MINISTRY OF HEALTH

FIVE-YEAR HEALTH SECTOR DEVELOPMENT PLAN 2011-2015

HANOI
DECEMBER, 2010

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List of Abbreviation

DRG	Diagnosis Related Group
GDP	Gross Domestic Product
GNI	Gross National Income
HMIS	Health Management Information System
IMR	Infant Mortality Rate
JAHR	Joint Annual Health review
MDG	Millennium Development Goal
MMR	Maternal Mortality rate
ODA	Official Development Assistance
PPP	Purchase Power Parity
SARS	Severe acute respiratory syndrome
SAVY	Survey Assessment of Vietnamese Youth
U5MR	Under-five child mortality rate
UNFPA	United National Population Fund
UNICEF	United National Children's Fund
WHO	World Health Organization

INTRODUCTION

The cause of people's health care and protection has, during the 2006-2010 period, obtained many important achievements, which yield positive influence on health indicators. All basic health indicators have been achieved and surpassed the set plan. Life expectancy at birth in 2010 is estimated to be 73 years; rate of under-five child malnutrition (weight for age) declines to 15‰ and 24‰; maternal mortality rate per 100,000 live births is 70 by end of 2010.

Apart from obtained achievements, it is anticipated that people's health care work in the future will face huge difficulties and challenges. As directed by the Prime Minister, the Ministry of Health develops a five-year health sector development plan for 2011-2015 as instructed in the Prime Ministerial Directive 751/CT-TTgCP dated 3/6/2009 on development of five-year socio-economic plan 2011-2015.

Formulation of the five-year health sector plan is based on orientation and key tasks for national socio-economic development; Comprehensive master plan and strategy for health sector, and the Party and State's intentions for health care work, and overview of health care work in recent years using evidence with participation of line Ministries, localities, the public, beneficiaries and donors. The joint annual health review (JAHR), developed in the past 4 years, has been used for situation analyses, determination of priorities issues and proposing specific solutions for the Plan.

On the basis of the World Health Organization's conceptual framework, the framework of the Vietnamese health care system presented below is also the framework of the five-year health sector development plan, 2011-2015.

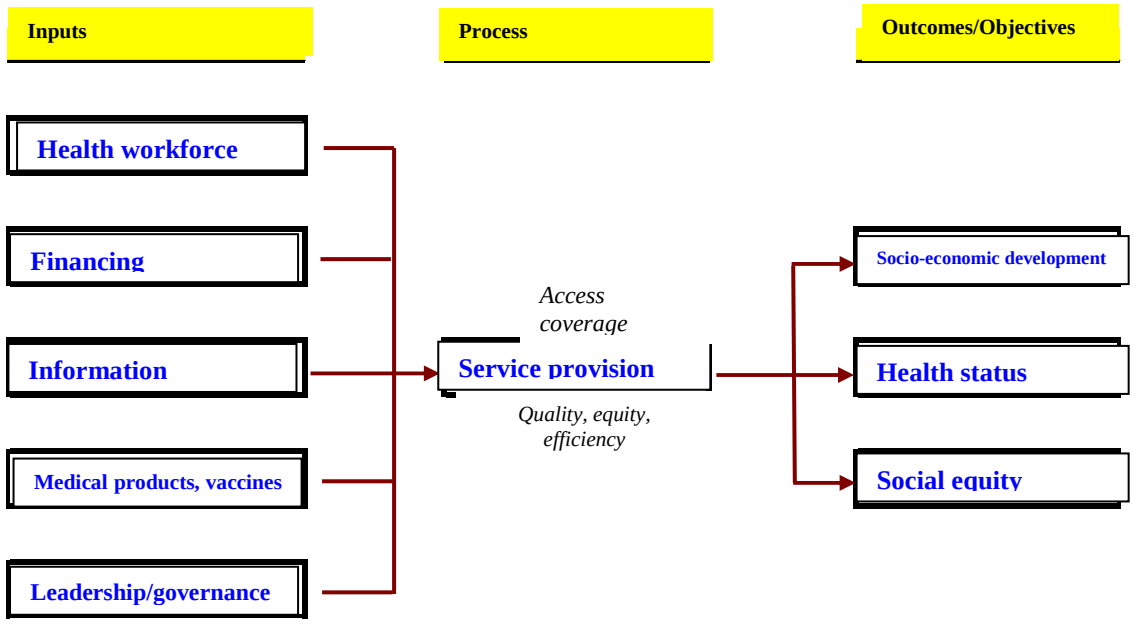

Figure 1. Framework of the Vietnamese health care system

The input components for the health care system should possess the following basic criteria.

Health workforce is one that works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, rational distributions across regions, (there are sufficient staff, they are competent, responsive and productive).

Health financing system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient.

Health information system is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health system performance and health status.

Medical products, vaccines and technologies are indispensable input components for the health system to operate. These components must assure quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use.

Leadership and governance involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system-design and accountability.

All above 5 mentioned input components aim to provide *good services for all people,* including health care, rehabilitation services, disease prevention and health promotion. Health services must also satisfy basic criteria of universal coverage, accessible to people (financial and geographical), and services must ensure quality, equity and efficiency.

The outcomes and ultimate goals of the health care system are to improve people's health status, making contributions to assure social equity and national socio-economic development.

This conceptual framework of Vietnam is used to develop its five-year health sector development plan. Detailed analyses of the currents status of above components, achievements, difficulties, short-comings and priority issues to be addressed and reformations for solutions can be referred to the Joint Annual Health Review (JAHR) 2010.

PART 1
ASSESSMENT OF IMPLEMENTATION OF THE HEALTH SECTOR DEVELOPMENT PLAN DURING 2006-2010

1. Health status and determinants

1.1. Basic health indicators

In line with national socio-economic development, concern for investment of the Party and Government for people's health care cause, the Vietnamese people's health status has been improved remarkably, reflected in some basic health indicators such as average life expectancy, child mortality, maternal mortality and malnutrition...

The average life expectancy of the Vietnamese people has increased considerately. The census 1999 indicates that average life expectancy of the Vietnamese people is 72.8 years (70.2 years in male, 75.6 in female)[1], surpassing the targets of 72 years set in the National strategy for people's health care by 2010. Given this achievement, Vietnam has higher average life expectancy than other countries with similar GDP per capita.

Infant mortality rate falls sharply from 30‰ (in 2001) to 16.0‰ (in 2006) and 15‰ (in 2008), obtained the target of reducing infant mortality rate to 16‰ as set in the national socio-economic development plan, 2006-2010.

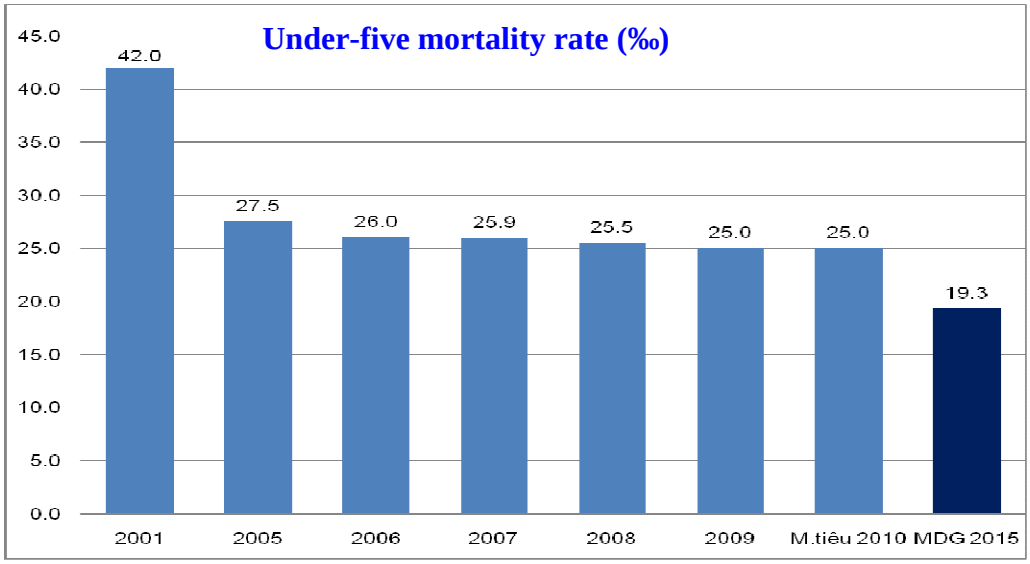

Figure 2: Under-five mortality rate (‰) during 2001-2010

[1] Census and housing survey on 1st April, 2009

Statistics of the Ministry of Health (MoH) indicate that under-five mortality rate declines from 58‰ in 2001, to 27.5‰ in 2005 and 25.0‰ by 2009, which achieved the target set for 2001–2010 period. According to the Millennium Development Goal, by 2015, this indicator will be reduced to 19.3‰. If this trend continues to 2015, Vietnam will certainly achieve the Millennium Development Goal (MDG).

For maternal mortality, statistics reveal that MMR of 165/100,000 live births (2001– 2002) drops to 80/100,000 live births (2005) and 69/100,000 as reported in the Census 2009, which achieves the target set in the strategy for people's health care and protection (70/100, 000 live births). However, if referring to the Millennium Development Goal of reducing ¾ of maternal mortality from 1990 to 2015 (that is to 58.3/100,000 live births), then Vietnam must strive more to obtain the target.

Under-five child malnutrition (weight for age) is one of important health indicators. Survey data of the National Institute of Nutrition (NIN) indicate that this status stays steady over years from 25.2% in 2005 to 21.2% in 2007 and 18.9% in 2009. According to the plan, Vietnam aims to reducing under-five child malnutrition – wasting form – to below 20% by 2010. However, with the joint efforts of the health sector in close collaboration with localities and line Ministries, and the national socio-economic development, it is anticipated that under-five child malnutrition will be 18.0% by 2010.

Although Vietnam has obtained considerate achievements in improving people's health care as reflected in the above statistics, difficulties and challenges are still ahead:

Rather large disparities in health status across regions, between living standards groups as evidenced by indicators such as infant mortality rate, child malnutrition, maternal mortality remains high in mountainous, remote, isolated and ethnic minority groups.. For infant mortality, although this indicator has dropped in all regions, including disadvantaged areas , this rate is still high in the North West, the Central Highlands with 1.4-1.5 times higher than the national average (Table 1). Disparity across the North West and South East seems to decline: from 3 folds in 2005 (33.9‰ and 10.6‰) to about 2.5 times in 2008 (21‰ and 8‰), but the differences remain very large..

Table 1: Infant mortality rate by region (per 1,000 live births)

Region	Infant mortality rate				Differentials across regions			
	2005	2006	2007	2008	2005	2006	2007	2008
the Red River Delta	11,5	11	10	11	0.7	0.7	0.6	0.7
North East	23,9	24	22	21	1.5	1.5	1.4	1.4
North West	33,9	30	29	21	2.1	1.9	1.8	1.4
North Central Coast	24,9	22	20	16	1.6	1.4	1.3	1.1
South Central Coast	18,2	18	17	16	1.1	1.1	1.1	1.1
TheCentral Highlands	28,8	28	27	23	1.8	1.8	1.7	1.5

South East	10,6	8	10	8	0.7	0.5	0.6	0.5
the Mekong delta	14,7	11	11	11	0.9	0.7	0.7	0.7
Whole country	**16,0**	**16**	**16**	**15**	**1.0**	**1.0**	**1.0**	**1.0**

Differences across regions are also seen in under-five child malnutrition. Although there have been great improvements during 2005-2008 as stated above, the Central Highlands and North western region have the highest rate of child malnutrition (Table 2). However, infant mortality differentials across regions between 2005 and 2008 show a clear decline. This might be attributed to increasing investment in health in these regions (the Central Highlands, North West, the Mekong delta…) through the state budget, government bill and ODA.-funded projects.

Table 2: Under-five child malnutrition by region (%)

Region	2005	2006	2007	2008
the Red River Delta	21.3	20.1	19.4	18.1
North East	28.4	26.2	25.4	24.1
North West	30.4	28.4	27.1	25.9
North Central Coast	30.0	24.8	25.0	23.7
South Central Coast	25.9	23.8	20.5	19.2
The Central Highlands	34.5	30.6	28.7	27.4
South East	18.9	19.8	18.4	17.3
the Mekong delta	23.6	22.9	20.7	19.3
Whole country	**25.2**	**23.4**	**21.2**	**19.9**

Child mortality remains high. Although child mortality rate has decreased considerately, given a population structure with high proportion of children (under-five children account for 6.7% of total population, an estimated number of 6,000,000 children with 1,200,000 to 1,500,000 babies born per year) thus the absolute number of child deaths remain very high. As assessed by UNICEF[2], about 31,000 children under-five die every year with 16,000 of them are newborns.

