environment that facilitates adoption of a healthy lifestyle and health promotion, prioritizes investments in prevention, strengthens primary health care, prevention and control of NCDs. Target groups for these programs need to start from children because prevention in this group will yield high returns through reducing future disease burden.

- Reforming organizational structures and models of primary health service delivery at grassroots level in the direction of comprehensive, continuous and consolidated connection between curative and preventive health as well as between grassroots and
upper levels of health system. Continue to increase sustainable and uniformed investment for grassroots health facilities, particularly those in the hardship areas in terms of both infrastructure and manpower.

- Strengthening disease surveillance and prevention systems, ensuring the availability of both medical equipment and manpower to actively response and control disease. Continue to effectively implement EPI activities, and gradually adding additional vaccines into the program.

- Strengthening intersectoral coordination in responding to climate change, industrial production planning, evaluating and monitoring the impacts of environmental pollution caused by industrialization, urbanization activities, communicating and monitoring the implementation of behavior change, lifestyle, prevention and control of risk factors for NCDs and epidemics.

- Develop regulations and strengthen surveillance by the central level, develop a framework for action and responsibility for each locality. Strengthen capacity of the health system for controlling effects of climate change (developing forecasting capabilities, promoting participation of the community, ensuring preparedness for prevention, coping and recovery after disasters).

- Continue to implement the MDGs and start to implement the Sustainable development goals (SDGs) with a focus on mothers, children and the elderly. Specific attention should be paid on studying the mechanisms and considering the proper roadmap for integrating national health targeted programs into routine PHC activities at the district, commune and village levels.

2. Health human resources

2.1. Summary of priority issues

2.1.1. Health human resources planning

The health human resources plan does not ensure balance between requirements of the health system and outputs of health worker training establishments.

Information on health human resources is inadequate for planning, policy formulation and evaluation inhibiting the ability to effectively formulate plans and policies.

2.1.2. Quality of health human resources does not yet satisfy the health care needs of the population

Quality and contents of training

- Competency-based training and quality assurance of training facilities and curricula has not yet been effectively implemented.

- Instructors in medical junior colleges have low levels of qualifications.
A large number of students in medical universities may have inadequate ability to follow the curriculum (particularly those recruited directly from disadvantaged areas).

Management capacity of health sector managers and capacity of health statistics staff remain weak because of inadequate professional training.

There is a need for more training in various fields including counsellors, communication experts, health statistics and pharmaceutical quality control.

**Distribution of health human resources**

- Geographic distribution of health workers is imbalanced due to difficulties in recruiting and retaining high quality medical staff to work in disadvantaged areas, particularly at district and commune level facilities.

- Imbalances in quantity and quality of human resources continue to exist between treatment and prevention and across specialties.

- Salary and salary supplements are too low and not commensurate with the amount of time spent in training, the work effort required, working environment, and working conditions, particularly for preventive medicine workers and health workers at the district and lower levels.

- Opportunities for continuing medical education to improve qualifications are insufficient, particularly in rural and mountainous areas.

**2.2. Recommendations**

**2.2.1. Solutions related to health human resources planning**

- In the Plan for the protection, care and improvement of the people’s health for the period 2016 – 2020, it is necessary to propose specific human resources goals and tasks that are appropriate with the plan for development of health human resources to the year 2020 and vision to the year 2030 and ensure that the system for routine data gathering is functioning in order to effectively monitor and evaluate implementation of the tasks laid out in the plan.

- Develop standards for skills and competencies needed for different types of health workers, operationalize these in the Project on work positions for each health sector unit and apply these standards towards improving quality of training curriculum, including continuing medical education. Ensure the standards meet ASEAN and other international requirements.

- Revise the Law on Examination and Treatment, stipulating that medical practice certificates should be time limited instead of issuing them once for life. One of the main conditions for renewing a medical practice certificate should be participation in continuing medical education. At the same time, there should be a roadmap for organizing medical board examinations as a condition for obtaining a medical practice certificate for those providing curative care services to ensure that they meet basic competency standards regardless of where they received their training or the form of that training.
2.2.2. Solutions related to quality of health human resources

Training quality

- The MOH should continue to work with the Ministry of Education and Training and other related agencies to refine the policies with an orientation towards transparent and equitable implementation of regulations on standards, criteria, operational conditions for student recruitment and training of health human resources at training establishments.

- Continue to improve quality of training at health human resources training facilities: the health sector must concentrate on training general practitioners, applying the family medicine approach, continue to implement the Project to train health workers from disadvantaged areas who commit to returning home to serve their community and training to upgrade current health workers to higher level qualifications. Implement education quality accreditation for health sciences training curricula, particularly with criteria for competency-based training and practical training in hospitals.

- Strengthen monitoring of training at health human resources training establishments, focusing on upgrade training, joint training programs, and training of staff from disadvantaged areas who commit to returning home to serve their community, student recruitment, and ensuring quality of training. Organize accreditation, monitoring and evaluation of continuing medical education in all health sector units and facilities.

- In the near future, it is necessary to research and propose a roadmap for organizing national medical board examinations as a requirement for issuing medical practice certificates that are feasible in the current situation and that are up-to-date with standards of other countries in the world.

- Strengthen the organization and capacity of statisticians and planning officers at different levels through in-service and short-term training courses as well as long-term education on health information, health statistics, use of health indicators.

Distribution (Deployment) of health human resources

Ensure stringency and good compliance with regulations on recruitment, deployment, enforcement of policies that provide preferential treatment as well as in the organization of continuing medical education (including both professional medical and managerial training). All health sector facilities must have a continuing medical education plan and career development plan for their personnel. There must be a policy and support mechanism to encourage and at the same time make mandatory the continuing medical education of health workers at the district and lower levels, strengthen forms of training and provide on-going support at the workplace for commune health workers.

Policies providing incentives for recruitment should not be only internal to the health sector, but in provinces with human resources shortages there is a need to actively develop policies and priority remuneration mechanisms for medical doctors, university-trained pharmacists and other university-level medical personnel and/or post-graduate trained staff according to the specific requirements of the locality.
Implement effectively human resources policies that have been issued and refine policies on deployment and remuneration. There is a need for an appropriate salary and salary supplement policy, for example, performance-related pay, or pay that compensates for poor working conditions (in disadvantaged regions, or for jobs with few opportunities for additional income from private sector activities…)

3. Health financing

3.1. Summary of priority issues

3.1.1. Inadequate coordination, coherence and consistency of health financing policies leading to ineffectiveness

- Lack of strategic health financing objectives to orient health financing policy formulation.
- Lack of access to public finance data.
- Some health financing plans and policies have not adjusted in line with changes in health system priorities and transformations such as priority on grassroots health system, reduction in ODA, phasing out of NTPs and growing private sector investments.
- Important health system priorities have not received adequate funding, such as statistics and reporting and continuing medical education.

3.1.2. Limitations in efficiency of financial resource utilization

- Inefficiencies in the health system due to inappropriate incentives inherent in provider payments and inadequate regulation of hospital autonomization policy.
- Inefficiencies due to not relying on evidence in policy formulation and implementation, particularly the social health insurance benefit package and use of evidence-based clinical practice guidelines.
- Health insurance administration lacks necessary conditions to implement strategic purchasing, lack of standards for determining medical appropriateness, and inadequate application of information technology for health insurance management and fraud detection.

3.1.3. Inadequate financial protection for citizens

- The share of total health spending paid by households out-of-pocket has not declined.
- The share of the population covered by health insurance is not increasing adequately fast.
- Health insurance coverage depth is inadequate as the scope of the insurance package is not based on an assessment of healthcare needs of the population.
- Financial protection from health insurance is inadequate, partly due to inefficiencies in care provision, but also due to low awareness of entitlements, or difficulties in accessing necessary services for some population groups.
3.2. Recommendations

3.2.1. Solutions for health financing strategy

- Develop an overall strategy of health financing with defined objectives and criteria for the health financing system in Vietnam containing coordinated and effective solutions to achieve the objectives.

