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Myanmar healthcare system and universal health coverage

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Ⅰ. Introduction

The Republic of the Union of Myanmar is one of the ASEAN countries and is situated in South East Asia region. The area is 676,577.2 km^2 (1.8 times of Japan) and it is bounded by Bangladesh, India, China, Laos and Thailand on the landward side[1)]. 1930 kilometers of the coast line is bounded on the west by the Bay of Bengal and on the south by the Andaman Sea[2)]. According to the Census 2014, the population in the Union of Myanmar was 51.486 million in September 2014 and it is estimated as 53.892 in 2018. Among them 36.8% was resided in urban area[3)]. There are 135 different ethnic groups with 7 major ethnic groups such as Kachin, Kayah, Karen, Chin, Myanmar, Mon, Rakine and Shan. All ethnic groups have their own languages and cultures. It has one Union Territory: Nay Pyi Taw and 7 states, 7 regions, 74 districts and 330 townships. According to 2014 data, Buddhism was 87.9%, Christianity was 6.2%, Islam was 4.3%, Hinduism was 0.5%, Tribal religion was 0.8%, others were 0.2% and no religion was 0.1%[4)].

1. History of health care system in Myanmar

Before 1886, there was no definite health system in Myanmar. Only indigenous practitioners trained in the Ayuvadic tradition provide health services. After complete colonization of the country by British, Myanmar Health system was initiated and followed the British health system. Myanmar health system was changed by the five distinct periods of administrative governments and political systems. The colonial period started from 1886 to 1948. In this period, health system focused on hospital care, vaccination against communicable diseases and sanitation. Most doctors were foreigners and living in towns. Rural population only depended on the indigenous medical practitioners and traditional birth attendants. During the parliamentary period from 1948 to 1962, a long-term program for economic and social development for the country including National Health Program called Pyidawthar Plan was drawn up. In 1951, a rural health scheme was initiated.

Revolutionary Council and Burma Socialist Program Party (BSPP) period was from 1962 to 1988. During this period, the Directorate of Health Services was reorganized to expand the coverage of health services to reach rural areas. Basic health care units were established at township level and provide health services to the rural population. Starting from 1978, a series of four-year People's Health Plans (PHPs) were drawn up, based on Health for All (HFA). The State Law and Order Restoration Council (SLORC) and the State Peace and Development Council (SPDC) period was from 1988 to 2011. In 1989, the National Health Committee (NHC) was formed and developed the 15-point National Health Policy in 1993. The first NHP (1991−1992) was formulated as a transition from last socialist-based PHP. It has been followed by a series of NHPs from 1993 to 2011. The election of 2010 led Myanmar to a civilian government in March, 2011. Now this is the Democratization period starting from 2011 after national election[5)].

2. Current situation

Although Myanmar health care system evolves with changing political and administrative system, the Ministry of Health remains the major provider of comprehensive health care. But the healthcare system is a mixture of public

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and private sectors. Some of the ministries are also public providers such as Ministry of Labour, Industry, Transport and Communication and Defense that provide health services for their employees and their families. The private, for non-profit, run by Community Based Organizations (CBOs) and Religious based society also provide ambulatory care, institutional care and social health protection in large cities and some townships. The private, for profit, sector is mainly providing ambulatory care but some are providing institutional care in Nay Pyi Taw, Yangon, Mandalay and some large cities. Besides these, Traditional Medicine is the Unique and important component of Myanmar Health Care System[6]. Though, the democratic process has accelerated, health status is still poor and does not compare favorably with other countries in the region. There are many problems to be resolved in every field including health sector. Now, Myanmar is facing many challenges in health sector such as

- Limitation of availability and distribution of inputs (e.g. human resources, physical infrastructure, essential medicines and supplies, financial resources)
- Weaknesses in key functions such as supportive supervision, referral, supply chain, health management information system, and public financial management
- Limited oversight, leadership and accountability

As Myanmar is one of the WHO member countries, the government adopts strategies to establish universal health coverage by 2030 as a part of the Sustainable Development Goals and also try to implement the activities to achieve this goal. Now, there is a strong political commitment to accelerating progress towards UHC which is defined as all people having access to needed health services of acceptable quality without experiencing financial hardship. It also focuses not just on disease priorities but also on health inequities.

According to the WHO statistics in 2015, life expectancy at birth was low and neonatal mortality rate, under 5 mortality rate and maternal mortality rate were still high (Tables 1 and 2). To achieve the targets of UHC by the year 2030, Myanmar must significantly improve in all areas of health system[7].