Although child malnutrition (wasting form) has been improved relatively, this indicator stays high compared to other regional countries. Stunting is fairly serious and remains widespread in all regions with 31.9% [3] *of stunted children*. As a consequence, stunting is a form of chronic malnutrition that leaves long-term legacy in terms of physical development when the child grows up, and is susceptible to diseases at mature age such as overweight and obesity, diabetes and other diseases. Stunting is also closely associated child mortality. Reduced stunting will directly improve the physiques, strengthens and intelligence of the Vietnamese people.

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[2] UNICEF. State of the World's Children 2007

[3] NIN, MoH. Report from the target program for malnutrition control 2006-2010

Basically, Vietnam is on the right track to achieve the Millennium Development Goals by 2015 in health, especially the MDG 4 and 5 of maternal and child health. However, maternal and child mortality remains relatively high, especially in disadvantaged areas. Other issues in relation to the MDG 6 on combating HIV/AIDS and other diseases should also be paid attention.

1.2. Disease morbidity and mortality patterns

The current disease pattern of Vietnam is in a transitional period with multiple disease burdens. Infectious diseases have declined but some communicable diseases are at risk of reoccuring; prevalence of non-communicable diseases is rising, accidents, poisonings and injuries are also galloping; Emerging unusual diseases are expanding with unpredictable trend…

Statistics from hospital inventories indicate that communicable diseases account for about 55.5% of total diseases in 1976, and declined to 25.2% in 2008. The non-communicable disease group is increasing over years, from 42.65% in 1976 to 63.14% in 2008. Other injuries, accidents and poisonings group stays steady at 10%.

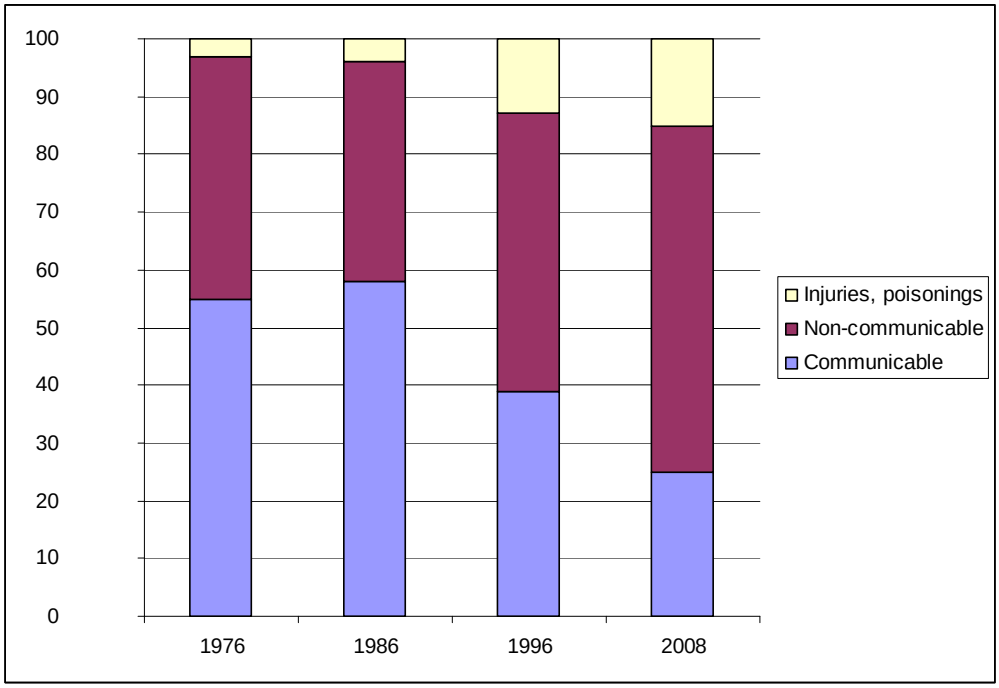

Figure 3: Disease morbidity pattern over years

Some studies on buderns of disease (BOD) also reveal similar results. Burdens of disease (calculated by DALY) indicate that the highest budern in Vietnam (2006) falls on cardiovascular diseases, injuries, nero-mental diseases…

Increase in non-communicable disease has lead up to escalating health care costs. The average treatment cost for non-communicable diseases is 40-50 folds higher than communicable diseases as it requires high technologies, expensive specific medicines, long treatment periods and susceptible complications. A heart surgery case costs VND100-150 million; a treatment period for hypertension or

diabetes costs VND 20-30 million... Meanwhile, health care facilities have to accelerate investment in expensive and modern medical equipment to diagnose and treat non-communicable diseases, recruitment more specialist doctors, and thereafter increasing service costs. This is truly a great challenge for the Vietnamese health care system in the upcoming time, and thus requires appropriate policies to strengthen disease prevention efforts, and to organize health care service delivery.

Regard to mortality pattern, findings from a national study on causes of death, which was conducted by Hanoi Medical University and Health Policy and Strategy Institute, 2010 by verbal autopsy of 9,293 deaths, show that causes of death of non-communicable diseases take 75%, followed by accidents, injuries (13%) and communicable diseases (12%).

Table 3. Causes of death in 2008

Disease category	Total		Female		Male	
	n	%	n	%	n	%
Communicable diseases	1.141	12	405	11	736	13
Non-communicable diseases	6.982	75	3.111	81	3.871	71
Injuries	1.170	13	318	8	852	16
Total	**9.293**	**100**	**3.834**	**100**	**5.459**	**100**

Source: Study on causes of death, conducted by Hanoi Medical University and Health Policy and Strategy Institute (2010)

The study findings also reveal that the leading causes of death as classified by disease group (by ICD-X) are circulatory system (27,7%), neoplasia tumor (18.3%), and respiratory diseases (7.8%)…

Table 4. Mortality by disease classification ICD-X (2008)

Disease group	Male	Female	Total
I- Infectious and parasitic diseases	9,0	4,7	6,5
II- Neoplasia tumor	20,8	16,6	18,3
IV- Endocrine, nutrition and metabolism	1,6	3,4	2,7
VI- Nerve system diseases	1,4	2,3	1,9
IX- Circulatory diseases	26,4	28,6	27,7
X- Respiratory diseases	7,6	7,9	7,8
XI- Digestive system diseases	5,0	2,7	3,7
XIV- Reproductive – urinary diseases	1,1	1,6	1,4
XVI- Perinatal period diseases	0,3	0,4	0,4
XVII- Congenital malformation, chromosome abnormality	0,5	0,6	0,6
XVIII- Abnormal symptoms and signs unspecified in other groups	9,2	20,3	15,7
XX- Exogenous cause	15,6	8,1	11,2
Other chapters	1,5	2,7	2,2

Source: Study on causes of death, conducted by Hanoi Medical University and Health Policy and Strategy Institute (2010

1.3. Mortality and morbidity of specific diseases

The communicable disease epidemic remains very complicated. Many dangerous infectious diseases tend to reoccur, e.g., Cholera, dengue fever...

Dengue fever, as of 12/2009, 105,370 cases were notified nationwide, in which there are 87 deaths. Dengue fever morbidity remains at high status (120/100,000 people). Morbidity rate increased by.9.2%, and mortality dropped by 12.1% over the same period of 2008. Dengue fever outbreak is prevalent not only in the southern and central regions, but also throughout the country. In 2009, the outbreak occurred in some northern provinces, in Hanoi alone, there were 16,175 cases of dengue fever, with 4 deaths.[4]

Dangerous accute diahreal epidemic, after many years under control, accure diarrhea reoccurred in 2007 with morbidity rate of 2.24/10 000 inhabitants, and continues to cause new cases. In 2009 alone, Vietnam had 239 cases of positive cholera vibrios (morbidity rate of 0.15/100 000 inhabitants).

Malaria has been pushed back and dropped in many places. In 2006, prevalence of malaria was 1.08/10 000 inhabitants, it declined to 0.68/10 000 inhabitants in 2009. This achievements, however, are not really sustainable as the risk of malaria reoccurrence in some regions are very high. In 2009, over 24.2 million people live in malaria prevalent regions (accounting for 27.6% of national population) mainly in mountainous, coastal areas, and regions with ethnic minorities, remote, isolated regions and borders.[5]

Tuberculosis: During 2007-2009, Case detection rate of new TB positive-smear (AFB +) is 62.7/100 000 inhabitants; TB case notification rate of all forms is 116.2 / 100 000 inhabitants. In which new case detection rate of TB positive-smear (AFB +) declines over years, from 64.2/100 000 inhabitants in 2007; 62.4/100 000 inhabitants in 2008 and 61.7/ 100 000 inhabitants for 2009 estimate. If referring to the annual rate of TB infection (ARI), Vietnam has detected 75% new positive smear cases (AFB+) and cured 90% of detected cases mainly by directly observed treatment short-course (DOTS). With findings from the national survey of TB prevalence 2006–2007, total new TB positive-smear prevalence at one time period is 114/100 000 ; prevalence of TB positive-smear (AFB +) of all forms is 145/100 000 ; prevalence of TB positive-smear with culture and growth is 189/100 000; prevalence of pulmonary TB with bacteriology evidence is 26/100 000. These findings indicate that the prevalnce of tuberculosis in Vietnam is still at high level, and a great number of TB patients in community are undetected or not included in the reporting system. Vietnam is one of 27 countries

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[4] Department of Preventive Medicine. Report of preventive medicine work, 2009

[5] Report from the National Program for Malaria Control, 2006-2009

that have the most serious multi-drug resistant TB (MDR-TB). In 2006, it was estimated that 5,900 TB patients resistant to drugs, taking 2.7% of new cases and 19.3% of relapsed patients. In addition, HIV/TB co-infection has become more and more serious and should be addressed soon.

HIV/AIDS pandemic: *Similar to the global trend, HIV/AIDS situation in Vietnam* tends to halt and steady as in previous years, however, basically HIV/AIDS pandemic is still out of control in Vietnam. This is reflected in statistics of sentinel surveillance in drug users, commercial sex workers and other groups. HIV infection rate per 100 000 inhabitants is 187 people (2009), equivalent to 160,019 HIV infected people who are currently alive. In which, Dien Bien province has the highest rate of infection with 599 people per 100 000 inhabitants, followed by HCM city with 578 people/100 000... Although HIV pandemic seems to halt, it still contains risk factors that break-out widely if effective intervention measures are not delivered proactively and effectively.

Cancer: In recent years, cancer mortality and morbidity is increasing. According to the study on causes of death in 9,293 death cases, in which males took 1,097 cases of death of cancer (accounting for 20.1%) and females had 618 death cases due to cancer (taking 16.1%). Major cancers in both men and women are liver cancer, lung cancer and stomach cancer.

Table 5: Proportion of death of cancer by sex in total 9,293 deaths.

No	Type of cancer	Male		Female		p
		n	%	n	%	
1	Liver	349	6,4	120	3,1	< **0,001**
2	Lung	253	4,6	106	2,8	< **0,001**
3	Stomach	133	2,4	74	1,9	> 0,05
4	Large intestine	46	0,8	36	0,9	> 0,05
5	The upper jaw	29	0,5	13	0,3	> 0,05
6	Others	287	5,3	269	7,0	< **0,001**
	Total	**1097**	**20,1%**	**618**	**16,1%**	< **0,001**

Source: Study on causes of death, conducted by Hanoi Medical University and Health Policy and Strategy Institute (2010

Other epidemics: Apart from difficulties and challenges in relation to non-communicable and communicable diseases during 2006-2010, Vietnam is faced with challenges in newly emerging diseases. Dangerous and newly emerging diseases are at risk of out-breaking into pandemic, influenza type A (H1N1), influenza type A (H5N1)... For influenza type A (H5N1), since the first case detected in December, 2003, so far 37 provinces/cities have notified with 112 cases of morbidity and 57 cases of death. For influenza type A (H1N1), by end of December, 2009, Vietnam has notified 11,104 cases positive with influenza A (H1N1) with 53 cases of death. Although the pandemic was not as serious as

initially evaluated, the transmission at galloping speed and predominance of this virus over normal virus is hiding a threatening risk at the global context if this virus is accompanied by another virus with very strong virulence.

1.4. Health determinants

1.4.1. Socio-economic factor

The Vietnamese economy has been growing at sustainable speed thanks to rational measures. The national economic growth rate stays at 6-7%. The average income per capita (GNI) risen from USD130 (in 1990) to USD1,010 (in 2009), and estimated USD 1,200/head per year.