- Develop appropriate plans for using and monitoring and evaluating use of funds mobilized from the tobacco control fund and other potential new revenue sources such as revenues from environmental fees and alcohol taxes. Advocate for further increases in the excise tax rate for tobacco.

- Strengthen appropriate health financing policies and investments to improve and reduce disparities in quality of services at the commune and district levels.

3.2.2. Solutions to improve efficiency in utilization of health financing resources

Effectively use public financial resources, especially the health insurance fund, through specific measures such as:

- Review the evidence underlying the selection of priority drugs, medical supplies and technical medical services that will be included on the list to be reimbursed by health insurance; use evidence-based methods such as health technology assessment for new technologies and assessment of health care needs.

- Make transparent to the population what their health insurance benefits package contains, put in place measures to minimize balance billing for insured patients.

- Strengthen monitoring of health insurance disbursement to medical facilities and claims for health examination and treatment costs through the health insurance information system.

- Adjust the payment method appropriately for a transition phase of changing to new payment methods, starting by developing better information gathering systems on the actual costs of services based on routine cost-accounting systems from a sample of different types of facilities, which can be used for more appropriate pricing of the existing fee schedule. Develop service standards, especially for high cost diagnostic services and prescriptions.

- Improve the effectiveness of the inspection, supervision and penalty mechanism

Because the health insurance fund only pays for curative care services (according to the Health Insurance Law), primary care services are paid from three sources: (i) state budget (allocation of recurrent spending budget to CHS and preventive health centers, and budget allocations to NTPs; (ii) health insurance; and (iii) out-of-pocket spending. To ensure primary care services are given priority for public financing (health insurance and state budget), it is first necessary to determine what to include in the primary care package, and from which funding source it should be paid. In the long-run, primary care services for individuals should be incorporated into a package paid from health insurance (using appropriate payment mechanisms).
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- Find effective solutions to deal with adverse effects of hospital autonomy policy, including increasing transparency of public hospital financial performance. Develop a set of monitoring and evaluation indicators on the overall performance of public hospital operations, including efficiency, to go along with strengthening the hospital information management systems.

- Develop and issue national standard treatment guidelines for common conditions.

3.2.3. Solutions for improving health financial protection

- Effectively increase health insurance coverage breadth, including increasing the subsidy for the near poor from state budget resources. Increase the political mandate throughout the system to actively seek enrollment.

- Roll out health insurance to households following the roadmap. Enhance the information database systems, including promoting the use of unique personal identification number preferably linked to the database of national personal identification numbers.

4. Pharmaceuticals, vaccines, biologicals and blood products

4.1. Summary of priority issues

4.1.1. Impediments to availability, affordability and access to essential medicines

- Local production of pharmaceuticals has not yet exploited its full potential to supply good quality, low-price, essential drugs to meet the health needs of the Vietnamese people.

- Wide gaps in availability and access to essential medicines across the different levels of health care, especially in hard to reach areas.

- Prices of some drugs remain high, impeding people’s access to drugs. The mechanism for monitoring drug prices does not yet meet requirements for state management. Some drug price control mechanisms have not yet been fully exploited.

4.1.2. Unsafe and irrational use of drugs

- Irrational and inefficient use of drugs persists in all levels of care.

- Clinical pharmacy activities in treatment facilities are insufficient and weak, and are receiving inadequate attention.

- Weak controls and coordination mechanisms in medicines selection and monitoring of use.

- The risk of antimicrobial resistance is increasing as a result of overprescribing and inappropriate use of antimicrobials in both the human and animal sectors. The presence of antibiotic residues in the food chain and in soil and water is alarming.

- Health facilities lack the capacity and mechanisms for reporting and managing ADRs and medication errors. Safe use of medicines remains a huge concern in all health facilities.
4.1.3. Uneven quality assurance in traditional medicine and biologicals/blood services

- Resources for implementing quality assurance testing for domestic drugs remains limited in the context in which there is an increasing number of pharmaceutical products, using new production technologies and new active ingredients.

- Regulations and quality management systems for traditional and herbal medicines remain weak; there are overlapping functions and tasks in the management process leading to ineffective coordination. Control over the source materials and quality of medicinal ingredients used in production of traditional medicines is not effectively implemented.

- Regulations for the quality and safety of blood and blood products needs to be strengthened. A hemovigilance system is not yet in place.

4.2. Recommendations

4.2.1. Solutions to reduce impediments to availability, access and utilization of pharmaceuticals

- Guide enterprises with an appropriate orientation to develop a road map for local pharmaceutical production that prioritizes public health needs including those for NCDs.

- Initiate cooperation (with bilateral donors) to accelerate technology transfer for the development and production of essential medicines of public health importance.

- Strengthen quality management system in the Drug Administration of Vietnam and provide public information on the quality enforcement/actions that are undertaken.

- Undertake regular assessment/survey of the quality of a basket of essential medicines and regularly publish results.

- Continue to organize effectively the campaign for “Vietnamese people prioritize use of Vietnamese pharmaceuticals”.

- Implement the centralized procurement system with competitive tendering for medicines procurement to ensure availability of essential medicines in the public supply system and private sector, and minimize variation of drug prices across facilities and provinces.

- Develop a supply mechanism for essential medicines in hard to reach areas.

- Strengthen the drug price surveillance system through regular surveys on drug prices in the private sector and monitoring of drug procurement prices in the public sector. Continue to assess the reasonableness of declared drug prices and winning tender prices through comparison with international and domestic reference prices (based on drug price surveys). Disseminate results of regular domestic drug price surveys, including the lowest and highest prices.

- Review the drug price control mechanism in the process of revising the Pharmaceutical Law, particularly the determination of which agency will be responsible and be assigned authority to monitor and manage drug prices. Stipulate in the Law or guiding documents that it is mandatory for private sector to report its retail prices and for the public sector to report the procurement prices.
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- Enforce the national generic policy.

4.2.2. Solutions to promote safe and rational use of drugs

- Unify the selection of essential medicines using the National Therapeutic and Drug Committee (NTDC) as a central mechanism for evidence-selection of essential medicines.

- Institutionalize the consumption and expenditure monitoring for medicines covered by health insurance in VSS

- Establish HTA for essential medicines

- Develop a training program and materials for clinical pharmacy to meet requirements for development.

- Project to develop the national system of pharmaceutical information and surveillance of ADRs; Invest in upgrading the national pharmaceutical information and ADR surveillance center in Hanoi and the regional center in HCMC.

- Develop materials guiding good practice in prescribing medications.

- Promote clinical pharmacy activities in treatment facilities.

- Revise and amend regulations on good pharmacy practice and strengthen implementation.

- Revise and amend, or develop new circulars and guiding regulations on pharmacovigilance, pharmaceutical information and advertisements.

4.2.3. Solutions for quality assurance in modern drugs, traditional medicines, biologicals and blood transfusion services

- Strengthen capacity of the pharmaceutical inspection system.

- Institutional development roadmap as a part of the pre-accession process to PIC/S

- Pre-accession and accession process to PIC/s

- Develop a list of generic drugs and a roadmap to make bio-availability and bio-equivalence standards mandatory (Revise Circular 08/2010/TT-BYT dated 26/4/2010).

- Develop three new laboratories to test and evaluate bio-equivalence in the North Central and Central coastal areas and Southeast regions.

- Develop 5 regional pharmaceutical quality assurance centers in 5 regions: northern mountains, delta and coastal areas of the North, the North Central and Central coastal areas, the Central Highlands, and the Southeast on the basis of upgrading five provincial drug quality assurance centers in the regions.

- Invest, upgrade and modernize 2 centers for testing bio-availability and bio-equivalence in the Central Drug quality assurance institute and the HCMC drug quality assurance institute.

