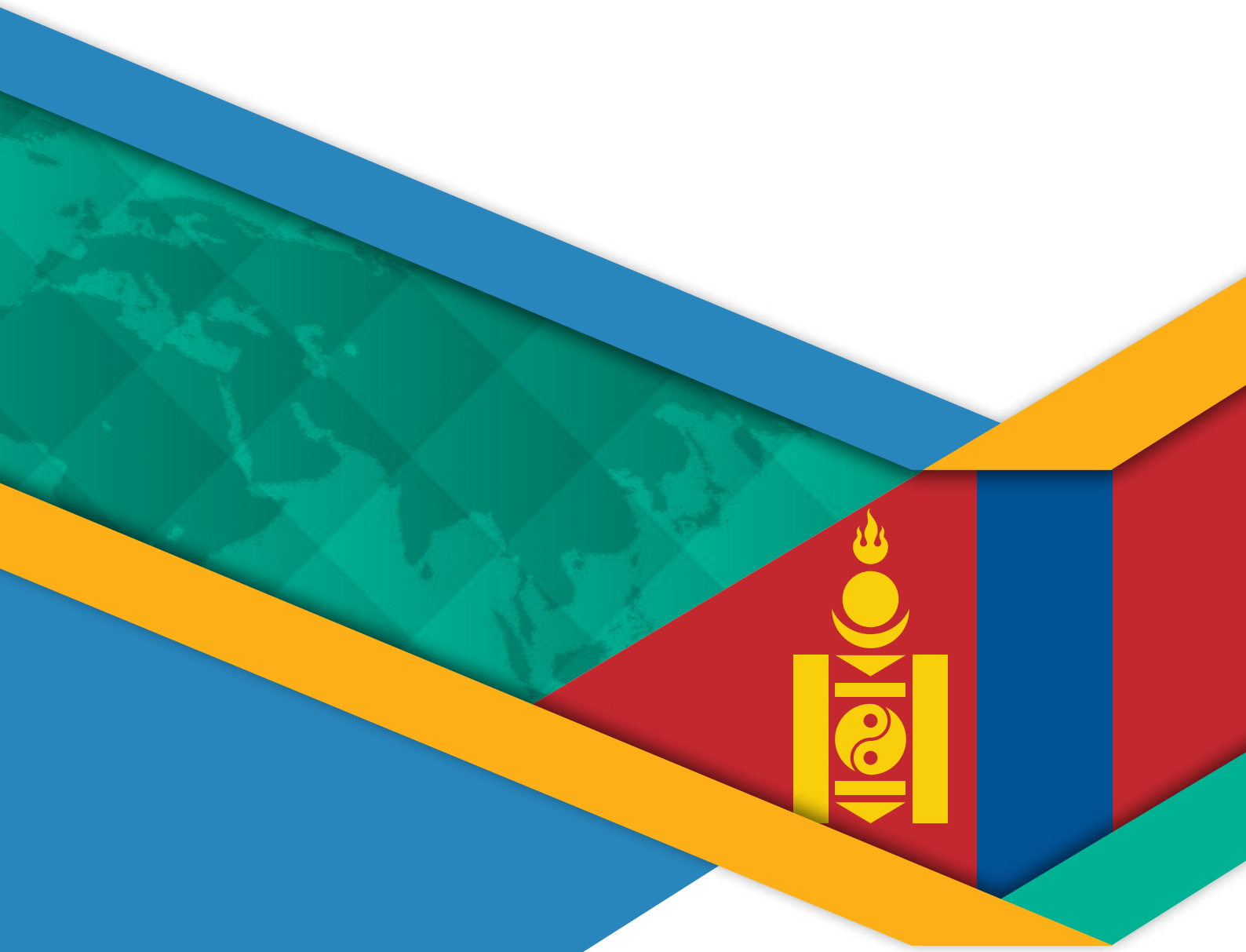


PRIMARY HEALTH CARE SYSTEMS (PRIMASYS)

Comprehensive case study from Mongolia



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Comprehensive case study from Mongolia

Ulaanbaatar City

2017

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Abbreviations

DRG	diagnosis-related group	IEC	information, education and communication
ENT	ear, nose and throat	IT	information technology
FHC	family health centre	NGO	nongovernmental organization
GASI	General Agency for Specialized Inspection	NSO	National Statistics Office
GDP	gross domestic product	PHC	primary health care
H-info	Health Information System	WHO	World Health Organization
ICD-10	International Classification of Diseases and Related Health Problems, 10th Revision		

Background to PRIMASYS case studies

Health systems around the globe still fall short of providing accessible, good-quality, comprehensive and integrated care. As the global health community is setting ambitious goals of universal health coverage and health equity in line with the 2030 Agenda for Sustainable Development, there is increasing interest in access to and utilization of primary health care in low- and middle-income countries. A wide array of stakeholders, including development agencies, global health funders, policy planners and health system decision-makers, require a better understanding of primary health care systems in order to plan and support complex health system interventions. There is thus a need to fill the knowledge gaps concerning strategic information on front-line primary health care systems at national and subnational levels in low- and middle-income settings.