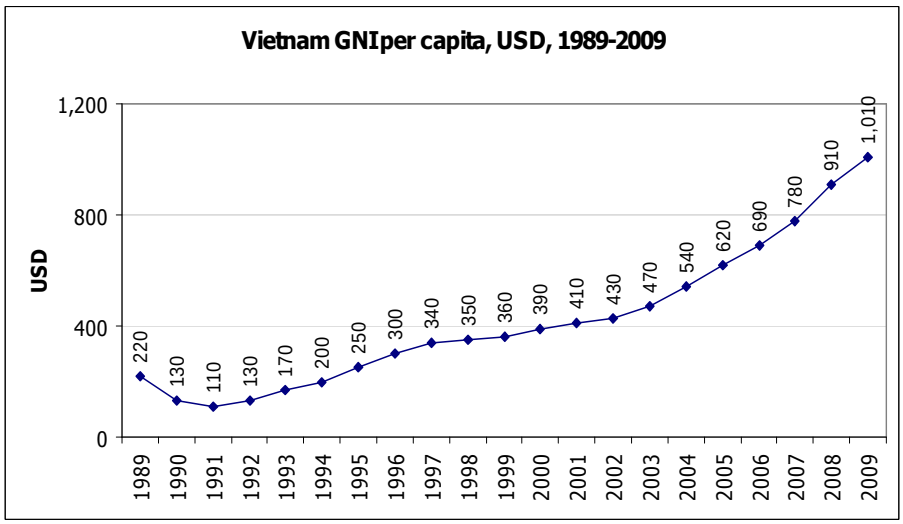

Figure 5. GNI per capita in Vietnam during 1989-2009

Source: http://data.worldbank.org/indicator/SH.XPD.PCAP/countries

Rapid and sustainable economic growth has facilitated favourable conditions for increasing investment in health and health promotion. In common principle, the more economy develops, the more investment in health is made. According to statistics in 2008 of the World Health Organization (Figure 6), countries with similar average GDP per capita like Vietnam (USD2,170-3,209 PPP) have total societal expenditure on health at 6.2% of GDP, and public expenditure on health takes 11.0% of total annual state expenditure. In addition, developed economy entails positive impacts on other factors, making contributions to improving people's health status.

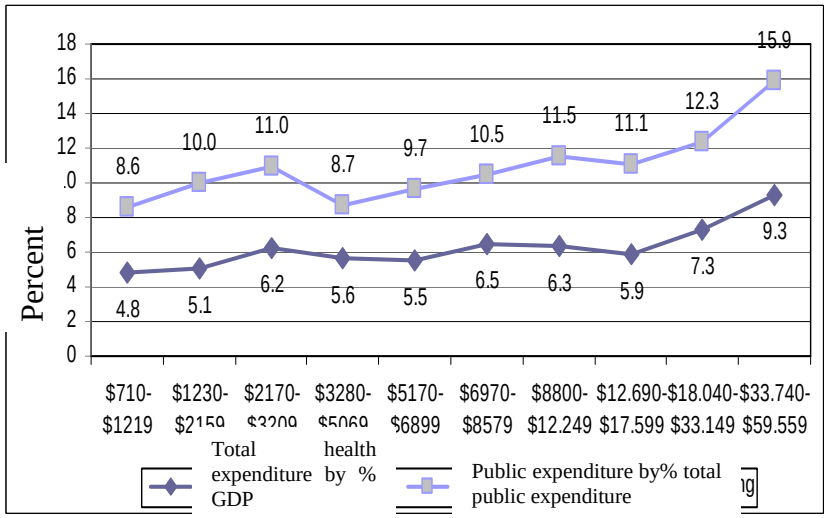

Figure 6. Proportion of average expenditure on health by average GDP per capita (calculated by PPP) according to WHOSIS, 2008

However, in economic development process, rich-poor gap between locations and across regions as well as segments of population tend to increase. This is an important factor that affects inequity in access to and use of health care services, which poses different effects on health status between segments of population.

1.4.2. Population related factors

The preliminary results from Census and housing survey dated 1/4/2009 indicate that Vietnam has a population of 85 789 573 people; population growth rate has fallen sharply. The annual average population growth rate during 1999–2009 period falls to 1.2%, the lowest growth rate over the past 50 years. Some potential population aspects also influence people's health status.[6]

Given a big and increasing population size, Vietnam's population density has risen from 231 people/km2 in 1999 to 259 people/km2. The population structure strongly varies with the proportion of population below 15 years of age declines from 33% in 1999 to 25%. Inversely, the proportion of population at 15-59 age group (the key labour force) rises from 59% in 1999 to 66%, and the population group aged 60 years and older increases from 8% in 1999 to 9% in 2009. There is a big group of women at reproductive age, which will influence the needs for reproductive health care and pediatric care services in upcoming years.

The proportion of the elderly is rising over the last 10 years (1999-2009), "aging indicator" has increased 11 percentage points after 10 years (from 24.5% in 1999 to 35.9%).

Imbalance of sex ratio at birth becomes more and more serious. Sex ratio at birth has increased in the past 10 years, and mostly reflected in the past 5 years. By

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6 Central Steering Committee for Census and Housing Survey: Report from infering sample of Census and Housing Survey 01/04/2009, presented in the dissemination seminar on sample survey. Hanoi-31/12/2009.

2010, estimated sex ratio at birth is 111 boys/100 girls. Possible causes of this phenomenon are the ingrained mind-set of "son preference", old parents live on their sons, accompanied by new medical technology (ultrasound) that helps detect sex of the fetus at early pregnancy period (in many places, ultrasound is taken at CHC), and easy and prevalent abortion in both public and private sector.

1.4.3. Industrialization, urbanization and migration and changing lifestyles

Increasing migration has induced pressures on people's health care in big cities and organization of health care service delivery. Rural-urban migration has also boosted health problems. There are 3.3 million people migrating in the past 5 years with an increase of 163,000 people. After 10 years (1999–2009), total migrants have reached 1.4 million people.

Rapid urbanization and industrialzation promotion has posed huge challenges to health care work. To date, 29.6% of inhabitants reside in urban area compared to 23.7% in 1999. Increasing pace of life is a risk factor to mental health diseases, cardiovascular and non-communicable diseases. Industrialization entails increasing risks of contacting with occupational diseases, accidents at workplace.... Air pollution, environmental pollution, shortage of safe water, shortage of other basic social services, due to failure to respond to the growing needs of population, is threatening people's health.

1.4.4. Climate change

Vietnam is one of the most affected countries due to climate change and rising sea level. Climatic change leads to increasing dangerous infectious diseases, vector-born diseases, threatening human health, especially the poor and near poor.[7] Climate-sensitive diseases are grouped in the highest leading causes of death at the global level. Diarreah, malaria and malnutrition claim the lives of over 3 million people over the world.[8] Warmer weather also supports the development and geographical expansion in the scope of work of mosquitoes, causing more disease threats. In addition, natural disasters pose huge influences on human health with serious consequences of lost safe water source, hunger, accidents, injuries and limited access to health care services. It is recommended that a stable health service delivery model, assuring public health in settings of natural disasters should be developed and secured.

1.4.5 Environmental health

According to preliminary statistics from the Census and Housing survey on 01/4/2009, so far, 87% of households have access to safe water source, 54% of

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[7] Nguyen Quoc Trieu. Opening Speech of Health Minister of Vietnam at ASEM meeting on sharing experiences in response to global climate change and newly emerging diseases. Hanoi 4-5/11/2009.

[8] http://who.int/globalchange/climate/en/

household use hygienic latrines.[9] In line with industrialization and urbanization process, urban environmental pollution, air and water pollution in residential areas is getting serious, which directly affects people's health. Air pollution in urbans is mainly caused by traffic (70%) with overcrowding of vehicles such as cars, motorbikes, and ongoing construction work in cities, drastic urbanization.[10] A lots of problems relating to accute and chronic health due to short-term and long-term exposures to air pollutants. Air pollution is the most dangerous for patients with respiratory and cardiovascular diseases and the elderly…

Athough working environment and conditions have been improved, especially when investors and production facilities import complete technology lines. However, in some local production facilities, many old and out-of-date production lines are being used, thus causing pollution in the workplace. For small-sized and private bussinesses, and traditional craft villages, working conditions are not supervised or under very limited supervision. There is a great in-flow migration from rural to urban seeking job with diverse and uncontrolled work, and working under unsecured conditions, and these people are at risk of health hazards and diseases while no full support from occupational health is provided.[11]

1.4.6. Lifestyle determinants

Tobacco smoking is a top leading preventable risk factor to death. Tobacco consumption in Vietnam is on a rise: in 1998, proportion of smoking in men was 50%, it was 56% in 2002. Meanwhile, tobacco smoking in women takes only 1.8%. Tobacco smoking by age group: highest in the 25-55 age group in men (at 68% - 72%) and 55-64 age group in women (5.8%). One issue of concern is that amongst experienced smokers, proportion of continued smoking keeps rising from 2004 to 2009.[12] Besides disease and death burdens, tobacco smoking poses financial burdens. Tobacco smoking induces huge costs to pay for treatment of smoking-caused diseases. There exists regulation on smoking prohibition in public areas and crownded places, the implementation and fine/punishment enforcement is not strict enough so the effects seem nil in reality. Some measures of communications, ban on advertisement, limited circulation and increased taxation on tobacco… have been applied, the return is below expectations.

Irrational use of alcohol affects people's health via three ways: alcohol drunk, alcoholism and alcohol toxication. According to the Vietnam National Health Survey, 2001-2002, the proportion of males aged 15 years and older drink alcohol is 46%. The higher educational attaiment, the higher proportion of drinkers: About 40% of men with educational attainment at high school and lower drink alcohol, while about 60% of drinkers – in both urban and rural areas – have

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[9] Central Steering Committee for Census and Housing Survey 01/04/2009- Results from sample inferrence. Ha Noi, 12/2009.

[10] MoH, 2008, Vietnam Health Report 2006. Hanoi: Medical Publishing House

[11] MoH, 2008, Vietnam Health Report 2006. Hanoi: Medical Publishing House

[12] MoH and GSO, 2010, 2nd National Survey on Adolescents and Vietnamese Youths (SAVY 2). Hanoi.

completed high school and higher education. Statistics in the Survey of Adolesents in Vietnamese Youths (SAVY1 and SAVY 2) show that the proportion of ever drinking one beer/alcohol amongst people aged 14-17 years in 2004 is 35%, and by 2009 this proportion has risen to 47.5%, for the 18-21 age group, in 2004 this proportion is 57.9% but climbed to 66.9% in 2009.[13]

Nutritional intakes: In general, the current diets of the Vietnamese people contain mainly vegetables, fruits with low lipid compositions, which deems to be a strong protective factor for people's health. However, this situation can change quickly, especially amongst the rich, those living in urban areas where it is easy to access energy-rich foods.

Drug addiction, prostitution: The number of drug users in Vietnam has risen rapidly in rencent years, especially in young aldults. In Vietnam, HIV/AIDS is strongly associated with drug addiction with an estimate of 56.9% of HIV/AIDS infected people is due to drug addiction. The proportion of drug addicts having sex with prostitutes in the last 12 months ranges from 18% to 59%, thus the risk of HIV transmission amongst drug addicts, prostitutes and sex partners is relatively high. Drug use is prevalence in men (accounting for over 90% of drug users) and young adults. Presently, 80% of drug users are below 35 years of age and 52% is below 25 years. According to report from behaviour surveillance in 2000, there is a high proportion of drug users whose educational attainment is completed junior secondary and high school, 65% to 94% of them are unmarried.

2. Preventive Medicine

Vietnam has developed a wide preventive medicine and public health network from the central to village level. The preventive medicine network is strengthened and activated to prevent possible epidemics, and timely responds to health problems related to natural disasters, catastrophes, floods, droughs, etc… … Almost all preventive medicine related indicators have been obtained. Recently, some relavent legal policies have been issued, for instance, the Law on prevention of infectious diseases (2007), Law on prevention and control of HIV/AIDS (2005), Law on food safety and hygiene (2010) and the national strategy for preventive medicine by 2010 and orientation towards 2020... Infrastructure, human resources, working means and budget for preventive medicine work has also been strengthened in recent years.

Preventive medicine work, however, is facing many challenges. Understanding and behaviour of the people on protection and promotion of health remains weak, and actions have not been translated into reality. Health education and communication campaigns do not really target the beneficiaries. Health education in schools and school health are not meeting requirements with education and communication modes are not appropriate and flexible.

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[13] MoH and GSO, 2010, 2nd National Survey on Adolescents and Vietnamese Youths (SAVY 2). Hanoi.

Health risk factors related to environment, safe water, occupation, food safety and hyginene, and changing lifestyles are prevalent in society. Dangerous epidemics and diseases such as cholera, influenza type A (H5N1) have not been tightly controlled and can occur anytime. Accidents and injuries and non-communicable diseases are rising while preventive measures should be comprehensive with inter-sectoral linkages, not merely medical interventions.

Food poisoning prevalence in Vietnam is very high. There are about 150-250 cases of food poisonings reported every year with 3.500-6.500 people affected, and 30-70 deaths. Food posioning due to chemicals, especially pesticides, food preservatives account for 25% of total food poisonings. Although the situation seems to decline in recent time, the development is still very complicated. The number of food poisonings concentrate on collective kitchens, street foods, wedding/death anniversary parties, the number of deaths concentrate on family-prepared foods.[14]

Intersectoral collaboration mechanism and participation of the people, mass and social organizations is limited, and fails to bring in full play their potentials. Capacity of provincial center for preventive medicine is limited in terms of resources, human resource, health information system, planning, equipment and technical tools, and provision of technical supportive supervision to lower levels. Preventive medicine work at the grass-roots level (district, commune and village) has not been fortified compatible with their tasks. Relations between the preventive medicine and sectors, local mass and social organizations are not tight. Incentive policy for preventive workers is not satisfied.