- Invest, upgrade and complete the national vaccine and medical biological quality accreditation institute with human resources, equipment, infrastructure, to ensure modern, uniform facilities that meet international standards.
• Reorganize the blood transfusion service system.
• Recommendations to strengthen safety and quality of traditional medicines

5. Medical infrastructure and equipment

5.1. Summary of priority issues

5.1.1. Inadequate planning and regulation of medical infrastructure and equipment investments

- Fragmentation in master plans and out-of-date master plans for health system infrastructure and medical equipment.
- Private sector investments are inadequately considered in existing master plans and private sector investments generally do not follow master plans.

5.1.2. Inadequate quality assurance, calibration and standards for utilization of medical equipment at health sector facilities

- Currently the quality control mechanism (calibration, external assessment) for medical equipment is not routinely implemented in all medical facilities.
- No standards system is in place (protocols, treatment guidelines) that is based on evidence about cases when medical equipment/technologies should or should not be used. There is also a lack of mechanism to identify under which conditions a piece of medical equipment should be invested in, and when it shouldn’t (HTA).
- Quality of domestically produced medical equipment is often inadequate to meet local demand and facilitate exports by meeting regional and international standards.

5.2. Recommendations

5.2.1. Develop and finance evidence-based investment plans for medical infrastructure and equipment

- Create a geographic database of disease patterns, capacity to meet those healthcare needs with appropriate services and the situation of related medical equipment to facilitate planning of medical infrastructure and equipment.
- Develop a master plan for infrastructure and equipment that matches with current and forecast needs, particularly for obstetrics/pediatrics care, NCD diagnosis and management, rehabilitation.
- Consider cost of infrastructure and equipment investments and maintenance as well as potential capacity utilization given disease patterns to ensure that the master plan is not simply a plan for building a facility in each locality.
- Arrange appropriate financing mechanisms to effectively implement evidence-based infrastructure and equipment plans, taking into consideration private investments and
the need to reduce geographic disparities in capacity, particularly at district hospitals and CHSs, and for the poorest districts and maritime areas.

5.2.2. Strengthen measures to ensure quality and safety of medical equipment

- Establish investment priorities for improving the capacity of network of medical equipment verification and calibration centers.

- Develop and issue the mandatory provisions on calibration and external quality assurance of medical equipment of the 5 groups of equipment directly affecting patient lives which have not been managed but must be included in the list of mandatory external assessment (equipment of operation theatre, diagnostic imaging, patient monitoring and intervention).

- Develop technical standards of medical infrastructure and equipment for maritime and mountainous areas.

5.2.3. Reform types of investments and organization of domestic medical equipment manufacturing

6. Preventive medicine and public health

6.1. Summary of priority issues

6.1.1. NCDs are the highest and most rapidly growing cause of burden of disease and mortality, yet control measures are not yet effective and investment is inadequate

- Control of risk factors, and preventive medicine are not yet effective. Risk behaviors such as smoking, alcohol abuse, remain widespread in the community. The proportion of people whose disease has been detected and treatment managed remains low.

- Activities lack integration, and a life cycle approach. Health services at the grassroots health facilities have not met the requirements of continuity and long-term management and care for people with NCDs.

- Funding for the operation is inadequate and cut over the years.

6.1.2. Inadequate effectiveness in control of some epidemic and communicable diseases

- Many communicable diseases have vaccines for prevention, but the risk of recurrence remains.

- Some diseases happen with high incidence such as hand, foot and mouth disease and dengue fever. Mortality caused by rabies is still at a high level.

- HIV/AIDS and hepatitis remain serious public health problems.

- Control of tuberculosis and malaria is unstable, especially the problems of drug resistance.

- Dangerous and emerging diseases are constantly occurring in the world and are at risk of entering Vietnam.
6.1.3. The health risk factors related to environment and people's lifestyle are not well controlled

- The coverage rate of sanitary latrines is still disparity between regions. There is a significant proportion of households with no toilet.

- Food poisoning happens unpredictably, particularly for the incidence and mortality from poisoning cases of fewer than 30 people.

- School health is still very limited and has not been considered for adequate investment despite the number of children, pupils and students account for nearly 1/3 of the population; and needs for education of lifestyle, care and improve the health of this population is very large.

- Complex and unpredictable climate change and natural disasters; industrial development requiring measures to deal with industrial sanitation.

6.2. Recommendations

Overall objectives

- To control the increase towards reducing morbidity, disability and premature mortality rates due to NCDs, prioritizing prevention of cancer, cardiovascular diseases, diabetes, COPD and asthma.

- Reduce morbidity and mortality rates caused by infectious diseases, rapidly control epidemics and outbreaks; quickly halt communicable diseases entering Vietnam to avoid their spread into the community.

- Gradually control risk factors to health related to the environment, food safety, people’s lifestyle and behavior, and consequences of natural disasters, catastrophes and climate change.

6.2.1. System strengthening solutions

- Consolidate, complete and develop the preventive health network towards reducing focal points at provincial and district levels. Develop the provincial preventive medicine centers to meet national standards. Deploy the model of two function district health centers.

- Strengthen and complete the model of proper CHS consistent with the national benchmarks of commune health which is specific to regions to ensure the provision of services on health communication, education and promotion, on preventive health, PHC and management of some NCDs in the community.

6.2.2. Technical solutions

- Strengthen capacity for preventive health and grassroots health facilities to control risk factors, prevention of NCDs; technical measures to increase early detection rates and ensure the continuing and long-term care, treatment and management for patients in the community.
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- Maintain and strengthen infectious disease surveillance systems and core capacities of IHR 2005 to prevent, warn, detect early and respond rapidly to public health events that may put Vietnam’s population health at risk.

- Perform effective technical guidance (such as instructions, guidelines, SOPs...) to control the epidemics such as dengue; hand, foot and mouth disease, transmission of diseases from animals (such as rabies), HIV/AIDS.

- Develop technical solutions to control the drug-resistant TB, drug resistant malaria; specific policies to prevent TB and malaria for the mountainous, ethnic minority areas…

- Implement the national action plan on viral hepatitis prevention and control. Advocate for resource mobilization and political support. Continue to strengthen hepatitis B vaccination to achieve regional target of hepatitis B prevalence at age 5 being less than 1%, ensure blood safety and injection safety, and promote harm reduction among people who inject drugs. Expand quality-assured testing for early diagnosis of viral hepatitis, and expand access to WHO-recommended effective treatment regimens, especially to those for chronic hepatitis B and C infection.

- Maintain and strengthen functions of the national regulatory authority for vaccines. Develop policies and technical measures to ensure that all children are immunized fully following regulations and according to the immunization schedule. Have effective measures to increase access to immunization services in remote, isolated and disadvantaged areas such as mobile immunization teams or immunization at people’s homes.

- Effectively implement school health activities toward building school environment to promote health and develop behaviors that are good for health, control diseases and increasing risk school conditions (such as school mental and behavioral disorders).

6.2.3. Communication solutions

- Strengthen communication and advocacy activities. Promote communication for behavior change with focus on hand washing with soap, prevention and control of diseases, immunization, communication to raise people’s awareness and practices in outlying, remote, ethnic minority areas.... Improve the effectiveness of risk communication, efficient coordination mechanisms between the health sector and the mass media agencies in information, communication activities.

6.2.4. Finance solutions

- Setting priorities in funding for programs to combat NCDs. State budgets should be used for monitoring, prevention and early detection of diseases. Develop relevant policies and mechanisms to ensure the provision of preventive services, early detection and continuity, long-term management and treatment of NCDs at grassroots health facilities, particularly at commune level.

- Prioritize investment of resources for preventive health activities, prevention of disease; immunization, prevention of HIV/AIDS, dengue fever, tuberculosis and malaria; food safety; school health.
Vietnam will no longer receive GAVI support five years from now. The budget for implementing the expanded program on immunizations should be managed by the state to maintain the program.