Table 1　Some health related indicators[7]

Indicator	
Life expectancy at birth	66.66 (2015)
Healthy life expectancy	59.2 (2015)
65 years and over	5.53% (2017 est.)
GDP per capita	1161.5 US$
Total health expenditure	2.3% of GDP
Out-of-pocket expenditure, as % of the health expenditure	51% (2014)
UHC services coverage index of essential health services	51%

(Source: WHO *Last updated on June*, 2017)

Table 2　Vital statistics

Neonatal mortality rate	26.4/1000 live births
(target for SDG 3: neonatal mortality rate <12/1000 LB)	
Infant mortality rate	39.5/1000 live births
Under 5 mortality rate	50/1000 live births
(target for SDG 3: U5 mortality rate <25/1000 LB)	
Maternal mortality ratio	178/100,000 LB
(target for SDG 3: MMR <70/100,000 LB)	

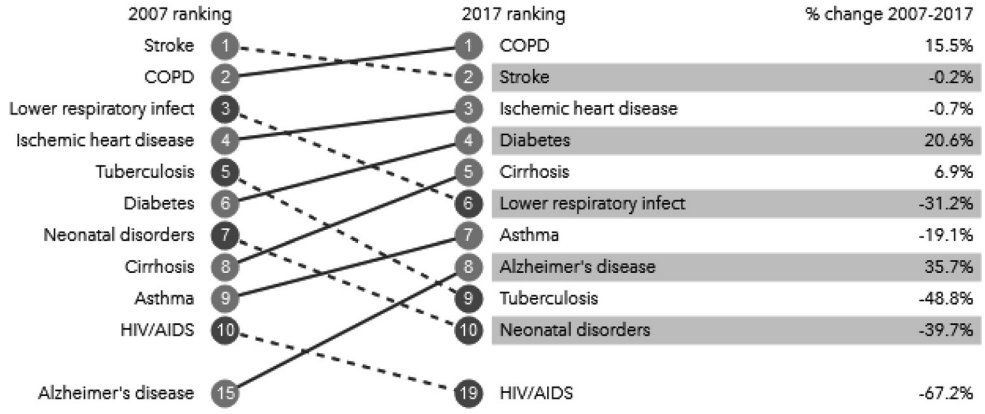
(Source: WHO statistics 2015)

3. Causes of death in Myanmar

The health sector is currently facing double burden of diseases: both non-communicable diseases and communicable diseases. The number of deaths caused by non-communicable diseases is constantly increasing and the risk of infection such TB, HIV/AIDS, respiratory tract infection also remain high (Fig. 1)[8].

4. Government Health Expenditure

There was significant increase in health expenditure (Fig. 2 and Table 3), which raised the share of GDP allocated to health. Share of public health expenditure in total health expenditure was less. It was mainly focus on medicine, medical equipment and infrastructure[9].



Source: The Institute for Health Metrics and Evaluation (IHME)

Fig. 1　Causes of death in 2017 and percent change, 2007−2017[8)]

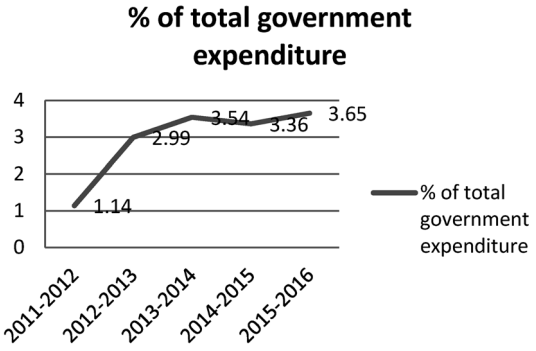


Fig. 2　Government Health Expenditure

Table 3　Government health expenditure

Financial year	% of total Government Expenditure
2011−2012	1.14
2012−2013	2.99
2013−2014	3.54
2014−2015	3.36
2015−2016	3.65

(Source: MoHS)

5. Health Facilities

Public hospitals are categorized into general hospitals (up to 2,000 beds), specialist hospitals and teaching hospitals (100−1,200 beds), regional/state hospitals and district hospitals (200−500 beds), and township hospitals (25−100 beds). In rural areas, station hospitals (16−25 beds), station health unit (no beds), rural health centers (no beds), and sub-rural health centers (no beds) provide health services, including public health services. Most specialty hospitals are situated in Nay Pyi Taw, Yangon Region and Mandalay Region. Teaching and specialty hospitals are mostly located in major cities (Table 4). The network of hospitals and health centers, expanding down to village level, provide curative services ranging from primary to tertiary health care[10)].