3. Examination and treatment, and rehabilitation

In recent years, health examination and treatment networkk from grass-roots to central levevl both in public and non-public sectors has been expanded and strengthened. Number of patient bed per 10 000 inhabitants in 2010 is at 20.5 beds (excluded CHC beds), which is on a par with regional countries. Resource mobilization has been made to invest in curative care using the state budget, government bill, ODA-loans and mobilized sources from “social mobilization”. As a result, health care facilities have strengthened their infrastructures, training of staff, investment in medical equipment to provide better and more diverse health care services.

Recently, some important legal policies on health care have been developed and issued, notably Law on Examination and Treatment (2009) and Law on Health Insurance (2008). The Ministry of Health is developing guiding documents for implementation. In addition, the Government Decree 43/2006/NĐ-CP on financial autonomy and policy on social mobilization has created new mechanism for sector management, motivating capital mobilization to develop the health care network. Some policies on improvement of health care quality have also been issued, and

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[14] MoH, Submission letter on Draft Law on Food Safety and Hygiene, August, 2009

eventually brought about effectiveness. e.g., Directive 06/2007/CT-BYT and Decision 1816 on rotating professional staff from higher level to come and provide technical support for lower hospitals with a view to improving quality of care...

As a result, the number of patient visists to public health facilities and health care centers reached 2 visits /head/year.[15] The poor find it easier to access health care services, and there is no difference in access to care between income groups. Many modern techniques have been applied, such as: kidney transplant, cornea transplant, stem cell transplants, liver transplant and endoscope surgery... By end 2009, after one and a half years of implementing the Project 1816, an average 30% of reduction in overcrowding has been obtained.

Although many achievements in health service provision capacity have been obtained, the outcome is still weak. Bypassing is relatively prevalent. Many people seek care at provincial and central hospitals to treat very common diseases that can be handled by district, or even communal level. Bypassing in health care leads to overcrowding in high level facilities and under-utilization of services at lower levels, thus causing unnecessary wastes for the entire health care system.

There exists difference in access to quality health care services between income groups and across regions. While people in the North West and Central Highlands (2 most difficult regions) mainly seek care at commune health centers, inhabitants in other regions seek inpatient care at hospitals.

Policy on health insurance has facilitated the poor to increase their access to health care services, however there is a downward trend in the proportion of 20% of the poorest group – with full or partial health care costs paid by health insurance card: in 2006, only 75% of them are paid by health insurance, by 2008 it was 62%. In 2008, the proportion of household paid for health care costs at "catastrophic costs"[16] rose from 11% to 12% of households, which means that avoidance of financial risks when using health care services is very limited.

Presently, management of health care quality is facing difficulties and challenges. Care pathways, standard treatment protocols, and standards guidelines for diagnosis and treatment of diseases are only restricted to some diseases. The development and regular updates of treatment guidelines for diseases based on evidence and intervention efficacy is a huge workload, but it has not become a routine activity of the Ministry of Health and no necessary resources are available to translate it into action. There is no continuum of care and information of patients and treatment courses at referrals, change in health facility, even between health examination visits in the same health facility, which influences quality with rising treatment costs.

Some financial mechanism tends to push health care costs, for example: application of "for-for-service" payment mechanism, mobilizing resources from

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[15] Health Statistical Yearbooks, 2007 and 2008

[16] Surpass 25% of total costs for non-food items of the household.

social mobilization, joint-ventures in investment in medical equipment, financial autonomy, accompanied by poor management capacity, and weak inspection and supervision capacity. These factors motivate revenue collection in some hospitals, which leads up to abuse of medical technologies or drugs in some facilities.

The auditing of health insurance, health inspection, identification of technique abuse, drug abuse and violation of code of conduct, and administrative violation in public health institutions is facing huge difficulties. Application of information technology in hospitals is delayed.

4. Population, Family Planning and Reproductive Health

Since 2005, Vietnam has achieved the replacement fertility rate and maintained this population growth rate over the last 5 years. In 2009, Vietnam's population is 85.8 million people, which is lower than projection. Awareness, attitudes, behaviours on population and family planning of all social strata, including men, has been very positive. The family size with small number of children is preferred by many people.

The health examination and treatment network is strengthened and developed with coverage of 100% districts, 93% communes, 84% villages/hamlets. By 2009, 100% of reproductive health care centers have been perfected.[17] At present, there are 12 specialized obstetric/gynecological hospitals, 12 pediatric hospitals and 2 private obstetric/gynecological hospitals. The number of hospitals with neonatology department, newborn care unit is increasing. Safe motherhood services are carried out widely at all levels. Cases of abortion have fallen, safe abortion services have been expanded. Prevention of reproductive tract infection, sexually transmitted infections, prevention of reproductive tract cancers, prevention and treatment of infertility has been promoted. There are 60 health facilities that implement and maintain "adolescents and young adults-friendly" service points, 50/63 provincial centers for reproductive health care provide reproductive health care services for the old-aged people.

Although progress has been made to maintain a rational fertility rate, reduced maternal mortality, neonatal mortality, and strengthened reproductive health care, more efforts should be made to maintain these achievements and to increase quality of care meeting people's needs for health care. By 2009, there are 28 out of 63 provinces/cities (accounting for 34% of national inhabitants) that fail to obtain the replacement fertility rate. On the other hand, due to population growth rate, the population size will keep rising in the 2011-2020 period. Imbalance in sex ratio at birth gets more serious. There exist discrepancies in maternal and child health status across regions. Neonatal mortality rate remains very high (taking 70% of infant mortality, and 50% of under-five child mortality). Understanding and behaviours of reproductive health of adolescents and young adults is very limited,

[17] By Decision 23/2006/QĐ-BYT

inducing unsafe sex, unwanted pregnancies and increased abortion. Sexually transmitted diseases tend to increase amongst adolescents and young adults.

The network of population-family planning service provision is inadequate, with poor quality, especially in remote, isolated areas and ethnic minorities. Distribution and provision of contraception methods is not flexible with passive acquisition of contraceptives and its sources. Pre-marital health check-up, ante-natal screening and neonatal screening services are not expanded. Education and communication for specific subjects/target groups is not paid due attention. Joint communications and provision of reproductive care services is limited.

5. Human resources for health

The number of health human resource has increased over years, especially number of doctors, pharmacists, nurses and medical technicians. Presently, Vietnam ranks in top rows of health workforce ratio to 10,000 inhabitants, increasing from 29.2 in 2001 to 34.4 in 2008. 100% of communes and 90% of villages have working village health workers, 69% of communes have doctors in 2009.

The network of medical workforce training institutions has been expanded. There are 21 public medical-pharmaceutical faculties/schools (17 of them belong to civil schools, 1 school under military forces) and 3 private medical schools/medical faculties of private universities. Almost all provinces have secondary medical schools, or colleges.

Overall, quality of health workforce has been improved. Many medical categories have been formulated such as bachelor of nursing, bachelor of public health and medical technology bachelor. Many health workers have been trained to upgrade their professional skills in post-graduate courses such as residence physician, specialist level I, level II, master and doctorate. The contingent of technical staff has been strengthened and is able to perform modern techniques... Continuing training is mandatory for all medical workers. The health sector has worked closely with the education and training sector to innovate training programs, open new discipline codes both at university, college and secondary level; strengthening post-graduate training.

Many effective measures have been applied to attract and retain health workforce to work at lower levels and disadvantaged areas. Policies in continuing training, upgraded training and “contract or address-based training” have made positive contributions to improving qualifications and skills of health workers who are currently working at health facilities. Policy on subsistence allowance regime for disadvantaged regions has been issued and implemented; there exists policy and measure to actively support human resource training in disadvantaged areas; rotating professional staff to come and support lower levels has preliminarily contributed to enhancing capacity for lower health workers through in-the-spot training/coaching and technology transfer.

An issue of concern is that there exists imbalance structure and distribution of health workforce, lacking health workers in some specialties (e.g., preventive medicine, anatomy, health statistics…), and rural and difficult areas. Health workforce with high qualifications concentrates in urban and big cities. Migration of health workforce from lower to higher level, rural to urban and from public to private sector and high level facilities has reached an alarming rate, which affects secured availability of health workers in rural, mountainous and the grassroots level.

The ratio of nurse to doctors in health facilities remains very low, which affects nursing care, patient care and quality of care. Statistics, 2008 by WHO indicate that ratio of nurse to doctor in the Philippine is 5.5; in Indonesia is 6.1, Thailand 7.7, while it is 1.4 in Vietnam.

The private sector is developing, and posing great pressure on demand for health professionals. Public health professionals move to work in private health facilities have become more and more predominant, especially highly qualified health workers. Income and working conditions are the major drive for moving to work in the private sector

Quality of training is limited. Qualifications of teachers, methods and teaching facilities are inadequate and poor. There is no unified output criterion as a benchmark to identify appropriate objectives and training program.

Health workforce management is ineffective. Planning for training and use of health workforce is facing huge difficulties. Policy on salary and allowance for heath staff is problematic with subsistence allowance by region and occupation is too low, and lacks a result-based payment mechanism. Working conditions of a majority of health workers are difficult with poor infrastructure and inadequate facilities, and unsafety.

6. Health Information Systems

In line with health system development, health information work has shown considerate improvements in recent years. Many legal policies in health information have been issued, including Law on Statistics, the program for national surveys and health indicator system.

The new national statistics indicator system is issued with updated indicators, including health indicators (Prime Ministerial Decision 43/2010/QĐ-TTg). Many channels of information collection are explored with diverse information sources, including routine reports, household surveys, administrative reports...

With regard to data management, the health sector has started to implement telecommunication solutions, information technology to strengthen quality and effectiveness in data management. The electronic information gate of the Ministry of Health and its subordinates has been upgraded to disseminate health sector information. The MoH publishes annual health statistical yearbook every year to serve planning and policy-making work. This is the 4th year of introducing the

Joint Annual Health Review (JAHR), an informative publication for all stakeholders used in their management, policy-making, planning and health sector support.

However, much done is to be done in health information system. There is no policy, orientation and health information system development plan available. Currently, information of some areas is not available. For example, information about private sector, causes of death, risk factors of non-communicable diseases, "social mobilization" activities in public health facilities, detailed information on health workforce... Collaboration mechanism in information system between agencies, components within the health sector, and between the health sector and other sectors is weak.

Quality of information is limited (sufficiency, accuracy, reliability and timeliness…). Application of information technology to improve quality and comprehensiveness in administration, management and health statistics is ineffective.

Statistics information is preliminarily analyzed, and converted into primary information, the use of data from HMIS for planning, supervision, and policy-making is weak. Deep analyses to serve trend assessment, forecast or recognition of problem, risk factors of the health system, that is transmission of information to evidence, is not done regularly. This is due to the fact that many information sources do not have dissemination mechanism, so it is easy to access; limited knowledge in data analysis, assessment and forecast amongst managers, planners at different levels; databases are poor at many levels and are without data linkages to other sources; failure to manage and update information, store and transmit data by modern technology.

7. Pharmaceuticals, vaccines and blood

To implement the national policy on drugs (1996) and Law on Pharmacy (2005), the Government and MoH issue many legal documents to ensure sufficient provision of quality drugs to patients and rational and safe use of drugs.

Access to drugs in Vietnam is relatively good thanks to a widespread network of drug distribution throughout the country. All health facilities from hospital to commune health center have adequate drugs appropriate with the designated technical responsibility. The state budget is allocated to purchase some essential drugs in the national target programs and free dispensary of drugs for patients with special diseases (TB, HIV/AIDS infected patients, schizophrenia, epilepsy). Expenditures on drug purchase in 2007 nearly doubles those in 2000,

and take about 40% total health care expenditure.[18] Average expenditure on drugs per capita rockets at USD17 per head in 2008.[19]

Pharmaceutical industry is strongly developing in terms of pharmaceutical enterprises and commodity items. Regulations on drug quality is reviewed and revised to gradually integrate into regional and global standards. Vietnam has established and operationalized Good Manufacturing Practice (GMP), good storage practice (GSP), good laboratory practice (GLP), good distribution practice (GDP), good pharmacy practice (GPP) and good agricultural and collection (GACP). Almost all pharmaceutical enterprises reach GMP. Vietnam has committed to harmonize regulations for pharmaceuticals in ASEAN; and will register drugs and compliance to general technical documents of ASEAN (ACTD).[20]

To ensure safe and rational use of drug, the MoH established Technical Council for Drugs and Treatment in hospitals; develop Pharmacopoeia; regulations for drug prescription and drug sale over prescription, list of essential drugs. In 2009, the national center for drug information and adverse drug resistance was established (DI-ADR).

The developments of drug market are relatively complicated in recent years. Some drug price stabilization measures were implemented, e.g., management of procurement of drugs in public hospitals, drug storage, promotion of local drug production, inhibit all forms of benefits to influence physician and drug consumers to promote prescription and use of drugs...