6.2.5. Recommendations for longer term measures

- Study and propose regulations to ensure that children are fully immunized prior to starting school.
- Research and propose to relevant authorities the establishment of a Community health promotion fund through compulsory contributions from producers and sellers of tobacco, alcohol and other products that are harmful to health to directly support NCD prevention and control activities and control risk factors to health in general.
- Consider and propose the development of a Law on Preventive medicine on the basis of integrating comprehensively all fields and contents of preventive medicine (prevention and control of communicable and non-communicable disease, IEC and BCC for health promotion, and occupational health).

7. Medical examination and treatment, traditional medicine and rehabilitation services

7.1. Summary of priority issues

7.1.1. Organization of medical services hinders ability to meet healthcare needs of the population effectively and efficiently

- Medical services (including traditional medicine and rehabilitation) are not appropriately organized to ensure effective provision of services to meet the needs of the people.
- The social security system and health care for the elderly have paid inadequate attention and made insufficient investments to respond to the rapidly growing needs resulting from population aging.

7.1.2. Uneven ability to provide basic medical services across geographic areas

- Professional competencies and service delivery capacity at the provincial and district levels, particularly in the northern mountains and other disadvantaged regions does not ensure quality and effectiveness.

7.1.3. Inadequate medical service quality management

- The system of medical service quality management is being developed, but many institutions and mechanisms have not yet been developed or implemented including:
  - Independent assessment of quality.
  - The mechanism to issue medical practitioner certificates does not ensure quality.
  - There is a lack of basis for evaluating clinical quality because of the lack of clinical guidelines and standards for many diseases.
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- Lack of mechanism (competition, transparent information on quality and patient satisfaction) needed to encourage medical facilities to improve the quality of their services.
- Inadequate monitoring and evaluation of safety and effectiveness of traditional medicine services.

7.1.4. Hospitals remain overcrowded at higher levels and underutilized at lower levels

- Hospital overcrowding has not yet been fully resolved at higher level hospitals because quality of medical services is not yet assured at lower level facilities and because of healthcare seeking habits and behavior of the population.

7.2. Recommendations

7.2.1. Reform medical services network organization

- Organize the medical services delivery network with the following requirements: appropriate with disease patterns, based on forecast need, minimize disparities in medical service provision capability, technical capacity and service quality across regions, strengthen capacity for primary care provision at the grassroots level. Develop a medical services master plan for the period 2016 – 2025 with a vision to 2030, including traditional medicine and rehabilitation services.
- Research and establish optimal referral networks, simplifying procedures relating to health insurance, and strengthening linkages at all levels and ensure continuity of care.

7.2.2. Improve medical service delivery capacity and increase access to services for specific target groups and for specific services in disadvantaged regions

- Invest more resources and supervision, promote more technology transfer in all provinces, implement rotation of medical professionals from higher to lower level facilities.
- Develop commune level medical examination and treatment competency standards.

Respond to the healthcare needs of the elderly

- Study and develop a long-term strategy to strengthen social protection, expand and diversify healthcare services for the elderly.
- Continue to implement and scale up effective models of healthcare counselling for the elderly in the community while studying and testing nursing home models that rely on social mobilization strategies.
- Strengthen training of health professionals and social workers while providing training and guidance for family members involved in healthcare for the elderly in the family and community.

7.2.3. Strengthen quality management

- Strengthen the national, provincial and facility-level medical services quality management systems; Develop a project to set up an independent organization for accreditation
of medical service quality; Supplement methods and instruments for measuring and evaluating medical service quality.

- Develop both financial and non-financial mechanisms to encourage quality improvement, set up a national quality prize for medical care facilities.

- Revise the Law on Examination and Treatment, particularly the contents related to management of medical practitioners, oriented towards evaluation of the actual competencies of medical practitioners, issuing and re-issuing medical practice certificates linked to continuing medical education.

- Complete the system for assessing the people’s level of satisfaction regarding medical service quality.

- Finalize policies to apply three appropriate provider payment mechanisms, put in place a mechanism aimed at reducing use of medical services by intensifying application of preventive medicine services and health promotion activities.

- Develop national clinical treatment guidelines. Stipulate detailed criteria for requesting expensive medical technologies or use of high tech equipment. For medical conditions where national guidelines are not yet in place, request that medical facilities create their own internal guidelines in writing to serve quality checking and health insurance reimbursements.

- Develop clinical guidelines and strengthen management and supervision to guarantee quality, safety and effectiveness of traditional medicine where it has advantages over western medicine.

- Develop rehabilitation techniques related to treatment, resolve difficulties in the payment mechanism to facilitate appropriate development of rehabilitation services, improve quality of life for patients and the disabled. Expand rehabilitation programs in the community to increase effectiveness.

**7.2.4. Consolidate measures to reduce hospital overcrowding**

- Actively implement the project for reducing hospital overcrowding, develop additional projects to contribute to reducing hospital overcrowding.

- Expand coverage of the Satellite hospital project to all provinces.

- Develop a mechanism for evaluating impact of policies related to reducing hospital overcrowding (i.e. policies related to management, finance, health insurance)

**8. Population, family planning, reproductive health and maternal and child health services**

**8.1. Summary of priority issues**

**8.1.1. Maternal and neonatal mortality remain high**

Maternal and early neonatal mortality remain at relatively high levels, particularly in disadvantaged regions and among ethnic minority people. The pace of reducing maternal
mortality ratio and neonatal mortality has slowed. The underlying causes are the lack of emergency obstetrics care, ineffective referral system and lack of early essential neonatal care.

8.1.2. Child malnutrition, particularly stunting, remains high

The stunting rate among children remains high due to poor nutrition among pregnant women and early childhood, particularly due to the low exclusive breastfeeding rate. In addition, the situation in some regions and among some populations, where utilization of clean water is low and sanitation is not yet ensured, diarrhea also contributes to poor childhood nutrition.

8.1.3. Unmet need for population, family planning services, reproductive health services, particularly in disadvantaged areas

Access, provision and use of population-family planning and reproductive health services of high quality in some regions and among some demographic groups remain limited:

- Access to and use of antenatal and delivery care of assured quality in some localities (ethnic minority areas and disadvantaged regions) remains limited.

- Unmet need for reproductive health services, contraceptives and family planning services remains high among some vulnerable groups including adolescents and unmarried young adults, migrants, people living with HIV, the disabled, people adversely affected by natural disasters, sex workers and homosexuals.

- The need for early detection and treatment for reproductive organ cancers remains high while capacity of the health system is limited.

- The need to prevent congenital anomalies and to screen for them during and after pregnancy through cost-effective preventive measures or early screening is not being met.

8.1.4. Imbalance in sex ratio at birth

The imbalance in sex ratio at birth continues to increase because of social pressure and culture, leading people to prefer sons to care for parents in old age and due to the lack of effective controls on technologies that allow people to sex-select the fetus.

8.2. Recommendations

8.2.1. General measures

Strengthen attention and leadership from each level, each sector and each locality for population-family planning, reproductive health and maternal and child health care. Invest appropriate levels of funds for these activities and study mechanisms for greater integration with primary care activities at the grassroots level.

8.2.2. Promote measures to reduce maternal and neonatal mortality

- Implement communication and advocacy activities aimed at strengthening the concern of all levels of the Communist Party and government authorities to provide leadership, direction and state management in implementation of maternal and child health goals, including malnutrition prevention and control.
Continue to complete policies in the area of population-family planning, reproductive health and maternal and child health, particularly policies for attracting physicians specialized in obstetrics and pediatrics to work in disadvantaged regions, and policies for village birth attendants.

Encourage innovation through cultural approaches appropriate with the customs and practices of different ethnic minority groups, assist ethnic minority women to access and use medical services that are readily available and friendly in order to reduce maternal and neonatal mortality.

Strengthen the auditing of maternal and neonatal deaths to identify causes and draw lessons to develop improved interventions.