The Alliance for Health Policy and Systems Research, in collaboration with the Bill & Melinda Gates Foundation, is developing a set of 20 case studies of primary health care systems in selected low- and middle-income countries as part of an initiative entitled Primary Care Systems Profiles and Performance (PRIMASYS). PRIMASYS aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness

and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance.

The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries. Furthermore, the case studies will serve as the basis for a multicountry analysis of primary health care systems, focusing on the implementation of policies and programmes, and the barriers to and facilitators of primary health care system reform. Evidence from the case studies and the multi-country analysis will in turn provide strategic evidence to enhance the performance and responsiveness of primary health care systems in low- and middle-income countries.

1. Methods

The following sources of official statistics were used to conduct the PRIMASYS study for Mongolia:

- National Statistics Office;¹
- health indicators produced by the Centre for Health Development;
- WHO data on health expenditure;²
- World Development Indicators of the World Bank.

The National Statistics Office (NSO) and the Centre for Health Development are the State institutions responsible for official reporting and releases of data and information on Mongolia's socioeconomic situation. When national data were unavailable, international sources were used where possible. Other sources included studies and researches, as well as legislations and orders published or disseminated in previous years. Annex 1 lists the sources used.

The main informants for the study were primary health care (PHC) providers. In order to ensure a wide representation of providers' views, interviews were carried out with two family health centres, four soum health centres in three aimags, and four family health centres in three districts of Ulaanbaatar city.³ The key informant institutions were selected on the basis of following criteria:

- more than 10 years' experiences of providing PHC services;
- has been working full time for a sustained period;

- distance from the centre of the province or administrative unit;
- coverage of both *ger*⁴ and apartment districts;
- with both good and poor performance records.

The key informant providers were selected in discussions with local administrative units using the criteria listed above. Annex 2 lists the interview participants.

The next group of key informants involved policy-makers; officials with tasks related to coordination, implementation and monitoring; representatives of nongovernmental organizations (NGOs) that protect the rights of primary care providers; and some well known independent researchers and individuals. The following selection criteria were used:

- has good knowledge and experience of the PHC system;
- policy officer in charge of PHC policy-making, working currently or previously;
- has studied and written reports and publications on PHC.

Accordingly, interviews were undertaken with four policy-makers, five implementation coordination persons, one association representative, and two researchers. Due to frequent changes of government, an effort was made to interview those policy-makers who had worked in the Ministry of Health for a longer period of time. Annex 3 lists the main participants in stakeholder interviews under this category.

1 www.NSO.mn, www.1212.mn.

2 World Health Organization Health Accounts: <http://who.int/health-accounts/en/>.

3 The "soum" is the second-level administrative subdivision below the "aimag" (province). Each soum is again subdivided into "baghs". "Baghs" and "khoros" are the same units; the former is found in rural areas and the latter in urban settings.

4 Traditional tent-like dwelling.

2. Overview of health care in Mongolia

Mongolia has 3 million inhabitants, with a very low population density. About 68% of the population lives in urban areas. The average annual population growth rate is about 2%, and the life expectancy at birth had reached 69.89 years (male 66.02, female 75.84)⁵ by 2015. Mongolia is situated in Central Asia and is a landlocked country bordered by China to the south and the Russian Federation to the north. The total territory covers 1 566 600 square kilometres, ranking it 19th in the world in terms of territorial size. Mongolia is a country of ancient nomadic traditions, and 32% of the population is still engaged in animal husbandry and inhabits the vast grasslands.

Mongolia is a lower middle-income country. The main economic activities include mining and agriculture, and the economy is therefore vulnerable to external commodity price fluctuations. A rise in commodity prices generates an increase in country earnings, with positive impacts on social sector recurrent and capital outlay allocations. In 2010–2014, about 37% of the government general revenue was allocated to capital investment, and the ratio of budget revenue to investment was 1:1.77. In 1995, Mongolia's Gini coefficient (measuring inequality) was 0.33, declining by 0.1 to 0.32 in 2015.