Nevertheless, the administration and control of drug prices in Vietnam market remains a big challenge. Drug price in Vietnam is higher than international reference price, including generic and specialized drugs. Tender in drug procurement seems ineffective in reducing drug price. Some drugs have very limited registered quotas, which creates monopoly and price increase in some drugs. Vietnam is heavily dependent on importation of pharmaceutical materials. In 2008, Vietnam had to import 90% of active substances to produce local drugs.[21] Patient medicine is more expensive than generic one but it still holds a majority of market share due to inappropriate regulations to encourage use of generic drugs. Using material or financial benefits to influence physicians and drug users with a view to promoting description and use of patient medicine should be stopped. Failure to widely apply appropriate payment methods, e.g., case mix payment, DRG, capitation to encourage savings from drug prescription.

Fake medicines, poor quality drugs including eastern medicine and pharmaceutical materials remain a headache, which requires strengthening drug quality control work in terms of number of staff and professional capacity.

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[18] MoH and WHO, Results from NHA 2006-2008. Hanoi: 2009.

[19] Health statistical Yearbook 2008

[20] Meeting between the Ministry of Health and Foreign Companies operating in the pharmaceutical field in Vietnam , Hanoi, 06/12/2007

[21] www.gso.gov.vn

Irrational use of drugs (especially anti-biotics) induces drug resistance in community, increasing adverse effects of the drugs and essential costs for drug purchase. Purchase of drugs for self-medication is very common as regulation for drug sale over prescription is not strictly followed. Standard treatment protocol has not been developed and updated, therefore there is no criterion to control drug prescription. There is a severe shortage of university pharmacists at district level to counsel safe and rational use of drugs. Doctors do not have statistics data of drugs resistance as a reference to prescribe, and microbiological test is not fully implemented.

Vietnam is able to produce many types of vaccines: TB, diphtheria, whooping cough, polio, tetanus, Japanese encephalitis, hepatitis B, measles, typhoid... With the support from GAVI, Vietnam is applying mixed vaccines 5 in 1 (diphtheria- whooping cough- tetanus-hepatitis B- Hib) in 5 years, 2010-2015. In 2010, the Government puts vaccines in the lists of specially supported commodities in the national program for improvement of productivity and quality.[22]

Although expanded program for immunization (EPI) has been evaluated a great success, due to budget constraint, some vaccines for infectious diseases are not included in the EPI.

In the field of blood and blood products, in 2001, the Prime Minister approved the program for safe blood transfusion. With the support from the World Bank, Vietnam constructed 4 regional blood transfusion centers in Hanoi, HCM city, Hue and Can Tho. In 2007, the Ministry of Health issued a regulation for blood transfusion. The movement of humanitarian blood donation is expanded, the proportion of blood pools with full screening as regulated increases overtime with 74% of total blood units collected in 2009.

The current difficulty is that we fail to mobilize sufficient voluntary blood donors to meet patient's need. About 20% blood collection comes from blood sellers. Many health facilities have to mobilize blood donation in the spot, failing to comply with regulations for blood screening, and are unable to conduct partial blood transfusion, thus shortage of blood is getting more serious. In remote and isolated areas, access to blood and blood products face enormous difficulties.

8. Medical equipment and technology

Considerate investment in and upgrading of medical equipment has been made in recent years. The government issued many legal documents to implement national policies on medical equipment 2002-2010. A system of legal documents for procurement is relatively sufficient, quality of tender has been improved, and quality of consultancy services and provision of commodities is enhanced. To promote social mobilization, many public health facilities have mobilized huge

[22] Decision 712/2010/QĐ-TTg

non-state financial resources to purchase medical devices and develop high technology.

To ensure quality and effectiveness, inspection of medical device procurement is also promoted to supervise efficiency of investment in medical equipment. The Ministry of Health collaborates with the Center for Quality Standard (Ministry of Science and Technology) to develop and issue 135 sector standards and 35 Vietnam standards for medical device. Verification and calibration of medical equipment is conducted in many health facilities. The scope and quality of training on managerial, technical staff and operation skills has been strengthened.

The system of production, business and import-export of medical equipment has been expanded. Presently, there are 48 local facilities that are able to manufacture and produce medical equipment with 621 types of products, and are granted license for circulation by the MoH. The Government encourages local enterprises to study, manufacture and produce medical devices, and develop preventive and corrective maintenance services and standardized audit of medical equipment.

However, in medical equipment field, there exist some problems of concern. Efficiency from investment in medical equipment is limited. There is no adequate information about current medical device capital and utilization rate by level of care, laying out a formation for the state management and support health facilities more effective investment in this field. Health technology assessment (HTA) aims to select the most cost-effective technology appropriate with actual need but is neglected. In some localities, the number and types of medical equipment are below the need, and incomplete while in other facilities, procurement of equipment is unnecessarily abundant. There is no standard design for hospitals, nor need-based medical equipment lists by level of care, by region, especially primary health care facilities.

There is inadequate policy that supports the production of medical equipments and consumables in the context of integration into the world economy, no strategy appropriate with capacity and local needs. Most locally produced equipment is very common with low technology contents. Quality of domestic medical devices is unstable with low accuracy, undurable and unreliable.

Standardized audit, warranty and preventive and corrective maintenance is almost neglected by health facilities, thus the equipment timeline is very short, low utilization rate and efficacy. Quality control and inspection, measurement and calibration of imported equipment and domestic devices is not strictly conducted. Monopoly of some suppliers in terms of warranty, maintenance, minor repairs, and provision of spare parts and consumables after guaranty period make the facilities dependent on the suppliers. Human resource for medical equipment is far below expectations.

With regard to treatment of medical waste, some health facilities fail to ensure essential conditions for medical waste management and infection control.

Almost all sewage treatment systems were constructed a long time ago, and have become downgraded, and waste management technology fails to meet environment standards.

9. Health financing

There have been positive changes in health care financing in Vietnam in recent years. Total societal expenditure for health increases rapidly. During the 1998-2008, calculated by reference price, the average increase in annual expenditure for health is 9.8%.[23] Total health expenditure over GDP increases by year, at 6.2% of GDP in 2007, which is higher than some regional countries. The average health care expenditure per capita in 2008 was VND 1.1 million (about US$60, equivalent to $PPP178 as per purchase power in dollar).

The proportion of public share out of total expenditure on health increases obviously, from 20% in 2000 to 43% in 2008. Vietnam is striving to raise this proportion to over 50%. The National Assembly issued Resolution no. 18 to accelerate increase in annual state budget for health with an increase in health budget higher than increase in annual average expenditure. The proportion of state budget for health out of total state budget expenditure rose from 4.8% in 2002 to 7.4% in 2007 and reached 10.2% in 2008. The government mobilized funding from the government bill and state budget to invest in upgrading district, inter-district and provincial hospitals in some disadvantaged provinces and some specialized hospitals.

The proportion of out-of-pocket payment has declined rapidly over the past 10 years, from 80% in 2000 to 65% in 2005 and 52% in 2008. The proportion of expenditure for preventive medicine out of total health expenditure increases sharply from 23.9% (2005) to 30.7% (2006), but not steady over years.[24] Vietnam is striving to achieve 30% of the state budget for health for preventive medicine work.

Health insurance coverage in community has risen. In 2010, it is estimated that the proportion of Vietnamese people covered by health insurance is 60.5%. The proportion of contribution from health insurance fund out of total health care expenditure increases over years, from 7.9% in 2005 to 17.6% in 2008.[25] Law on Health Insurance in 2008 defines a roadmap for universal insurance by 2014. There are new improvements in policy on supporting the poor and vulnerable groups in health care. By 2008, total poor people provided with health insurance card are 15.8 million people. The state budget used to purchase health insurance for the poor accelerates with a premium from VND50,000 (2002) to VND394,200 (2010, equivalent to 4.5% of annual minimum salary). Since 2008, the state budget is used to support 50% of the health insurance premium for members of the near poor

[23] MoH - WHO. National Health Account ,1998-2008. Statistical Publishing House. Hanoi, 2010
[24] MoH - WHO. National Health Account ,1998-2008. Statistical Publishing House. Hanoi, 2010
[25] MoH - WHO. National Health Account ,1998-2008. Statistical Publishing House. Hanoi, 2010

enrolled to voluntary health insurance scheme, part of premium for school students, and exempt for children under 6 years old.

However, there are some problems of concern in health financing. Although public expenditure for health care has increased in recent years, such increase still falls below actual needs (below 50%). The state budget investment in health care fails to meet requirements for health sector development. The proportion of household's out-of-pocket payment is still high (52%). Expenditure from health insurance fund for health care is very low, taking 17.6% of total annual health care expenditure in 2008. Total foreign grant and loan values takes 1.8% of total health expenditure every year, about 8-10% of total state budget expenditure for health care, and may fall in the future as Vietnam will be come middle income country.

There is difference in health financing across localities and levels. According to Law on Budget, expenditure for local health depends on level of interest of local authority in health care work as well as ability to raise revenue, therefore some localities find it difficult to prioritize budget for health sector.

The current state budget allocation mechanism for health facilities fails to motivate efficiency of service provision. The state budget is allocated based on bed norms, population or number of health cadres, regardless of outcomes and quality of services provided. Expenditure for preventive medicine is very limited. Most state budget allocation for health is for recurrent costs, with low investment so it is very difficult to improve infrastructure, application of science and technology, enhancing quality of care in public health facilities.

In hospitals, "for-for-service" payment method is posing irrationality, creating conditions for lab-test abuse and drug abuse by service providers. The Ministry of Health and Vietnam Social Securities have jointly piloted and developed new payment mechanism such as capitation, case mix payment. However, application of a new payment method should be taken into thorough consideration of its pros – cons and feasibility to adopt in the context of Vietnam. In addition, appropriate investment should be made to standardize health examination and treatment system, training of staff, and learn international experience to design a suitable and effective payment method for Vietnam.

Currently, there is no effective measures to control health care costs. The average health expenditure per capita doubles from 2005 to 2008. This increase reflects a big investment in health with a view to enhancing quality of care, health care facilities apply many high technologies with high quality, and modern equipment… However, this increase is partly attributed to other factors, e.g., increased electricity price, water, minimum salary, irrational choice of service by patients (bypassing), lack of mutual recognition of lab-test results between health facilities…

The protection of people against financial risks when using health care services should be rationalized and strengthened. The proportion of health insurance coverage is below the universal health insurance target by 2014. Most uninsured have difficult life (farmers, the near poor, low-income people,

employees in small and medium-sized businesses…). The state budget, out of others, contributes a relatively big proportion to health insurance fund. Reality indicates that it is impossible to implement universal health insurance with sole funding source from the state budget in a country like Vietnam. The near poor is subsidized a minimum 50% of the premium, but there is a very low rate of enrollment amongst the near poor, if they are not subsidized more.

Some insured people in poor provinces are unable to access health care services due to relatively high indirect costs (foods, travel), plus long distance from home to heath facility and poor quality of care. Household's out-of-pocket payment out of total health care expenditure remains high. The proportion of households paying for catastrophic costs is still high and steady overtime. Especially, the poor with free health insurance card but their health care expenditure at catastrophic level is nearly 30%,[26] (mainly indirect costs when seeking care, e.g., foods, travel for patients and care-givers). The application of co-payment mechanism in health insurance for the poor and difficult participants is necessary to contain abuse of health insurance services, but this also decreases accessibility to health care services of insurance card holders.

10. Governance

There are new development in health policy and strategy formulation. Many Laws, under-Law documents[27], strategies, policies have been formulated and enacted with relatively high quality. Communications within health institutions and with other sectors, stakeholders aim to reach a consensus in policy development have been strengthened. Many health policies have been revised, supplemented timely.

The organizational structure of health delivery system has been completed and stabilized both at central and local level. At the central level, the organizational structure of the Ministry of Health is adjusted by Government Decree 188/2007/NĐ-CP and Decree 22/2010/NĐ-CP. After a time, district health network was split into 3 units, structure of the grass-roots level has been adjusted and stabilized. District health center was established to perform two preventive functions: health care examination and treatment and management of commune health centers; in some locations where district hospital was established, then district health center carries its function of proving preventive medicine services and management of commune health center.

The implementation of Government Decree 43/2005/NĐ-CP on financial autonomy, although some problems arise, has created conditions for development and strengthening effective performance of public health facilities. The Ministry of

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[26] Wagstaff, A. 2007b. "Health Insurance for the Poor: Initial Impacts of Vietnam's Health Care Fund for the Poor." Impact Evaluation Series #11.Policy Research Working Paper #WPS 4134, World Bank, Washington,DC.

[27] Law on Pharmacy, Law on health examination and treatment, Law on prevention infectious diseases, Law on prevention and control of HIV/AIDS; Law on Health Insurance; Law on donation, reception of tissues, human body parts, and donation and receipt of dead body.