Continue to focus on implementing interventions that have proven effective in healthcare and reducing mortality of mothers and newborns: train health workers to meet standards for skilled birth attendants; widely implement nationwide the essential early neonatal care following WHO recommendations; apply widely the methods for care of preterm an underweight newborns including kangaroo mother care; support establishment of neonatal intensive care units for sick newborns at district hospitals; implement widely integrated management of child illness (IMCI); improve quality of antenatal care package and basic emergency obstetric care at the commune level and comprehensive emergency obstetrics care at district hospitals.

Strengthen checking and supervision of the implementation of transfer procedures for emergency obstetric and neonatal cases; Strengthen procedures to prevent, detect early and deal with emergency obstetric and neonatal cases and improve collaboration between obstetrics, pediatrics and other specialists and intensive care units.

8.2.3. Implement measures to reduce stunting in children

Develop long-term and medium-term plans to implement nutrition policy focused on reducing stunting. Continue to complete policies in the area of improving nutrition of mothers and children.

Communicate and advocate for strengthening the concern of leadership in guiding and directing implementation of prevention and control of malnutrition.

Continue to focus on implementing interventions with proven effectiveness for improving nutrition of mothers and children.

Strengthen mobilization of the community to participate in improving nutrition of mothers prior to and during pregnancy and supplementing nutrition for children of all ages.

8.2.4. Strengthen access to population and reproductive health services

Quality antenatal and delivery care

Strengthen IEC to improve understanding and raise demand of the people for quality reproductive health services.
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- Advocate for development and implementation of remuneration and employment policies for village birth attendants.
- Continue to emphasize implementation of effective interventions.
- Support establishment of community-based referral groups in disadvantaged regions; consolidate the emergency referral system for mothers and newborns.
- Reconsider the division of functions and tasks of different types of professionals in the fields of obstetrics and pediatrics.
- Implement Government policies to support ethnic minority women to deliver at health settings.

**Strengthen screening for congenital anomalies and disorders**

- Continue to implement basic cost-effective interventions such as supplementation of folic acid before and during pregnancy, vitamin K injections at birth, IEC to prevent use of alcohol during pregnancy, limit use of pharmaceuticals during pregnancy, implement widespread rubella vaccination.
- Finalize the selection of procedures, standards and screening technologies for antenatal and newborn screening and diagnosis. Provide training about antenatal and neonatal screening and diagnosis of congenital disorders and anomalies for health workers, while providing training on IEC and promotion of screening in the community to population and family planning staff.
- Strengthen screening centers for antenatal and neonatal screening and diagnosis in all regions and screening units in provincial hospitals. Gradually transfer technology about antenatal and neonatal screening and diagnosis to the provincial level facilities.
- Subsidize access to and use of antenatal and neonatal screening services for pregnant women and newborns. Organize monitoring, early detection of disease and disabilities among children. Develop a policy to subsidize and organize treatment and guidance for rehabilitation services for children with disabilities.
- Implement IEC on multiple modes of communication, but with a focus on direct communication and on groups at high risk of giving birth to a child with congenital disorders or disabilities.
- Expand pre-marital counselling and health checks. Continue to implement interventions to reduce child marriage and consanguineous marriage.
- Develop, test and implement intervention models in the community aimed at reducing social factors affecting causes of reductions in healthy life expectancy.

**Ensure the delivery of family planning and reproductive health services to priority groups and localities**

- Interventions to reduce unmet need for reproductive health services, contraceptives and family planning services need to be implemented among some vulnerable groups.
including adolescents and unmarried young adults, migrants, people living with HIV, the disabled, people adversely affected by natural disasters, sex workers and homosexuals.

- Strengthen the linkage between reproductive health services with HIV/AIDS
- Integrate, reorganize and improve the system of providing contraceptives and reproductive health services. Organize the delivery of family planning and reproductive health services appropriate with the fertility levels of each region.
- Expand and improve quality of the family planning service delivery network in terms of equipment, physical facilities and professional skills. Develop technical guidelines and supervise compliance. Refine technical standards and strengthen quality management of contraceptives and other reproductive health commodities.
- Rapidly shift from a model of free delivery of contraceptives towards a partial fee-collection model. Provide free contraceptive services only to groups requiring social assistance. Encourage and facilitate organizations, individuals, private organizations, NGOs, and professional and social organizations to participate in IEC, counselling, provision of population and family planning services, production and distribution of contraceptives.
- Effectively implement incentive policies (both financial and non-financial) for providers of population and family planning services.
- Change IEC messages about family planning towards “each family should have two children” in order to ensure maintenance of an appropriate fertility rate and to stabilize at an appropriate population size and structure.
- Improve capacity of the health system for early detection and treatment for reproductive organ cancers.

8.2.5. Effectively intervene to minimize the imbalance in sex ratio at birth

- Strengthen and improve effectiveness of IEC and BCC related to gender equality, imbalance in sex ratio at birth, the value of daughters and the status and role of women in sustainable development of the family and society.
- Strengthen checking and monitoring aimed at halting sex selection at birth as required by current legal regulations. Severely punish sex selection behaviors to serve as a deterrent and to create social discussion in order to quickly stop this practice.
- Actively develop and implement policies to support strengthening the role and status of women and girl children, particularly for daughters in families that have no sons and for the parents in these families.
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9. Health Information System

9.1. Summary of priority issues

9.1.1. Weak oversight and leadership for implementing the HIS strategic plan

- Key health information systems are not functioning effectively including death registration and cause of death statistics, and chronic disease registries, leading to inadequate information for health sector planning.

- Patient records are inadequate to ensure continuity of care, avoid adverse reactions or ensure efficiency by avoiding duplication. Information from patient records is not analyzed to inform health system reforms.

- Data available in the HIS are underutilized because they are not disseminated to researchers who could provide appropriate analysis for planning and policymaking.

- Data are not regularly and comprehensively reported from the private health sector.

9.1.2. Health system activities are not adequately monitored for performance

- KPI monitoring systems are a prerequisite for performance appraisal (in HRH management) and effective pay-for-performance and other health financing policy reforms. Systems of key performance indicators are not in place, hindering ability to hold the health system and various agencies and units accountable for use of resources to achieve outcomes; information on performance is not available to allow health system managers to identify areas for improvement.

9.2. Recommendations

9.2.1. Solutions related to implementing the Comprehensive Plan for Development of the Health Information System

- Solutions to strengthen key information systems (death statistics, chronic disease registries); Verify the data quality, to provide feedback mechanism on data quality, to do survey for revising data from regular reports.

- Solutions to strengthen patient records: Review regularly the harmonization of tools for collecting and justifying medical records, primary templates and reporting templates used by health facilities, projects/programs and at different levels. To integrate priorities in the management information system.

- Solutions related to information dissemination

- Enhance IT application by developing essential basis for an integrated HIS of the sector, developing and implementing effectively an IT system for health statistics in the national scale (software, database, infrastructure for IT).

9.2.2. Solutions related to developing and utilizing key performance indicators

- Develop a Proposal on Health information system for monitoring and evaluating five-year and annual plans.
10. Governance

10.1. Summary of priority issues

10.1.1. Limited quality, efficiency and effectiveness of health policies and legislation

- Health policy formulation and approval is slow; policy documents contain inconsistencies and conflicts.

- Capacity of the agencies in charge of policy development and research units as well as the coordination between these agencies and units is limited. Many policies are developed without adequate information or concrete and persuasive evidence. Few impact evaluations are done to serve as the basis for policy adjustments and refinements.

- Policy implementation is weak due to inadequate resource allocations, lack of operational plans and inadequate awareness of policies by local authorities responsible for implementation.

10.1.2. Inappropriate organizational structure of the health system to meet the requirements of the new situation

- The health sector currently functions both as a regulatory body and a service delivery agency leading to inadequate separation of functions and work overload.