Table 4　Public facility (As of March 2018)

Health facility	Number
Specialty hospital	32
Teaching hospital	9
Hospital (500 beds)	11
Hospitals (300 beds)	3
Hospital (100−200 beds)	70
Hospitals (16−50 beds)	273
Station hospital	736
Total number of hospitals	1,134
Total number of beds	55,004
Station Health Unit	356
Rural Health Center (RHC)	1,796
Sub RHC	8,406

(Source: MoHS)

Table 5　Private facility (As of March 2017)

Health facility	Number
private hospitals	193
private specialist clinics	201
private general clinics	3,911
private dental clinics	776

(Source Private Health Statistics)

According to the Private Health Statistics 2015 by the Department of Medical Services, there were 193 private hospitals, 201 private specialist clinics, 3,911 private general clinics, and 776 private dental clinics (Table 5). Most of them are small in size and 90% have fewer than 100 beds. The largest one in Yangon has 220 beds. In Myanmar, many charity hospitals run by private sectors are operating for the poor. There are private non-profit clinics run by community-based organizations and religion-based societies, which also provide ambulatory care and institutional care[11].

6. Health workforce

The figure only showed the health manpower situation in 2014[12] (Table 6). In current situation the number is more than that expressed figure. Although the number of health workers in Myanmar increased, it is still far below the recommended WHO standard.

According to WHO health statistics 2014 data, physician, nursing and midwifery personal, dentist and psychiatrics per 10,000 populations in 2015 were 6.1, 10, 0.7 and less than 0.05 respectively[13]. Health worker (including doctors, nurses and midwives) per 1,000 population was 1.49 which was lower than WHO standard 2.4 per 1,000 population.

Table 6　Healthcare manpower (2014)

Health manpower	number
Medical doctor	31,542
Nurse	29,532
Midwife	21,435
Pharmacist	2,553
Medical technologist	2,604
Dentist	3,219
Dental nurse	357
Health assistant	2,062
Lady health visitor	3,467
Public health supervisor I	652
Public health supervisor II	4,998
Traditional medicine practitioners	6,963

(Source: Health in Myanmar 2014)[12]

Ⅱ．Provision of Health Care by Ministry of Health and Sports

Although the health care system is a mixture of public and private sectors, the Ministry of Health and Sports (MoHS) is the major organization responsible for raising the health status of Myanmar people. It provides comprehensive health services, including promotive, preventive, curative and rehabilitative measures throughout the country including remote and hard to reach border areas. Ministry of Health and Sports is headed by the Union Minister, assisted by the one Deputy Minister and one Permanent Secretary. There are seven departments named Department of Medical Services, Department of Public Health, Department of Human Resources for Health, Department of Medical Research, Department of Food and Drug Administration, Department of Traditional Medicine and Department of Sports and Physical Education[14].

Each and every Department has a Director General who leads the department and implements the activities according to the health policies to realize the objectives. Ministry of Health and Sports has two objectives and three strategies[15].

Objectives

1. To enable every citizen to attain full life expectancy and enjoy longevity of life
2. To ensure that every citizen is free from diseases

Strategies

1. Widespread disseminations of health information and education to reach the rural areas
2. Enhancing disease prevention activities
3. Providing effective treatment of prevailing diseases

1. Department of Medical services

This department is responsible for providing hospital services. It provides hospital based health services and field visit services to the community and also undertakes procurement, storage and distribution of medicines, medical

instruments and equipment for all health institutions. Curative services are provided by various categories of health facilities at different levels like State and Regional Hospitals, District hospitals, Townships hospitals and Station hospitals which are under the control of this Department (Fig. 3). There is a referral system from station hospital and township hospital to the district hospital where physicians, obstetrician/gynaecologist and a paediatrician are available. The patients from District hospital could be also referred to State or Region hospitals and specialty hospitals when they need tertiary care[15].

2. The Department of Public Health

It is mainly responsible for provision of primary health-care and basic health services such as nutrition promotion, environmental sanitation, maternal and reproductive health, child health, school health, occupation and environmental health and health education, up to the grassroots level. The Disease Control Division and Central Epidemiology Unit under this Department cover prevention and control of infectious diseases, disease surveillance, outbreak investigations and disaster and public health emergency preparation and response (Fig. 4)[15].