The average distance from a rural health centre located in a soum to the nearest provincial (aimag) general hospital, as well as to reach a rural household for PHC service delivery, is 100 kilometres. This remoteness is a barrier to household access to health

services. On the other hand, people in urban settings can readily access family health centres for their PHC services. As of 2015, there were 3244 health care facilities, of which 218 were family health centres (FHCs), 291 were soum health centres (SHCs) and 39 were inter-soum hospitals.

As a result of effective policies and strategies to protect maternal and child health, Mongolia's maternal mortality rate per 100 000 live births declined from 199 in 1990 to 69.7 in 2006 and to 26 by 2015. Thus Mongolia successfully achieved its Millennium Development Goal for that indicator and transitioned from a high to a low maternal mortality rate country. There has also been good progress in the country's infant mortality rate per 1000 live births, which declined from 63.4 in 1990 to 15.3 in 2015. Thus, Mongolia achieved the Millennium Development Goals for its maternal and child health targets.

Mongolia implemented a centralized and planned health system, termed the Semashko model, during the period 1921–1990. However, since the transition to a market-oriented economy in 1990, a new wave of private health care providers has been introduced.

The PHC service is free of charge to all citizens and is financed from the general government budget revenue, as assured by the Health Act. Table 1 presents key demographic, macroeconomic and health data for Mongolia.

⁵ Mongolia health indicators, 2015.

Table 1. Mongolia: key demographic, macroeconomic and health data

Indicator	Results	Source of information
Total population of country	3 057 778	NSO ^a Mongolia statistics, 2015
Sex ratio: male/female	1:1.03	NSO Mongolia statistics, 2015
Population growth rate	2.06%	NSO Mongolia statistics, 2015
Population density (people/sq km)	2	NSO Mongolia statistics, 2015
Distribution of population (rural/urban)	Urban 68.6%, rural 31.4%	NSO Mongolia statistics, 2015
Gross domestic product (GDP) per capita	US\$ 4 182	NSO Mongolia, 2015
Income or wealth inequality (Gini coefficient)	0.32 ^b	World Bank data indicator
Life expectancy at birth (years)	69.89 ^c	Mongolia health indicators, 2015
Top five main causes of death (ICD-10 classification) per 10 000 population	I00–I99: 18.47 C00–C97: 13.18 S00–T98: 8.47 K00–K93: 4.33 J00–J99: 2.03	Mongolia health indicators, 2015
Infant mortality rate per 1000 live births	15.3	Mongolia health indicators, 2015
Under-5 mortality rate per 1000 live births	18.3	Mongolia health indicators, 2015
Maternal mortality rate per 100 000 live births	26	Mongolia health indicators, 2015
Immunization coverage under 1 year (including pneumococcal & rotavirus)	98.3%	Mongolia health indicators, 2015
Total health expenditure as proportion of GDP	4.73%	WHO, 2014 (http://www.who.int/nha/en/)
PHC expenditure as % of total health expenditure	9.1%	WHO, 2014 (http://www.who.int/nha/en/), NSO statistics
% of total public sector expenditure on PHC	16.5%	WHO, 2014 (http://www.who.int/nha/en/), NSO statistics
Per capita public sector expenditure on PHC	US\$ 17.3	WHO, 2014 (http://www.who.int/nha/en/)
Public expenditure on health as proportion of total expenditure on health	55%	WHO, 2014 (http://www.who.int/nha/en/), NSO statistics
Out-of-pocket payments as proportion of total expenditure on health	42%	WHO, 2014 (http://www.who.int/nha/en/)
Voluntary health insurance as proportion of total expenditure on health	1%	WHO, 2014 (http://www.who.int/nha/en/)
Proportion of households experiencing catastrophic health expenditure	0.9% (2012)	Analysis of catastrophic health payments and benefit incidence of government spending for health in Mongolia, 2015

a. National Statistics Office, Mongolia.

b. <http://data.worldbank.org/indicator/SI.POV.GINI?locations=MN>.

c. Male 66.02, female 75.84.

2.1 Demographics and primary health care

The young make up 45.8% of the total population. Due to changes in the social system, the fertility rate decreased sharply in the period 1990–2000, but increased again in the 2000s. Children aged under 5 years and people aged 60 years and above account for 22.6% of the total population, indicating a need for a more accessible PHC system in Mongolia. The population growth rate is 2.06%, as reflected in the bulge at the base of the population pyramid (Figure 1), again indicating a need for increased access to PHC to cater for the growing population.