- Health facilities are organized by administrative division, rather than as integrated health systems resulting in low continuity of care, weak coordination between units and costly inefficiencies due to duplicate services and inadequate capacity utilization.

10.1.3. Inadequately effective system and mechanism for inspection, monitoring and supervision of health system activities

- The health inspector network is insufficient in number and limited in capacity.

- The supervisory role of political organizations and professional associations to ensure accountability is weak because of low capacity and inadequate coordination.

10.1.4. Insufficient public administrative reform in the health sector

- Public administrative reforms in the health sector have been slow and do not yet meet requirements of the rapidly changing socio-economic situation.

10.2. Recommendations

10.2.1. Improve quality of health policy development and efficiency of health policy implementation

Strengthen coordination between the agencies in charge of policy development and research units so as to have convincing information, data and evidence for policy making process, building capacity for research institutions and agencies to develop evidence-based policies.
Reviewing and supplementing for the working regulations of the MOH to incorporate the content concerning the development of legislative documents into the indicators for assessing the quality of operation of subordinate agencies. Priorities in terms of time, resources and other necessary conditions should be focused to ensure the development, implementation, monitoring and evaluation of policies after being issued.

Mobilizing local governments’ participation and involvement to implement legal documents and policies, especially with social issues that need interdisciplinary collaboration. Important content and indicators should be included in the annual resolutions of the Party’s Committees and socio-economic development plans of the local governments as a foundation to track, monitor and link with the local governments’ accountability to health activities.

10.2.2. Reform managerial mechanism and operational structure of health care networks at central and provincial levels

Transform the organization and management of health systems at central and local levels. The MOH should continue to decentralize, strengthen autonomy and reduce the number of subordinate business agencies. Adequate priorities should be focused to the workforce who has competence and capacity in health information analysis and synthesis, policy planning and health system management. The role of the provincial Department of Health, especially the accountability of the Health Director in advisory, implementation, supervision and monitoring health activities in the province.

It is necessary to have changes in the organization of health service delivery network in response to the changing disease patterns, population aging, growing people’s health care needs while there are more favorable conditions in socio-economic development and geographical accessibility to health care.

Medical facilities do not need to be categorized by administrative level, but should be classified according to the level of care they can provide, hospitals should be encouraged to develop technologies and achieve higher standards, including even district hospitals. Preventive health centers at provincial and district levels should be rearranged and narrowed of their focal points to improve operational efficiency. Grassroots health facilities should be reformed comprehensively in terms of operational model, financial mechanism, expansion of service delivery, strengthening health management for people, especially people with chronic diseases and the elderly. Supervision and supports between levels of care and between curative and preventive facilities should be consolidated in order to deliver comprehensive and continuous health services.

Strengthening capacity and quality in the field of inspection, calibration of equipment, drug testing and monitoring adverse drug reactions (ADR) and food safety inspection following the direction of establishing regional centers to avoid spread by provincial administration unit which easily lead to the shortage of investment resources, manpower and low operational efficiency.
10.2.3. Promote the supervisory roles and improve the effectiveness of health sector inspectors, and of socio-political organizations and professional associations

Continue consolidating and strengthening the health inspector network, especially specialist inspectors to be capable of inspecting the implementation of the provisions of law and policy on health as well as handling of violations.

Building mechanisms to strengthen community supervision activities through the Vietnam Fatherland Front, mass organizations, socio-political and professional associations for health. In fact, if only the health sector to perform supervision and inspection activities, it would be insufficient of manpower and time, thus the participation of social organizations and professional associations is very necessary.

Supplement regulations and enhance coordination between the MOH and civil society, professional organizations (e.g., Vietnam Medical Association, Pharmaceutical Association, Vietnam Health Economics Association, the Medical Equipment Association...) in the processes of health policy development, tracking, monitoring and implementation. Institutions in charge of developing documents and policies should actively provide information and consult for critical reviews on the draft policies. There should be regulations on policy feedbacks and wide publication of responses and comments from the stakeholders.

10.2.4. Speed up public administrative reforms in the health sector

Continue to review legal documents, regulations, procedures and principles in the field of health so as to simplify or eliminate unsuitable and unnecessary procedures.

Simplify medical procedures and steps, speed up the application of information technology in administrative management of health facilities, especially examination and treatment facilities in order to facilitate more convenience for people in accessing and using health services.

Strengthen and promote the information, communication and supervision activities of the Fatherland Front, political organizations, socio-political organizations at all levels, professional and business associations, people and the press for health administration reform.
Chapter VI. Recommendations for strengthening PHC in the grassroots health network

Based on the above situation assessment and analysis of the PHC-based service delivery framework, recommendations to strengthen the grassroots health network to promote PHC will include objectives and solutions in health service delivery reform and grassroots health network consolidation.

1. Objectives

1.1. General objectives

To create a comprehensive breakthrough in the governance, organizational structure, human resources, finance, facilities, equipment and operational mechanism of the grassroots health network; to improve PHC-based service delivery capacity towards universal health coverage; to contribute to reducing imbalances in the service delivery system; to eliminate the hospital-centric tendency and revive the connections between different levels of care, between preventive and curative care; to improve equity, efficiency, quality and accessibility of the overall health system.

1.2. Specific objectives

To increase resources for the grassroots health network through the acts of capacity building, appropriate motivation enhancement of health human resources; increased financial resources, availability of drugs, and equipment and necessary conditions at facilities.

To improve operational capacity and efficiency of the grassroots health network by revising/reviewing functions, responsibilities, organization and operational mechanism of CHSs, district hospitals/health centers; reform of the financial mechanism and measures to promote collaboration between facilities and levels of care; ensure the delivery of comprehensive, continuous and integrated health care services.

To improve leadership and operational administration of the grassroots health network; strengthen the health management information system; reform planning, monitoring, supervision and evaluation activities linked to the performance of the grassroots health network.

2. Recommendations

2.1. Leadership and governance

- *Raise awareness on the necessity of grassroots health network reform and strengthening:* enhance the perspective and responsibility of the Party committees and government authorities at all levels on the role and the importance of the grassroots health network – *which is the foundation of the national health system.* Assert that the consolidation of the grassroots health network to implement PHC-based, people-centered service delivery model is a top priority of the health sector that needs to be performed continuously and sustainably with a long-term vision and based on a solid rationale derived from practical and existing conditions in each region.
Joint Annual Health Review 2015

- **Develop and promulgate policies and plans on the strengthening of the grassroots health network:** MOH will submit the Master Plan for Strengthening the grassroots health network to promote PHC towards universal health coverage to the Government. MOH should also propose to include the objectives, targets and specific tasks for grassroots health network strengthening into a Party Resolution, the Five-year and annual national and provincial strategies, policies and socio-economic development plans.

- **Effectively implement existing policies on strengthening the grassroots health network:** continue to improve existing policies and regulatory documents concerning the organization and operation of the grassroots health network, such as the national benchmarks on commune health to 2020; MOH Circular No. 43/2013/TT-BYT (2013) classification of curative health facilities and technical services they provide; MOH Circular No. 37/2014/TT-BYT (2014) guiding health insurance registration for primary healthcare and referrals; projects related to the grassroots health network strengthening etc.

- **Review and revise public policies that have large impacts on the grassroots health network,** especially the policy on financial autonomy; Regulations on intersectoral coordination in health policy development and implementation.

- **Develop and implement mechanisms and solutions for coordinating and integrating health facilities, levels of care, health programs and preventive and curative care.** Regulate the technical relationship and accountability of district hospitals and district health centers to CHSs.

- **Promote an appropriate role for the private health sector:** Develop and implement policies and mechanisms to promote the roles and ensure quality of private sector health care, coordinate public and private health care in providing PHC services.

- **Continue to consolidate Health Care Steering Committees at different levels,** promoting roles, obligations and responsibilities as well as specific mandates of different sectors, social organizations, community and individuals.