3. Health service delivery at Township level

As nearly 63.2% of people are residing in rural area, the Township Health System is the backbone of the Myanmar Health System. At township level, the Township Medical services department and Township public Health Department provide primary and secondary health care services down to the grassroots level. It usually covers 100,000 to 200,000 populations. Township Medical services department provides curative and rehabilitative services at inpatient and out-patient wards in township hospital and station hospital. Under the Township Public Health Department, there are Urban Health Center, School Health Team, Maternal and Child Health Team, one to three Station Health Units and four to five Rural Health Centers (RHCs). Each RHC has four sub-RHCs (Fig. 5). One rural health center covers 20,000 populations and one Sub Rural Health Center covers 5,000 populations. In each RHC, there are one Health Assistant, one Lady Health Visitor, five Public Health

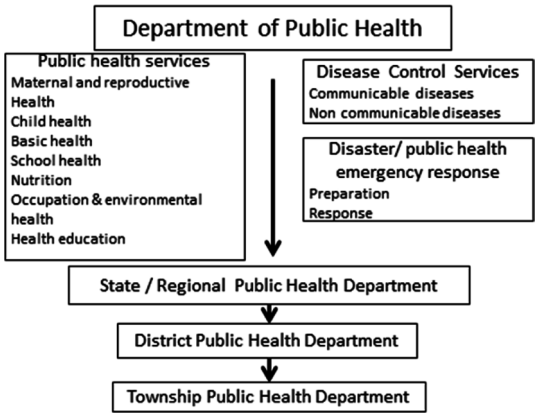


Fig. 4　Department of Public Health

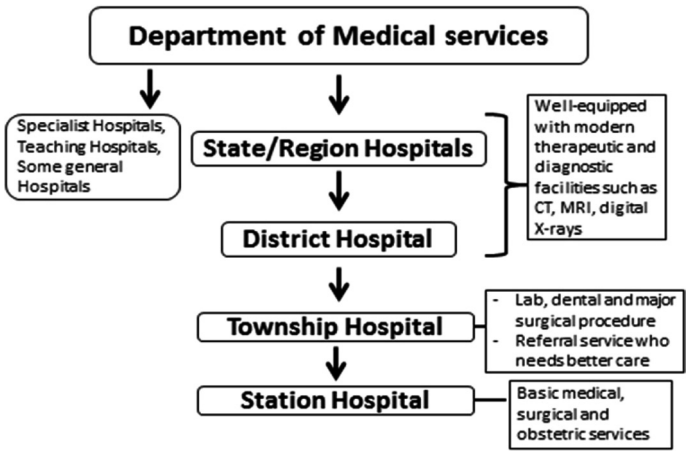


Fig. 3　Department of Medical Services

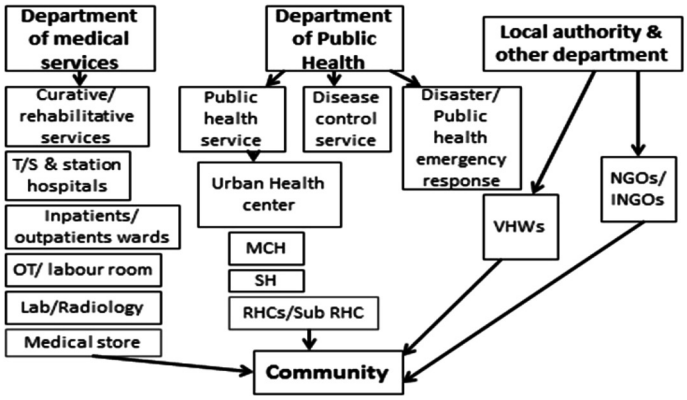


Fig. 5　Health service delivery at Township level

Supervisors Grade II and five Midwives (MWs). Only one midwife is assigned in each Sub RHC. At the village level, Voluntary Health Workers (VHW) assist in health services. All these basic health staff are responsible for maternal and child health (clinic or homecare), school health, nutritional promotion, immunization, community health education, environmental sanitation, disease surveillance and disease control activities, disaster and public health emergency response services, treatments of common illnesses, referral services, birth and death registration, and training of volunteer health workers: community health workers and auxiliary midwives. They are also responsible for administrative and managerial functions. As their workload is too much, they face many challenges in their effort to reach out to the remote villages, with limited resources and support[15].