Health is reviewing to detect and overcome the trends of changing public hospitals into private one under any form, addressing limitations due to complete financial autonomy as directed by the Politburo.[28]

Strengthening health inspection system, health inspection work, against negativeness and corruption, wastes is considered a key task in the state management of health sector. Technical support in outreach services and lower level, including monitoring, guiding and check-up health care tasks by higher level to lower level should be maintained. The patient council in public hospitals keeps playing active roles in direct supervisory of health care quality.

However, in the health system governance, many problems should be innovated and completed. First of all, should strengthen capacities in management, health policy and strategy development to better respond to changing requirements of the health care system towards equity, efficiency and development. The Politburo observes that: *"the health sector is delayed in innovation and confused both in awareness and development of a working mechanism"*.[29] Many health policies are delayed for reform or have been reformed but not basically and incompletely. Evidence-based policy making should be further strengthened.

Participation of mass organizations, civil society, occupational associations, beneficiaries and community in health policy and strategy formulation, dialogues and advocacy to reach consensus on policy should also be improved.

The development, issuance of technical standards to manage health care quality is not fully implemented. Standards, or norms for laboratories have not been issued, which leads to difficulties in controlling quality of care and causing great wastes as many health facilities do not recognize lab-test results of other facilities. There is an absence of technical standards to ensure evidence-based cost-effectiveness.

Organization of local health system is in transition period, re-integrated after a time of being separated into different units. The health care system organization model is not appropriate and unstable, especially the grass-roots and preventive medicine facilities[30]. Integration of prevention and treatment in the grass-roots health care network is weak. In health insurance, lack of a full-time unit responsible for the state management of health insurance at provincial and a lack of professionalism of health insurance implementing agencies.

Health inspection, check-up and supervision is facing huge difficulties and limitations, and fail to meet up requirements for state management of health due to insufficient human resources and finance, lack tools and procedures for supervision and inspection, lack rational regulation for bonus and punishment…

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[28] Conclusion 42-KL/TW dated 1/4/2009 of the Polit buro.

[29] Conclusion 42-KL/TW dated 1/4/2009 of the Polit Buro

[30] Conclusion 42-KL/TW dated 1/4/2009 of the Polit Buro

11. Implementation of health indicators

Health indicators are indicated in Prime Ministerial Decision 35/2001/QĐ-TTG dated 19/3/2001 on Strategy for people's health care and protection during 2001-2020; Decision 153/2006/QĐ-TTg dated 30/6/2006 on comprehensive master plan for health sector development by 2010 and vision 2020; Indicators designated by the National Assembly and some other documents. Implementation of health indicators is presented in table below.

Table 3: Results from implementation of basic indicators

Indicators	Target by 2010	Expected Implementation 2010
1. Life expectancy at birth (years)	71,0	73
2. Population growth rate reduction (p1000)	0,2	0,2
3. MMR (p100.000)	70	68
4. IMR (%o)	<25,0	<16,0
5. U-5MR (%o)	<32,0	25,0
6. Newborns <2500 gr (%)	<6,0	5,1
7. U-5 child malnutrition (%)	<20	18,0
8. Fully vaccinated children (%)	>90	>90
9. Commune with doctor (%)	70	70
10. Commune with midwife (%)	>95	95
11. Villages with active VHW (%)	85	90
12. Number of doctor/10,000 inhabitants	7	7
13. Number of pharmacist/10,000 inhabitants	1	1
14. Number of public bed/10,000 people	>20,5	20,5
15. Commune achieving new national benchmark for commune health (%)	80	80

Assessment results indicate that all health indicators have been obtained or even surpassed the set targets.

12. Priority issues to be addressed

The Joint Annual Health Review 2010 (JAHR) analyses the current health sector status and identifies problems of concern to be addressed in upcoming years. On the basis of the health sector framework, priority issues to be solved in the next 5 years are presented in respective categories below:

- *Health status and determinants*: Relatively large disparities in health status across regions, income groups; Changing disease patterns, and people's growing needs for health care; increasing adverse risk factors to health.
- *Preventive medicine and primary health care*: The grass-roots health care network is facing huge difficulties, especially in mountainous, remote, isolated areas; preventive medicine network (especially district level) remains weak. Inter-sectoral collaboration and public participation in preventive work is

limited. Understanding and awareness of the people and some cadres on health protection and promotion is weak.

- *Health examination and treatment:* Responsiveness of the curative care network is limited; quality of care remains poor; overcrowding in hospitals has not been solved strictly; financial mechanism and hospital management remains a problem of concern.
- *Provision of services for population-family planning and reproductive health:* The risk of increasing fertility rate may reoccur in many localities; quality of population is low; imbalance of sex ratio at birth tends to increase. Quality of care for FP, maternal and child care services is poor, and there exists disparity in maternal and child health status across regions and between segments of population, i.e. ethnic minority group, young adults and migrants.
- *Human resource for health*: Health workforce is inadequate and imbalanced in terms of structure and distribution; quality of health workforce remains limited; especially the mountainous areas and ethnic minorities, health human resource management seems ineffective.
- *Health information*: Policy on health information system is incomplete; quality of information is poor; ability to reconcile, analyze and use statistics information is weak.
- *Pharmaceuticals, vaccines and biomedical products*: Domestic production of drugs is very limited; drug price is high; quality of drugs and pharmaceutical materials should be further improved; Irrational and unsafe use of drug. Expansion of new vaccines and mixed vaccines, and sustainability of vaccine provision is challenging.
- *Medical equipment:* Efficiency in investment in medical equipment seems limited; domestic production of medical device is limited; quality assurance of medical equipment remains very weak.
- *Health financing:* The proportion of public spending on health sector is low; effectiveness of financial source distribution is limited; coverage of health insurance is limited; health care cost control is facing difficulties.
- *Health system governance:* Capacity of health policy-making, strategy planning, inspection, monitoring and supervision is weak.

Apart from issues mentioned above, there remain specific problems of different areas to be solved. All aforesaid issues are inter-linked and should be addressed in a comprehensive manner. Given resource constraints, priorities should be given to: Strengthening health care system management capacity (both at central and local level); consolidating, stabilizing and developing health delivery system with special attention to the grassroots level, development of health human resource with a long-term vision to 2010 and 2020.

PART 2
FIVE-YEAR HEALTH SECTOR PLAN, 2011-2015

1. Opportunities and challenges

1.1. Opportunities

- The Vietnamese Party, National Assembly and Government are paying more interest in the health sector, identifying important role of health in the cause of national industrialization, modernization, regarding investment in health as a direct investment for sustainable development.
- The legal system for health care is gradually accomplished; Many Laws, government Decrees, Prime Ministerial Decisions, Joint Circulars of Ministries have created clear and transparent legal corridor for health sector construction and development process.
- The health care delivery structure, after some changes, has reshaped and stabilized, which drives a boost for future development.
- The national economy is developing at rapid speed, annual economic growth rate is 7-8%, Vietnam has become a middle-income country, which furthers the Government to solve difficulties, troubles and increase investment in health care.
- Awareness and participation of the people, party echelons and authorities in health care work is more intensive; inter-sector collaboration in health care is extensive and effective..

1.2. Challenges

- People's growing needs for health care both quantity and quality. Disease patterns are changing with possible reoccurrence of some infectious diseases, non-communicable diseases, injuries, accidents are rising with new epidemics and complicated developments; adverse health determinants are also increasing (environment, climate change, lifestyle).
- Responsiveness of the health sector is weak; many health facilities are deteriorated; medical equipment is old, out-of-date and asynchronous; shortage of health workers, staff qualifications and skills are low; health staff structure and distribution is imbalanced failing to meeting people's health care needs; public expenditure for health is low; some reform policies and mechanisms are delayed.
- Challenges in health sector development towards equity and efficiency in the setting of market economy with multiple policy impacts on the health sector, widening rich-poor polarization are truly obvious.
- Ensuring balanced development of grass-roots health and primary health care so that everyone can benefit quality basic health care services,

development of high medical technology and techniques to improve professional skills and quality of health care services in the context of low public expenditures for health.

2. Objective

2.1. General objective:

Continue to develop a health care system towards equity, efficiency and development, improving quality of care, meeting the growing and diverse needs for health care of the people for the protection, care and improvement of heath; reducing morbidity and mortality, promote health and increase life expectancy, improve the quality of population, contributing to improving the quality of life, the quality of the human resources in response to the needs of industrialization, modernization, national building and defense.

2.2. Specific objectives:

- To consolidate and perfect the health care network at all levels; Continue to invest in upgrading health care system capacity, with priority given to the grass-roots level, health care network in the mountainous, remote and isolated areas.

- To promote preventive medicine and primary health care in the new situation, assuring every people access to quality basic health care services; ; to enhance performance of the national health target programs, keep epidemic outbreak under control; to strengthen inter-sectoral collaboration in people's health care; and gradually control health risk factors.

- To continue to develop and improve quality of health examination and treatment with a balance of basic and universal health care services for the people and intensive and high-technology services.

- To enhance performance of population and family planning activities, reproductive health, securing stable population with rational population growth and quality, and gradually mitigate imbalance of sex ratio at birth.

- To promote health human resource both quantity and quality in response to actual needs of the health sector; to strengthen health workforce for the rural, mountainous, remote and isolated areas with focus on some specialties (para-clinical, preventive medicine and pediatric care, health education and communications, counseling…).

- To transform performance and health care financing mechanism towards increased public expenditure for health, development of universal health insurance, adjustment of budget allocation and use to increase its efficiency..

- To develop pharmaceutical industry and domestic production of medical equipment, strengthening effective use and management of drugs, bio-medical products and medical devices.

- To strengthen management capacity in response to the needs for health sector reform and development in the new situation.

3. Basic health targets

The proposed health indicators and targets below are used to monitor objectives and health sector development orientation.

Table 4: Basic health targets during 2011-2015

No	Indicators	Estimates 2010	In 2011	In 2012	In 2013	In 2014	In 2015
	Input indicators						
1.	Number of doctor/10,000 inhabitants	7	7.2	7.4	7.6	7.8	8
2.	Number of pharmacian/10,000 inhabitants	1.2	1.3	1.4	1.5	1.6	1.8
3.	Villages with active VHW (%)	85	86	87	88	89	90
4.	Commune with doctor (%)	70	72	74	76	78	80
5.	Commune with midwife or assistant doctor in obstetric and pediatric care (%)	> 95	> 95	> 95	> 95	> 95	> 95
6.	Hospital bed per 10,000 inhabitants (exclude CHS bed)	20.5	21	21.5	22.0	22.5	23.0
	Performance indicators						
7.	Fully vaccinated infants (%)	>90	>90	>90	>90	>90	>90
8.	% of commune achieving new national benchmark for commune health	-	40	45	50	55	60
9.	Health insurance coverage (%)	60	63	67	71	76	80
	Outputs indicators						
10.	Life expectancy at birth (years)	73.0	73.2	73.4	73.6	73.8	74.0
11.	MMR (p100,000)	68	67	66	64	61	58.3
12.	IMR (p1,000)	<16	15,5	15,3	15,2	15	14,8
13.	U-5MR (p1,000)	25	24.0	23.0	22.0	21.0	19.3
14.	Size of population (million inhabitants)	86,920	87,810	88,694	89,570	90,438	<92
15.	Population growth rate reduction %*o*	0.20	0.20	0.20	0.20	0.20	0.20
16.	Population growth rate (%)	1.04	1.02	1.00	0.98	0.96	0.94
17.	Sex ratio at birth (boys/100 girls)	111	112	112	112	113	113
18.	Under-five child malnutrition rate (weight for age) (%)	18.0	17.3	16.6	16.0	15.5	15.0
19.	HIV/AIDS prevalance in community (%)	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3

4. Key tasks

4.1. Consolidating, and completing health care delivery network especially the grass-root health

To consolidate, complete and stabilize health care delivery structure from central to local level, especially grass-root health network (district, commune and

village), rural health and health in mountainous, remote, isolated and disadvantaged areas, ensuring equivalent access to quality basic health care services.

To evaluate and summarize local health care structure to stabilize the organizational apparatus, functions and tasks of health care institutions suitable for the local context, effective coordination of resources, and local health care activities in the spirit of Resolution No.46-NQ/TW of the Polit Buro "local health institutions are managed by the vertical health sector".

To strengthen investment in commune health centers in infrastructure, equipment and staff training by Prime Ministerial Decision 950. Striving by 2015, 80% of communes have active doctors; over 95% of communes have midwife or obstetric-pediatric assistant doctor, 60% of communes achieving the national benchmark for commune health in the 2011-2020 period. To train and provide medicine bags for village health workers as accredited by the MH's regulations, striving 90% of villages/hamlets have active village health workers.

To implement well targets set in the national target program for developing new rural.

To promote private health development, especially private hospitals. Strive to achieve minimum 1.5 private beds per 10,000 people by 2015. To strengthen public-private partnership in health care with a view to enhancing quality of care and better respond to people's health care needs.

4.2. Strengthening preventive medicine, national target program for health

To consolidate, stabilize and investment for preventive medicine system development at all levels in terms of infrastructure, medical equipment, staff training, especially the district preventive medicine network. To promote preventive work, strengthen health education and communication so that people will understand and actively take actions to prevent epidemics; to develop an early warning system, rapid response; active epidemiological surveillance to prevent epidemic outbreak.