- **Develop and standardize the HIS,** set up regulations on the sharing of information between health facilities at all levels in order to deliver integrated continuous health services and to enhance management of the grassroots health network activities. Identify roles and responsibilities of CHSs, district hospitals/health centers in data collection and information processing in order to determine local people’s health care needs. Develop innovative ways to gather and compile health statistics, apply information technology at district health centers and CHSs for improved health management and for determining needs and planning for community-based health care so as to link information between levels.

- **Develop and promulgate policies and regulations concerning accountability of stakeholders to ensure transparency in health service delivery management with routine and periodic monitoring and evaluation mechanism of the grassroots health network’s activities.** Use the national benchmarks on commune health to develop and improve reporting indicators to assist the consolidated monitoring and evaluation of grassroots health network performance.
2.2. Organizational and operational reform of grassroots health network

- Adjust the functions and tasks of grassroots level health entities, to operate as a unified system and become a hub that is linked with higher level specialist facilities, ensures integrated and continuous healthcare, that takes PHC as the foundation, responds effectively to the risk factors in the context of epidemiological transition and changing morbidity patterns, population aging, industrialization, urbanization, globalization and climate change.

- **Identify an appropriate scope of the grassroots health network service delivery** with consideration of appropriate features for each region.

- **Plan the grassroots health network** adapted to the needs of each region, area and changing functions. Improve and implement the district health center model with integrated preventive and curative care functions. Maintain and strengthen regional polyclinics in mountainous, remote and outlying areas. Diversify health service delivery models to perform pro-active care including: provision of curative care services at district and commune health facilities; organizing mobile health care teams; transporting patients to relevant specialist health facilities...

- **Scale up the military-civilian model** CHSs and clinics in border, island, remote and outlying areas. Consolidate, develop and guide school health, office health, occupational health activities …with an orientation towards strengthening PHC.

- Continue to strengthen and develop the networks of village health workers, village birth attendants in ethnic minority regions and disadvantaged areas.

- Develop the family doctor (GP) clinics model wherever possible. Integrate the family doctor model and approach with the operation of the PHC team at CHS.

2.3. Grassroots health network service delivery reform

- **The grassroots health network service delivery reform**: Strengthen home-based and community-based health management, palliative care and rehabilitation, especially for NCDs. Practice the strategy of “prevention is better than cure”, strengthen health education and promotion to change people’s behavior from passive to active care of their own health and protection for themselves and for the community. Adopt a household health management model.

- **Expand the scope of health service delivery** at district and commune levels to ensure regular, continuous, comprehensive care; connecting prevention and health promotion to curative care and rehabilitation; integrate modern medicine with traditional medicine; provide integrated care for infectious diseases, NCDs and injuries; create favorable conditions to scale up community-based health care models at the grassroots level.

- **Enhance capacity and competence** in examination, diagnosis, detection and screening of diseases, flexible, effective referral and receiving and monitoring of patients especially with NCDs.
2.4. Appropriate human resource development to meet the grassroots health network operational needs

- **Review and determine the grassroots health network human resource needs**, in terms of number, qualifications and structure in order to plan and operate accordingly to a PHC-based service delivery model and in response to changes in health care demands due to epidemiological transition. (HPET Project should be revised to meet this task).

- **Diversify training models** for primary health workers with priority for local residents, especially in disadvantaged areas. Strengthen specialist training; family medicine training; practical nurses, birth attendants in ethnic minority areas with priority for local residents and the ethnic minorities. Continue the implementation of policies to strengthen human resources for disadvantaged areas.

- **Reform training programs and curricula** for primary health workers based on competencies and teamwork approaches in response to changes in health care needs where NCDs and aging population account for most of the burden of disease; focus on family medicine training for primary health workers at the commune level.

- **Implement continuing medical education**, practical training, technical assistance and transfer from upper level health facilities to the grassroots health network, to meet the current health care needs. Disseminate technical handbooks and guidelines for village and commune health workers. Focus on training programs for health workers prior to their work in the grassroots health network.

- **Implement various solutions to strengthen the grassroots health network human resources**: Strictly follow provisions of the Law on Examination and Treatment that require health workers to have 18 months practical training in clinics before being granted a medical practice certificate, especially for the newly graduated health workers. Put in place requirements for social responsibility for newly graduated health workers after 18 months of compulsory supervised practice to work in the grassroots health network. Continue to implement the policy of time-limited rotations where district health centers/district hospitals alternate their staff with CHSs and vice versa. Effectively implement policies to attract and maintain health workers in the grassroots health network. Supplement and improve incentives/remuneration for health staff working in mountainous, remote, disadvantaged and ethnic minority areas. Reward health workers who have substantial work achievements at the grassroots level.

2.5. Increase investment and reform grassroots health network financing

- **Public funding** (State budget, health insurance, ODA) **should be the key financial resources** for the operation of the grassroots health network. The Government (central and local) should be responsible to ensure investment in facilities, equipment, human resources, essential medicines, and funding recurrent expenditure of the grassroots health network in order to create a breakthrough in the delivery of quality PHC services, mobilization of financial and technical support from local and international organizations and individuals, and appropriate increases in budget allocation to district and commune health facilities.
Chapter VI. Recommendations for strengthening PHC in the grassroots health network

- Reform financial mechanism to incentivize health workers and staff to perform PHC, and at the same time to ensure financial protection to service users, especially vulnerable population groups, and contribute to improving operational quality, efficiency and responsiveness of the health system.

- Speed up implementation of the roadmap towards universal health insurance, supporting the near poor, people working in the fields of agriculture, forestry, fishery and salt production to participate in social health insurance.

- Reallocate state budget to the grassroots health network based on performance and outputs. Reform health insurance payments by capitation to improve efficiency of health insurance fund use in the grassroots health network and encourage the delivery of PHC services.

- Expand the models of State commissioning services and public private partnership in public health service delivery. Financial incentives are needed to strengthen the connections with the private health sector in provision of PHC services.

2.6. Strengthen health IEC activities

- Pay special attention to implementing IEC, disseminating knowledge on disease and risk factors to support individuals and the community to know how to take care of their own health and to make correct choices in using health care services.