4. The Department of Human Resources for Health

This department is mainly responsible for training and production of all categories of health personnel, except for traditional medicine personnel, to fulfill the health needs of the country in line with National Health Policy. Under this department there are 5 medical universities, 2 universities in each allied medical universities such as University of Dental Medicine, University of Nursing, University of Medical Technology, University of Pharmacy. There are also one University of Public health, one University of Community Health and 50 nursing and midwifery training schools. In 2015, 39 doctorate courses, 12 PhD courses, 47 master courses, and 13 diploma courses were provided in medical and allied universities. There are no private medical and allied medical universities in Myanmar. This department is also responsible for reviewing, revising and updating of educational programs, supervision of training processes for quality assurance, management of faculty development and infrastructure development. Now, all the universities are going to change outcome-based curriculum from subject-centered curriculum[15].

5. The Department of Medical Research conducts national surveys and research for evidence-based medicine and policy making.

6. The Department of Food and Drug Administration ensures safe food, drugs and medical equipment, and cosmetics. It extends branches in other Regions and State to implement control activities. In addition, this department has also established branches in important border trade zones such as Muse, Kalthaung, Myawaddy and Tamu[15,16].

7. The Department of Traditional Medicine is responsible for the provision of healthcare with traditional medicine through existing health care system in line with National Health Plan. It also provides the training of traditional medicine practitioners. Most of them were trained at the Institute of Traditional Medicine until 2001, and at the University of Traditional Medicine from 2002 onwards.

There are 16 traditional medicine hospitals and 243 Traditional medicine clinics all over the country[17]. They provide the health services independently from the modern medicines; however, the concept of integrated service delivery has been widely discussed.

8. Non-Governmental Organizations (NGOs)

Recent years, Non-Government Organizations (NGOs) are also increasing significantly. In line with the national health policy, International NGOs like WHO, UN agencies, local NGOs such as the Myanmar Maternal and Child Welfare Association and the Myanmar Red Cross Society, Myanmar Medical Association, etc. as well as locally acting community-based organizations and religion-based societies, also support and provide healthcare services.

9. Health Information System (HIS)

Health Information System (HIS) in Myanmar started in 1987. Hospital records, public health service records and administration records are used as a main source of HIS. It only covered public facilities and the information on private facilities was limited. In 2014, HIS started to change from paper based-format to electronic health information format by conducting District Health Information System (DHIS2)[18], but could not cover all the townships. In addition to that, the geo-enablement of the Health Information System has been trying to establish to support the implementation of the National Health Plan 2017−2021[19].

10. Health care financing

Statutory financing system is very limited. The major sources of finance for health care services are the government, out of pocket, social security system, community contributions and external aid. Although, the government has increased health spending on both current and capital yearly, out-of-pocket expenditure is still high. Social security scheme is the only one organization that provides health insurance to the employees working for industries, factories, enterprises and firms employing over 5 employees, including state-owned, private, and foreign or joint ventures. It covers only about 1% of population. The social security board established workers' hospitals, dispensaries and mobile medical units to provided free medical treatment to insured workers under this scheme. Now, the government is experimenting with its first private health insurance scheme that has been introduced on first July, 2015. Eleven private insurance companies are implementing their own schemes[20,21].

11. Challenges in health care system

Poverty is the major constraint hindering the development of the country's health care system. There are many challenges in health care system especially in the area of Health Services delivery, Health Workforce and Health Information System[22].

12. Challenges in health services delivery

Maldistribution and inadequacy of the resources such as low investment in rural health services, preventive services, inadequate funding for expansion of universal health coverage are the important issues in provision of health services. It is not ensure that health care services reach the poor and disadvantaged groups, ethnic minority groups, and people residing in conflict-affected and hard-to-reach areas. The next challenge is insufficiency of infrastructure including poor transportation, inadequate sheltered premises for service provision, insufficient electricity and poor in internet connection in some remote townships, particularly those in ethnic minority areas and hard to reach areas. People in these areas could hardly receive the effective health services.

Another issue is that some of ethnic groups still adhere to cultural practices and traditional remedies. Seeking out astrologers and healers rather than basic health staff to administer health care is common. Such health-seeking behaviour can cause complications in modern health care provision. In addition to that, because of the language barrier there are difficulties in provision and utilizing of

public health services. Due to limited financial means and availability of services, many people, particularly the poor and marginalized, delay or avoid getting the health services that they need. Moreover, insufficient medical equipment and devices, inadequate drugs and laboratory services are found in hospitals and clinics to provide effective and qualified health services. Weakness in referral system and ineffective utilization of health information for decision making is another issue for health services delivery.