To continue to promote active preventive medicine and to keep large-scale epidemic outbreak under control. Apart from traditional epidemics like dengue fever, malaria …, special attention should be paid to other pandemics that are at risk of re-occurring or hiding such as influenza, cholera, acute diarrhea... To strengthen capacity for epidemic surveillance system; to strengthen inter-sectoral collaboration in epidemic prevention, especially animal-to-human transmission epidemics.

To effectively implement environment health, supervision and management of medical waste that causes environment and other health harmful effects.

To develop effective preparedness plans in response to emergencies, natural disasters, catastrophes, newly emerging epidemics; to strengthen health education and communications, tobacco and alcohol abuse control; to strengthen

management of non-communicable diseases (cardiovascular, diabetes, cancers, hypertension...); to strengthen school health activities; maternal and child health care, health care for the elderly, and rehabilitation…

The national program for prevention of social and dangerous epidemic diseases: Organization for effective performance and delivery of projects under the national target programs which were approved by the Prime Minister such as tuberculosis; leprosy; malaria; dengue fever control and expanded immunization.

Food safety and hygiene: Projects on strengthening capacity for food safety and hygiene control in Vietnam; education and communications on food safety and hygiene; to strengthen capacity for quarantine system of food safety and hygiene; prevention of good poisonings and food related diseases in Vietnam; assurance of hygiene in the production, preliminary preparation and processing of farm products; assuring safety for aquatic species, safe living environment and safe foods for aquatic culture species.

HIV/AIDS prevention and control: Effective implementation of projects on information, education and communications for behaviour change and HIV/AIDS prevention and control; Intervention projects on mitigating HIV/AIDS transmission; surveillance, treatment and care of HIV/AIDS, and prevention of mother-to-child transmission of HIV (PMTCT)…strengthening capacity for provincial and central preventive medicine system, and HIV/AIDS control;

Sanitation and safe water: To work in close collaboration with line Ministries and sectors to steward and supervise environmental sanitation, safe water supply, management of medical wastes. Ensuring 100% of health facilities have standard system for management of dangerous medical wastes. To implement activities for environment health improvement, occupational health, hygiene and safety at workplace; prevention of injury and traffic accidents.

4.3. Consolidating, developing and improving quality of health examination and treatment

To continue to consolidate and complete health care network at all levels, especially provincial, regional and specialized hospitals (oncology, obstetrics, pediatrics...) to strengthen responsiveness of hospitals at all levels. To do planning for health care network in line with people's health care need in regions and residence. To strengthen effective use of investment to improve quality of care, especially, district, regional hospitals that have been invested in recent years. To combine development of basic health services with high technology, specialized medicine, public and private sector.

To adjust technical responsibility level towards expanding services, medical techniques, especially in lower levels to facilitate people to access quality health care services closest to where they live and work.

To enhance quality of care: To continue to promote implementation of Health Minister's Directive 06/2007/CT-BYT dated 07/12/2008 on improving

quality of health care examination and treatment. Pay special attention to addressing drug abuse, para-clinical tests, expensive and unnecessary high-tech services for patients. To reinforce regulations for granting practice license by Law on health examination and treatment for all public and non-public health workers. To strengthen control of drug quality and medical equipment.

To complete legislation that guides the implementation of the Law on health examination and treatment, care pathways in curative care, regulations for safe and rational use of drugs, comprehensive care, infection control and management of medical waste. To expand comprehensive care models. To strengthen medical ethics education, regulation of behaviors; to make remedial sanction for violations of professional ethics. To implement medical technology assessment to identify effective, cost-effective and efficacy medical interventions, and to ensure quality of care.

To prevent hospital overcrowding: To implement comprehensive and effective measures to gradually reduce hospital overcrowding, rationally use medical services, and gradual reduction of hospital services, including: Step-by-step to establish an effective referral system, encouraging provision of appropriate heath examination and treatment services by designated clinical level preferably through health insurance; transforming hospital financing mechanism shifting from fee-for-service to package payment method, towards DRG payment mode, and other modern payment methods; to consolidate and improve quality of care at the grass-roots level; to strengthen preventive work and primary health care; expand hospital care network to meet people's needs for health care…

To continue to promote technical support, and develop schemes to rationalize Health Minister's Decision 1816/QĐ-BYT dated 26/5/2008 on "Rotating professional staff at high level facilities to support lower facilities to improve health examination and treatment quality".

Hospital financial management: To implement Government Decree on transforming working mechanism, and health financing mechanism; to implement hospital autonomy; reforming the state budget allocation mechanism for hospitals and payment methods. To take feasible measures to control hospital costs.

Strengthening hospital management capacity: To strengthen management and effective use of human resources in hospitals; To develop and apply information technology in hospital management;. To organize long-term and short-term training courses on hospital management for different participant categories focusing on financial management, human resource, medical equipment, infrastructure and quality of care. To construct green-clean-beautiful hospitals. To ensure proper implementation of hospital waste management to ensure hygienic environment.

Traditional medicine: To keep implementing the national policy on traditional medicine, develop legislation to promote development of oriental medicines and pharmaceutical materials; guiding documents for clinical therapeutic protocols using traditional medicine and treatment procedures with

mixed modern and traditional medicine for some diseases. To issue treatment protocol by traditional medicine for some diseases. To develop standard and strengthen audit of quality of care by traditional drugs and products. To strengthen organization structure in traditional medicine from central to local level.

4.4. Strengthening population - family planning and reproductive health care

To complete legislation system and documents to create a legal corridor framework and favorable social environment to effectively implement population, family planning and reproductive health care.

To implement effective national program for population - family planning, ensuring achieving targets for population work, maintaining fertility rate at 0. 2%o, keeping annual population growth rate below 1% under control. To implement comprehensive and effective measures, including technical measures, combined with inspection, checks and strengthened communications to reduce imbalance in sex ratio at birth at 113 boys/100 girls.

To consolidate, invest in infrastructure, equipment to increase people's access to population-family planning and reproductive health care services, especially essential health care package; narrow down the gap in reproductive care indicators, and maternal and child health care indicators across regions, between segments of population; reduce maternal and child mortality, trying to achieve targets in the MDGs for maternal and child health; provide pre-birth screening services and neonatal screening; reduce unwanted pregnancy; reduce reproductive track infection diseases, sexually transmitted diseases.

To organize professional training for staff of population and reproductive health toward professionalism; to improve capacity and implement scientific study on population and reproductive health.

4.5. Developing health human resources

To prioritize investment in upgrading training facilities, to improve training quality in universities for health professionals, training materials and methods; investing in upgrading teaching facilities, strengthening clinical practice and implementing management measures to improve capacity and quality of medical training.

To gradually develop health cadres both quantity and high quality, balanced structure and distribution of heath workforce, meeting development need of the health sector in both public and private sectors. To develop technical and capacity criteria for each health cadre, standardizing training outputs; To issue health practice licenses for health professionals who meet standards.

Continue to implement the project on free entry to medical schools, training by address, concentrated 4-year medical and pharmaceutical training; expanding training targets for assistant doctors, midwives, nurses, pharmaceutical staff, training village health workers, village midwives as requested by the Ministry of Health in response to health workforce needs in rural and disadvantaged regions.

To strengthen post-graduate training (specialist doctor level II, II; master and doctorate) for health workers. To develop policy on incentive and support health workers in the northern regions, central highlands and mekong delta to pursuit post-graduate training courses.

To promote scientific research and application of scientific advancement in health care activities, especially basic medicines, high-tech medicines, clinical medicines, public health and health management...

To develop and implement projects on developing high-quality health human resource, training on specialized and key medicines to develop advanced medical technology suitable with the context of Vietnam.

To continue implementing staff rotation policy, increase direction at level, technology transfer to lower level. To apply science, technology and advances in medical science in the world and region, develop hi-tech medical center.

To strengthen management and effective use of health human resource. To review and propose appropriate policies and measures to secure deserving incentives for health workers in different specialties, levels, and to attract and retain cadres to work in mountainous, remote, isolated and disadvantaged areas, and the grass-roots level.

4.6. Developing health information system

To develop a master plan for health information system by 2015 and vision 2020 to continue consolidating, developing comprehensive, consistent and quality health information system from central to local levels, in public and private health sectors. To complete indicators, registers and statistics reports, guidelines for health information management, hospital information, information on preventive medicine and epidemic control, teaching and scientific research…

To develop health information database at all levels; upgrading information quality (completeness, accuracy, timeliness). To develop appropriate regulation and mechanism for data collection from the private sector, e.g., number, types, size and services, patient visits and service provision... To strengthen capacity for data synthesis, analysis and processing. To develop a mechanism for sending feedback to health information quality.

To develop a monitoring system to follow-up priority issues, including: supervision, reporting, response and forecasting of infectious diseases, database of non-communicable diseases, food safety and hygiene; information on private sector (number, type, size, services, patient visits and service provision…). To strengthen management and information sharing between national target programs.

To gradually modernize health information system suitable for financial, technical capacity and utilization need of each level, including upgrading hardware and development of software, information sharing modes, transmission, reporting data via internet…

To strengthen information dissemination to users with diverse and

appropriate modes; to strengthen utilization of information for direct management in each facility, level and use information for health policy and strategy development.

4.7. Renovating health service operation, financial mechanism

To increase yearly state budget for health with an expense speed higher than average expense speed of state budget in inspirit of the National Assembly Resolution 18; striving to set 10% and more from the state budget for health to cover investment and recurrent costs. Strive to achieve the proportion of public expenditure on health (state budget, social health insurance and aids) at least 50% of total societal expenditure on health by 2015.

To give priority for allocation of at least 30% of state budget for preventive medicine and primary health, mountainous, remote and isolated areas to meet the policy objectives (support the poor, children under-six)..

To ensure the state budget, government bill and foreign aids to invest in approved projects by the Prime Minister: Comprehensive master plan for health sector development (by Decision 153/2006/QĐ-TTg) and Projects 47/2008/QĐ-TTg (district hospitals), Decision 930/2009/QĐ-TTg (specialist hospitals), Decision 950/2007/QĐ-TTg (Commune Health Centers).

To gradually reform the state budget allocation mechanism towards results-based and outcomes-based approach; enhance hospital autonomy, accountability in public hospitals, and accompanied by an inspection and check-up mechanism to improve effectiveness in using the state budget for health.

To expand international cooperation, mobilize and effectively implement foreign aids projects (ODA and NGO) on health sector development investment. To continue maintaining Health Partnership Group (HPG), Joint Annual Health Review (JAHR), implement agreements between MoH and donors (SOI), to conduct joint assessment of national health strategies and plans (JANS)… to create favourable conditions to mobilize more international aids sources for health in upcoming years.

To develop sustainable universal health insurance, striving by 2015, at least 80% of Vietnamese people are covered by health insurance. To ensure compliance with contribution to health insurance in formal sector; to strengthen supervision, checks-up and punishment of non-compliance with health insurance enrollment as regulated by the Law. To develop a roadmap and implement comprehensive and effective measures to rapidly expand health insurance coverage to all employees in informal sectors. In parallel with extensive coverage expansion of health insurance, continue to improve benefits package and quality of care for all beneficiaries (intensive coverage). To reform procedures for purchase and payment of health insurance to facilitate the insured patients when seeking care.

To implement appropriate measures to control health care costs, gradual decrease household’s out-of-pocket payment out of total health care costs such hospital payment method transformation (case-mixed payment), development of

care pathway, strengthening inspection, supervision of prescription, use of drugs, laboratory tests, and medical technology, improve quality of health care services to reduce hospital lengths of stay…

In line with financial mechanism reform, adjustment of service price should be made, promoting social mobilization, should continue increasing the state budget to purchase health insurance card for the poor, near poor, children-under-six years, the elderly, ethnic minorities and social target groups. To gradually expand the state subsidies to support the poor and disadvantaged people to pay for indirect costs during treatment episodes (foods, transport) in in-patient care with a view to strengthening access to and use of health care services for these groups.

To classify public hospitals and health facilities to enhance hospital autonomy and accountability. To develop a fee schedule as a basis for correct and full calculation of input costs and a transparency payment mechanism for health services;

To reform hospital payment method. To pilot application of case-mix payment method for normal hospitalizations to replace fee-for-service payment method. Strive to achieve the target that by 2015, 50-70% of normal diseases will be paid by service package method. To explore possibility of paying health care costs via DRG methods suitable in the local setting.

4.8. Pharmaceuticals and bio-medical products

To continue to reinforce Law on Pharmacy. To strengthen development of domestic pharmaceutical industry, meeting minimum 60% of drug needs for health care, especially essential drugs.

To implement effective measures for drug quality administration, drug price management, and rational and safe use of drugs; 100% of complete pharmaceutical production enterprises reach WHO's standard for Good Manufacturing Practice (GMP); 100% of drug test facilities reach WHO's standard for Good Laboratory Practice (GLP); large-sized enterprises that import and circulate drugs reach Good Storage Practice (GSP).