- Strengthen IEC oriented towards the community in order to provide information on reforms in health service delivery to gradually increase trust of the people in the health sector in general, and in the improved quality of health services at the grassroots level.
<table>
<thead>
<tr>
<th>Year Type of indicator</th>
<th>Source of information</th>
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<tbody>
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<td>2013</td>
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<td>2014</td>
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<tr>
<td>2015 (target)</td>
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<tr>
<td>Health spending share of GDP %</td>
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<tr>
<td>2011</td>
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<td>2012</td>
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<td>2013</td>
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<td>2015 (target)</td>
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<tr>
<td>Public share of total health spending %</td>
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<td>2010</td>
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<tr>
<td>2011</td>
<td>936.0</td>
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<td>2012</td>
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<td>2013</td>
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<td>2014</td>
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<tr>
<td>2015 (target)</td>
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<tr>
<td>Per capita health spending (current prices)</td>
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<td>2015 (target)</td>
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<td>Out-of-pocket share of total health spending %</td>
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<td>2010</td>
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<td>2011</td>
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<td>2012</td>
<td>48.83</td>
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<td>2013</td>
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<td>2014</td>
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<tr>
<td>2015 (target)</td>
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<tr>
<td>Doctors per 10,000 people</td>
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<td>2013</td>
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</tr>
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<td>2014</td>
<td>7.8</td>
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<td>University-trained pharmacists per 10,000 people</td>
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<td>2011</td>
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<td>2014</td>
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<td>2014</td>
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<tr>
<td>2015 (target)</td>
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<tr>
<td>Monitoring indicators</td>
<td>Unit</td>
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<td>--------------------------------------------------------------------------------------</td>
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<tr>
<td>Proportion of CHSs served by a doctor</td>
<td>%</td>
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<tr>
<td>Proportion of CHSs served by an obstetrics/pediatrics assistant doctor or midwife</td>
<td>%</td>
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<tr>
<td>Proportion of rural villages served by a village health worker</td>
<td>%</td>
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<tr>
<td>Monitoring indicators</td>
<td>National</td>
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<td>-----------------------</td>
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</tr>
<tr>
<td>Proportion of communes meeting national commune health benchmarks (new benchmarks applied since 2011)</td>
<td>80.1% (2001-2010)</td>
</tr>
<tr>
<td>Source of information</td>
<td>MOH-HSYB</td>
</tr>
<tr>
<td>Year Type of indicator</td>
<td>2010</td>
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<tr>
<td>Number of drug outlets per 10,000 people</td>
<td>5.0</td>
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<tr>
<td>Number of outpatient consultations per 10,000 people</td>
<td>3980</td>
</tr>
<tr>
<td>Outpatient consultations per 10,000 people</td>
<td>3980</td>
</tr>
<tr>
<td>Inpatient admissions per 10,000 people</td>
<td>7.35</td>
</tr>
<tr>
<td>Inpatient stay</td>
<td>10.3</td>
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<tr>
<td>Average length of inpatient stay</td>
<td>11</td>
</tr>
<tr>
<td>Proportion of people having medical treatment in the past 12 months</td>
<td>40.9%</td>
</tr>
<tr>
<td>Data for 2011-2012 represent a mix of the old and new benchmarks</td>
<td></td>
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<td>Source of information</td>
<td>MOH-HSYB</td>
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<td>Year Type of indicator</td>
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<td>Number of drug outlets per 10,000 people</td>
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<td>3980</td>
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<tr>
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<tr>
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<td>40.9%</td>
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</tbody>
</table>

**Note:** The table above presents data for various health indicators, including the proportion of communes meeting national benchmarks, number of drug outlets, outpatient consultations, inpatient admissions, and average length of inpatient stay, among others. The data is categorized by different sources and years, with specific targets and benchmarks highlighted.
<table>
<thead>
<tr>
<th>Monitoring indicators</th>
<th>Unit</th>
<th>Disaggregation</th>
<th>Year</th>
<th>Type of indicator</th>
<th>Source of information</th>
</tr>
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<tbody>
<tr>
<td>Proportion of women giving birth who had 3 or more antenatal visits over 3 trimesters</td>
<td>%</td>
<td>National</td>
<td>2010  2011  2012  2013  2014  2015 (target)</td>
<td>&gt;90 (80 or 87*)</td>
<td>MDG, NTP, KH National Action Plan*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>79.2 86.7 89.4 84.5 n/a</td>
<td></td>
<td>MOH-NTP For 2013: GSO-SPCFP</td>
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<tr>
<td>Proportion of pregnant women fully vaccinated against tetanus</td>
<td>%</td>
<td>National</td>
<td>2010  2011  2012  2013  2014  2015 (target)</td>
<td>&gt;90 (&gt;90 for 8 vaccines)</td>
<td>MDG, 5-yr plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>93.5 94.6 95.5 95.7 82.2 [MICS]</td>
<td></td>
<td>MOH-NTP</td>
</tr>
<tr>
<td>Proportion of children under age 1 who are fully immunized</td>
<td>%</td>
<td>National</td>
<td>2010  2011  2012  2013  2014  2015 (target)</td>
<td>&gt;90 (&gt;90 for 8 vaccines)</td>
<td>MDG, 5-yr plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>94.6 96.0 95.9 91.4 n/a</td>
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<td>MOH-NTP</td>
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<td>%</td>
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<td>2010  2011  2012  2013  2014  2015 (target)</td>
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<td>MDG, NTP, KH National Action Plan*</td>
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### Monitoring indicators

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<th>Type of indicator</th>
<th>Source of information</th>
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### Impact indicators

### Health status

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<th>Fall 0.5</th>
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<td>Infant mortality rate</td>
<td>Under-five mortality rate</td>
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<td>TB case detection rate (all forms)</td>
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<td>Proportion of rural households using improved water source</td>
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<td>Proportion of medical facilities whose medical solid waste is treated according to national environmental standards</td>
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<td>15.4</td>
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<td>Stunting rate of children under age 5 (height for age)</td>
<td>%</td>
<td>National</td>
<td>29.3</td>
<td>27.5</td>
<td>26.7</td>
<td>25.9</td>
<td>24.9</td>
<td>24.2 (26)</td>
<td>2010</td>
<td>NTP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RRD</td>
<td>25.5</td>
<td>24.8</td>
<td>21.9</td>
<td>20.8</td>
<td>20.3</td>
<td>...</td>
<td></td>
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</tr>
<tr>
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<td></td>
<td>NMMA</td>
<td>33.7</td>
<td>32.4</td>
<td>31.9</td>
<td>30.6</td>
<td>30.7</td>
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</tr>
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<td></td>
<td>NCCCA</td>
<td>31.4</td>
<td>29.7</td>
<td>31.2</td>
<td>27.7</td>
<td>28.1</td>
<td>...</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>CH</td>
<td>35.2</td>
<td>35</td>
<td>36.8</td>
<td>32.9</td>
<td>34.9</td>
<td>...</td>
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<td></td>
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<td>SE</td>
<td>19.2</td>
<td>21.5</td>
<td>20.7</td>
<td>16.5</td>
<td>18.3</td>
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<td>MRD</td>
<td>28.2</td>
<td>26.8</td>
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<td>24.5</td>
<td>24.0</td>
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<tr>
<td>Sex ratio at birth</td>
<td>Number of boys born for every 100 girls</td>
<td>National</td>
<td>111.2</td>
<td>111.9</td>
<td>112.3</td>
<td>113.8</td>
<td>112.2</td>
<td>112.8 (≤113)</td>
<td>2010</td>
<td>5-yr plan</td>
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<td>RRD</td>
<td>116.2</td>
<td>122.4</td>
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<td>114.3</td>
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<td>108.2</td>
<td>104.3</td>
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<td>108.0</td>
<td>...</td>
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<td></td>
<td></td>
<td>SE</td>
<td>105.9</td>
<td>108.8</td>
<td>111.9</td>
<td>114.2</td>
<td>108.9</td>
<td>...</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>MRD</td>
<td>108.3</td>
<td>114.9</td>
<td>111.5</td>
<td>103.8</td>
<td>114.1</td>
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### Monitoring and evaluation indicators, 2010 – 2015

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<th>Monitoring indicators</th>
<th>Unit</th>
<th>Disaggregation</th>
<th>Year</th>
<th>Type of indicator</th>
<th>Source of information</th>
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<td><strong>Financial protection</strong></td>
<td></td>
<td></td>
<td>2010</td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td>Proportion of households facing catastrophic spending</td>
<td>%</td>
<td>National</td>
<td>3.3</td>
<td>2.5</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Note: Proportion of villages having at least a village based midwife with at least 6 months training (for disadvantaged regions) is a new health sector basic indicator, but no data have been gathered on this indicator so it is not included in the 2014 JAHR, but will be included in future JAHRs.

Abbreviations for sources of data:

- **DAV** Drug Administration of Vietnam
- **GSO** General Statistics Office
- **HSYB** Health Statistics Yearbook
- **MDG** Millennium Development Goal
- **MICS** Multi-indicator cluster survey
- **MOH** MOH
- **NHA** National Health Accounts
- **NIN** National Institute of Nutrition
- **NTP** National Target Program
- **SPCFP** Survey of Population Change and Family Planning (GSO)
- **MSA** Medical Services Administration
- **VHLSS** Vietnam Household Living Standards Survey

Abbreviations for regions as follows: RRD Red River Delta; NMMA Northern Midlands and mountain areas; NCCCA North Central and Central coastal areas; CH Central Highlands; SE Southeast; MRD Mekong River Delta
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