13. Challenges in health workforce

Health workforce is the most important resources for successful implementation of National Health Vision and Mission. However, there are insufficient numbers of health professionals in all categories all over the country. According to World Health Organization (WHO) health statistics, in 2013−2014 the number of doctors, nurses and midwives, and dental surgeons per 100,000 populations in Myanmar were 61, 100, and 7, respectively which was far less than the recommended WHO. Due to limited resources and support, the basic health workers at township level hardly reach out to the remote villages and some remote area where there are ongoing ethnic tensions and violence. In some ethnic minority and rural areas, volunteer health workers are often required to perform above and beyond their basic health service training.

Another challenge is increased migration of population from rural areas to urban areas as well as from urban to urban which cause increasing burden to health service system and demand on more health workforce at urban areas. At the same time, migration of skilled health workers from rural to urban causes the further loss of health workers at rural areas or small towns that lead to uneven distribution of skillful health workers between urban and rural areas.

14. Challenges in health information system

The challenges to address in HIS are lack of written health information policy, deficient in systematic medical record and health care registration keeping system. Less interest in proper systematic record documentation by health professionals and limited skilled person at every level both quantity and quality are the issues to address in collecting and management of health information. Weakness in supervision, monitoring and feedback system, weak IT infrastructure and networking and low utilization of health information for evidence-based decision making are the other important issues in HIS[23].

Ⅲ．Myanmar National Health Plan and Universal Health Coverage

The Myanmar National Health Plan 2017−2021 was released in December 2016 with the aims of strengthening the country's health system and making the way towards UHC. Subsequent National Health Plans (2021−2026) and (2026−2031) will build on the current National Health Plan to reach the goal of UHC[24].

During the first five years, it is needed to ensure essential package of health services (EPHS) is available and accessible for everyone. At the beginning, only a small package of quality services - for example, ante-natal care and vaccination are included in EPHS. Over time, the package typically increases to a more comprehensive set of services. This means there will be expanding the package that the entire population should have access the Intermediate EPHS by 2025 and subsequently to the Comprehensive EPHS by 2030 (Fig. 6). Starting from February 2015, there have been a series of meeting and workshops towards the development of an EPHS. Now, MoHS selected 150 health services (75 are related to public health services and 75 are related to medical services) and make a plan to provide these health services freely to the poor who need it. This plan will be started in 2020. According to the various surveys conducted by MoHS, daily income of 16 million people was less than 1,300 Kyats (less than 1 US$) and 14 million people was between 1,300 Kyats and 2,000 kyats (nearly 1.5 US$). These people are assumed as poor and MoHS provide such