To revise list of essential drugs, vaccines and medical consumables for health facilities.

To standardize tender procedures and mechanism procurement and supply of drugs; to control drug sale over prescription; to manage and use drugs and drug products to secure safety for users; to strengthen supervision, inspection of drug production and supply, and management of drugs and vaccines quality, stabilizing drug prices; ensure safe blood transfusion and blood products at all levels.

To improve technology and quality of drugs and vaccine production, securing GPs standards in the production, circulation and trials in laboratories, storage and management of drugs... Ensure vaccines in EPI for infants are domestically produced. All domestic vaccines and bio-medical products reach WHO's standard for GMP.

4.9. Medical equipment and infrastructure

To strengthen domestic production of medical equipment, common medical equipment in the short term, and gradually promote production of medical high-technology, investing in advanced technology lines to produce medical devices; ensuring minimum provision of 60% of common medical equipment for health facilities.

To conduct assessments of current situation and medical device need at all levels; to review, update list of essential medical equipment for all health facilities. To develop a database of medical devices (attached by reference costs) to support health facilities in procuring appropriate medical equipment.

To prepare and develop the area of "Assessment of medical technology" to determine appropriate technological and equipment solutions for health facilities, to ensure economical and cost-effective investment and to meet people's health care needs.

To strengthen storage, preventive maintenance and repair of medical equipment. Preventive maintenance and repair units for medical equipment should be established locally to strengthen effective investment in medical equipment and quality of health care services. Health facilities should allocate sufficient budget for preventive maintenance and repair of medical equipment. To set aside a reserved fund for asset depreciation to re-invest in medical equipment, when necessary.

To strengthen capacity for medical device calibration and audit network; to develop some regional centers for medical measurement and verification in 3 regions of the country.

For local health facility, continue to invest for infrastructure development as indicated in Decisions 47, Decision 930 and Decision 950 of the Prime Minister. For central level, to promote progress in completion of capital work, check, handover and put into operation as mentioned in approved projects, and translate the government plan for removing some health facilities from city centers of Hanoi and HCM city.

With regard to medical waste management, strive to achieve the target that completes and puts into operation of medical waste management system for entire sector by 2015. To ensure medical waste and other toxic wastes are treated properly as regulated.

4.10. Strengthening health sector management capacity

To raise awareness, role and responsibility of Party Committees, authorities, Fatherland Front, social organizations, communities and each inhabitant in the protection, care and improvement in health. To incorporate objectives and tasks for people's health protection, care and improvement into national and local socio-economic development strategies, policies and plans.

To improve capacity and quality of health strategies, policies and plans at all

levels. To supplement, accomplish health legal policies and documents. To develop and implement national strategy for people's health protection, care and improvement and master plan for health sector development, 2011-2020, vision 2030, specific policy and strategy such as population and reproductive health (2011-2010), preventive medicine and food safety and hygiene… towards equity, efficiency and development in line with the national socio-economic conditions and people's health care needs.

To enhance the role and management capacity, and health planning at central and local level by issuing forms and assessment criteria and tools for planning, holding training courses on health information management system, hospital management, strengthening support for local authorities in masterminding local health plan and sector master planning.

To prioritize resources of the Ministry of Health to enhancing capacity for health-policy making, issuing regulations, technical standards, plan development, directing health plans implementation, strengthening health inspection, supervision and checks-up. To lay off direct involvement of the Ministry of Health in health service delivery by delegating authority to local governments.

To consolidate, develop health inspection network and technical supervision at all levels, making sure the health inspectorate is competent to accomplish assigned work, especially inspection of health examination and treatment, pharmaceuticals, and food safety and hygiene...

To strengthen delegation of authority and inter-sectoral, inter-level collaboration in health care and reinforcement of basic legal policies and document for health, national health target programs. To strengthen linkages between preventive medicine and curative care and functional rehabilitation; between central and local level; and combine traditional and western medicines.

To promote appropriate social mobilization, private sector development (especially private hospitals), to strengthen management of quality and service price in private facilities. To promote public-private partnership in health, striving for common health goals for the people.

To strengthen participation of stakeholders in health policy-making, development and implementation of health policies (including local levels, beneficiaries, community, social organizations, associations and development partners…). To strengthen dialogues, advocacy and lobby for policy issues with the National Assembly, line ministries and sectors, increasing consensus in policy development and implementation.

5. Some investment programs and projects

On the ground of current situation analyses, identified priority problems to be addressed in the next 5 years, apart from the need for increasing recurrent expenditure for health, it is clearly indicated in the National Assembly Resolution 18 that the following sectors, programs and projects should be invested:

+ *Consolidating health care network at all levels* *(mainly on infrastructure and equipment)**:***

- To invest and upgrade district hospitals (Decision 47)
- To invest and upgrade provincial hospitals in disadvantaged areas and in some specialist hospitals (Decision 930)
- Project on development of specialist medical techniques.
- Pilot Project on policy and mechanism for specialized medicine development
- To invest and upgrade Commune health center (Decision 950)
- To invest in district health center/preventive medicine (Decision 1420)
- To invest in developing food safety and hygiene, population-family planning network.
- Projects on medical waste management during 2010-2015 towards 2020
- Health support projects at regional and provincial scale.

+ *Implementation of national health target programs* *(after approval by Prime Minister)*

- National target program for health (TB control, leprosy control, malaria, dengue fever, cancers, hypertension, diabetes, community mental health, asthma and chronic pulmonary obstruction, EPI, reproductive health, child malnutrition, civil-military collaboration, school health, safe blood transfusion, communications).
- National target program for food safety and hygiene (management of food quality, communications, verification…).
- National target program for population-family planning (education and communications, service provision, improve quality of population…).
- National target program for HIV/AIDS prevention and control (communications, harm reduction interventions, supervision, treatment-care…).

+ *Health human resource development*

- To invest in strengthening capacity for medical training institutions at central and local levels.
- Project on health human resource development with high quality.
- Projects on free-entry to medical school, training by address, training medical cadres at the grass-roots level (doctors, pharmacists, training commune health staff, village health workers…).
- Project on establishing a system of accreditation of practice license for health workers as regulated in the Law on Health Examination and treatment.
- To maintain continuing training and retraining for health workers.
- To train cadres in some human resource-poor specialties (para-clinical, preventive medicine, pediatric…).

+ *Pharmaceuticals – medical equipment*

- Investment in domestic pharmaceutical industry development.
- Investment in domestic production of medical equipment.

+ ***Health financing***
  - To transform performance mechanism and health financing.
  - Project on development of universal health insurance.
  - Project on reforming service price policy.
  - Project on hospital payment reform (payment methods, case mix payment, DRGs…).
  - To reform the state budget allocation mechanism for health facilities (performance-based, and outputs-based).

+ ***Strengthening health sector capacity***
  - Project on strengthening health sector capacity.
  - Fortifying health inspection network and some specialties.

6. Monitoring, supervision and evaluation

On the ground of designated indicators, the Ministry of Health is responsible for evaluating plan implementation and annual health indicators taking it as a foundation for subsequent planning exercises.

The National Assembly is responsible for monitoring assigned indicators in health sector.

Collection and dissemination of indicators follow Prime Ministerial regulations for the national indicator sets. Health indicators will be collected by the Ministry of Health through annual health statistics and other reliable sources.

Every year, the Ministry of Health works with Health Partnership Groups (HPG) to conduct a joint annual health review (JAHR), laying out a foundation for health policy making and planning, and mobilizing international aids for health sector. The JAHR report will be used as a reference source to assess annual health sector performance.

Provincial Health Departments will be responsible for monitoring, supervision of plan implementation and provincial level health indicators.

Indicators	**Sources and reporting responsibility**
Input indicators	Health statistical yearbook, MoH (PFD)
1. Number of doctor/10,000 inhabitants	Health statistical yearbook, MoH (PFD)
2. Number of pharmacian/10,000 inhabitants	Health statistical yearbook, MoH (PFD)
3. Villages with active VHW (%)	Health statistical yearbook, MoH (PFD)
4. Commune with doctor (%)	Health statistical yearbook, MoH (PFD)
5. Commune with midwife or assistant doctor in obstetric and pediatric care (%)	Health statistical yearbook, MoH (PFD)
6. Hospital bed per 10,000 inhabitants (exclude	Health statistical yearbook, MoH (PFD)

CHS bed)	
Performance indicators	Health statistical yearbook, MoH (PFD)
7. Fully vaccinated infants (%)	Health statistical yearbook, MoH (PFD)
8. % of commune achieving new national benchmark for commune health	Health statistical yearbook, MoH (PFD)
9. Health insurance coverage (%)	Health statistical yearbook, MoH (PFD)
Outputs indicators	Health statistical yearbook, MoH (PFD)
10. Life expectancy at birth (years)	Estimates by Census (GSO)
11. MMR (p100,000)	Census and housing survey (GSO); Health statistical yearbook, MoH (PFD)
12. IMR (p1,000)	Census and housing survey (GSO); Health statistical yearbook, MoH (PFD)
13. U-5MR (p1,000)	Census and housing survey (GSO); Health statistical yearbook, MoH (PFD))
14. Size of population (million inhabitants)	Estimates by Census (GSO))
15. Population growth rate reduction ‰	Estimates by Census (GSO)
16. Population growth rate (%)	Estimates by Census (GSO))
17. Sex ratio at birth (boys/100 girls)	Health-FP Dynamic Survey (GSO) and Health statistical yearbook, MoH (General department of population)
18. Under-five child malnutrition rate (weight for age) (%)	Health statistical yearbook, MoH (NIN)
19. HIV/AIDS prevalance in community (%)	Health statistical yearbook, MoH (VAAC)

Apart from aforecited indicators, other indicators should be monitored, supervised to capture an overview and insights of the health sector. These indicators are indicated in the JAHR report prepared by the MoH and HPG, including indicators of health service provision, health status, health human resource, health information system, drugs and medical equipment and health financing.

7. Analysis of risks and difficulties in plan implementation

Risks, difficulties	Proposed measures
Slow increase in the investment from the state budget and fall behind development needs of the health sector.	Continue to lobby the National Assembly, Government and related Ministries to increase investment in the health sector as endorsed in the Resolution 18 of the National Assembly. Strengthen supervision to locality (through the NA) in budget allocation for health. Foster health insurance development. Propose to the NA and Government to issue the Government treasury bill for health sector.

Local health plans are incompatible with the overall priorities and policies on health	Consult local governments in the planning process so that local priorities are incorporated in the overall health sector plan. Develop guidance tools and hold training to enhance health planning capacity; strengthen checks, inspection and supportive supervision; give comments to planning process.
Modest inter-sector collaboration in health plan implementation	Consultation with Ministries, sectors in health planning process; the health sector should strengthen its activeness and establish inter-sector steering committees, coordinating committees for those issues that need inter-sector collaboration.
Impacts from market mechanism to the goal of equity in health	Ensure pro-poor health policies, and for remote and isolated areas; mitigate negative influences of some policies on the poor (hospital autonomy, social mobilization…) by implementing health insurance for the poor, near poor, children-under six, the elderly, ethnic minorities and social target groups.
Monitoring of plan implementation is facing difficulties	Gradually establish and strengthen supervision indicator system, health sector performance review; continue to develop joint annual health sector review (JAHR)

8. Organization of implementation

The Ministry of Health takes overall responsibility to the Government for implementing designated plans and indicators.

Pursuant to the five-year health sector plan 2011-2015, MoH's subordinates, Provincial Health Departments, health agencies of other Ministries and sectors will organize and implement the annual plan for people's health care, protection and improvement, and periodic report its performance to competent authorities.

Line Ministries, sectors, Fatherland Front and relevant social organizations work closely with the MoH – in their functions and tasks – to implement, monitor and supervision of implementation.

The Ministry of Planning and Investment, Ministry of Finance mobilize resources, submit the Government proposed annual budget allocation for health sector in spirit Resolution 18 of the National Assembly.

Provincial People's Committees direct respective Provincial Health Departments to develop local plans in line with intentions, directions and policies of the Government for health – based on local conditions: submit the plan for appraisal and approval as regulated by current procedure; direct provincial health department and relevant departments to implement assigned plans and targets./.

Functional and relevant Departments, General Departments, Administrations, MoH's Office, Health Inspection and subordinates of the Ministry of Health and projects under the national health target programs are responsible for

developing annual health plan in line with specific priorities, objectives and tasks as denoted in the five-year health sector plan, 2011-2015.

Planning and Finance Department, MoH is a point unit to synthesize and assists the Minister of Health to monitor, remind and reconcile the implementation of five-year health sector plan./.

Dispatched to:
- Government Office
- MPI, MoF
- Pro. Health Depts.
- MoH's subordinates (Departments, Administration)
- Health agencies of other sectors
- Archive, PFD-4, KHTCC2

MINISTER

Nguyen Quoc Trieu

APPENDIX
BUDGET ESTIMATES FOR HEALTH SECTOR 2011-2015
(Central and provincial budgets)