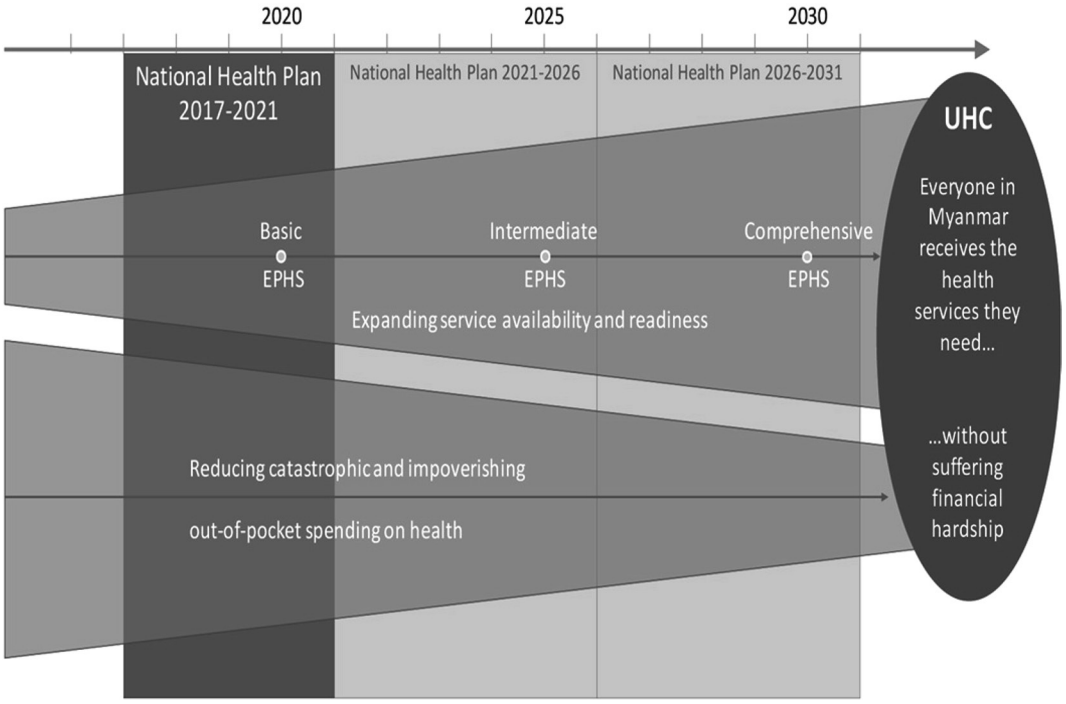


Fig. 6　Myanmar National Health Plan

kind of health services to them freely[25].

During the development of the EPHS, consideration is given to supply-side readiness to deliver the services. For supply-side readiness, investments are needed to ensure health facilities, human resources, medicines and commodities are in place. Now, the government and other INGO and NGOS are constructing more Rural Health Centers and sub Rural Health Centers to improve the accessibility and availability of health services in rural area especially remote and hard to reach area and the area where the poor and marginalized group are residing. To find the best locations for the centers, factors such as population coverage, availability of staff and supplies, accessibility, local needs and lack of existing services were considered. For example, under the leadership of the MoHS, 3MDG is financing not only the construction of 82 rural and sub-rural health centers but also providing solar panels, rainwater tanks, drug storage rooms and onsite staff accommodation across Myanmar[26].

1. Japan supports Myanmar to achieve UHC

Japan supports Myanmar's health sector in various areas to achieve UHC. Japan will support the establishment of regional general hospitals in Dawei and elsewhere[27]. JICA (Japan International Cooperation Agency) recently provided 77 million dollars to establish a cardiac and neuro specialty hospital in Yangon together with technical support in the areas of infectious diseases and medical engineers[28]. JICA also agreed to provide the grants on "Project for Improvement of Magway General Hospital"[29] and "Project for Improving Loikaw General Hospital in Kayah State" in 2017[30]. Japan also provide equipment essential to establishing a blood bank in Rakhine State in January 2018[31]. For capacity building, JICA also implement PEME (Project for Enhancement of Medical Education) project to provide short term and long term trainings to the doctors from Myanmar Medical universities, at Six Medical Universities in Japan[32].

Ⅳ. Suggestions

Indeed, Myanmar's entire health system has come a long

way since the country's democratic transition began in 2011; there are many challenges to be addressed and many areas to be reformed. To address the challenges and to achieve UHC, significant investments are needed. Myanmar's government needs to provide more funds to health sector and collaborate and cooperate with public health sector and other development partners, NGOs, INGOs and stakeholders to improve health care system. More trained health workers and health centers were needed both in urban rural areas, and that they should be easily accessible and affordable to the population. In some remote area and hard to reach areas where ethnic minority group are residing, working with the local ethnic health organizations (EHOs) and local NGOs will be the one option to provide healthcare to all people. In addition to that people will need to be educated with knowledge of primary health literacy and also empowered to lead a healthy life style. The government also needs to ensure increased foreign investment in the country's pharmaceutical sector, health workforce sector and private health care sector (private hospitals, Private clinics, private diagnostic centers, etc.), to ensure effective private-public cooperation can take place. National health insurance scheme is also essential to cover all Myanmar people.

Ⅴ. Conclusion

All the departments under the MoHS are implementing their activities effectively and harmoniously and also collaborating and coordinating among the departments to fulfill the objectives of MoHS. Moreover, the ministry also has a close collaboration with other sectors to address the issues that are beyond the scope and capacity of the health sector. Now health system is improving by government investment, private contribution and help of NGOs and International Non-Government Organization (INGOs) and other development partners. If Myanmar's economic progress continues to increase and if the ceasefire negotiations and political dialogue between government and ethnic armed groups will success, provision of health services will be improved in the future. In addition to that, with the collaborative efforts by the MoHS, international community, donors, developmental partners, stakeholders and all ethnic groups, "Universal Health Coverage" will be successfully achieved by the year 2030.

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