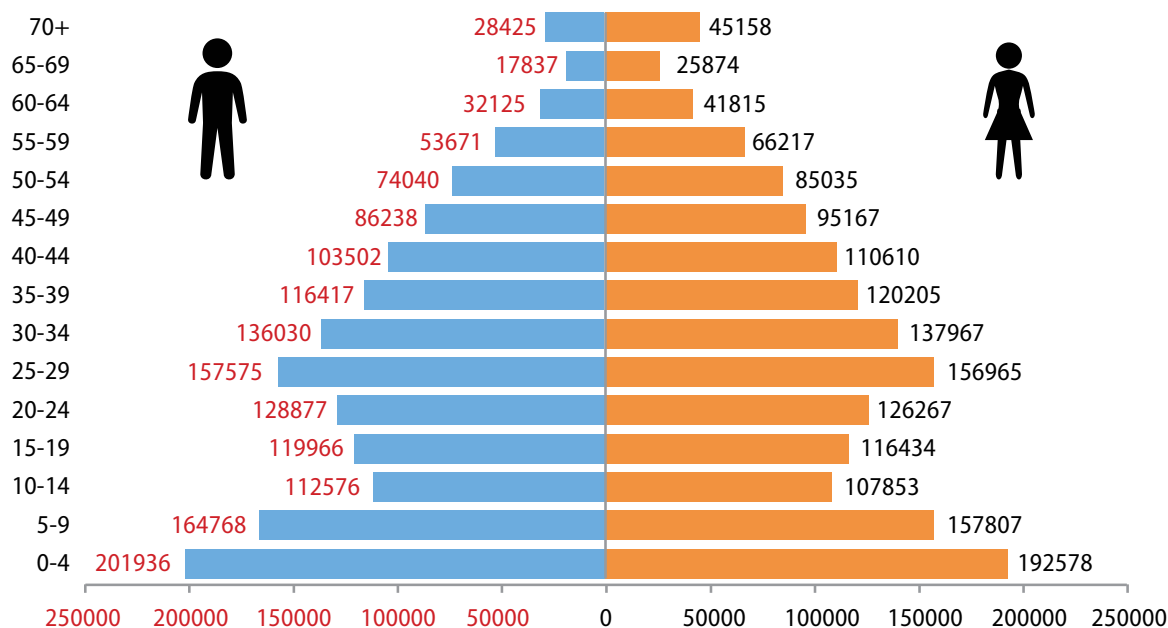
The PHC facilities (family and soum health centres) in Mongolia provide key health services to the population in their designated catchment areas. They provide eight types of services, including immunization, maternity care, and home visits for children aged under 5 years. Due to Mongolia’s harsh climate, respiratory infections are widespread in winter and spring, adding to the workload of PHC providers.

More specifically, the FHCs provide basic health services to their catchment area populations, including outpatient visits, prevention check-ups, some laboratory tests, home visits and vaccinations. On the other hand, the SHCs provide health services to herders located in remote areas, at an average distance of 100 kilometres, thus facing challenges of higher costs, poor roads and risky environments. These are the main specific features of Mongolia’s PHC service delivery.

2.2 Macroeconomics and primary health care

Mongolia’s economy is highly dependent on mining revenues and agricultural outputs, which accounted for rises in the government general revenue after 2011. However, this was short lived, and government-funded institutions were hit hard when the prices of minerals dropped again. As result, PHC providers were faced with a challenging situation, whereby their recurrent budgets decreased and capital investments stalled.

Figure 1. Mongolia population pyramid, 2016



Source: NSO population statistics, 2016.

2.3 Health status and primary health care

PHC gains in Mongolia have played an important role in the increase in life expectancy and the sharp declines in maternal and child mortality. However, high mortality due to noncommunicable diseases and poor public health care (including lack of knowledge and awareness of the population), coupled with negative lifestyle factors,⁶ have had impacts on the outcomes of PHC services and the reputation of providers.

2.4 Health service delivery system and supply of essential medicines

Over the past 80 years, Mongolia's health system has been based predominantly on curative medical care. Under the Health Act (2011), health services are categorized as medical care and public health services. With respect to types and packages of health services, health care facilities and health services are categorized as shown in Table 2.

Table 2. Health service delivery

Health facilities	Service package	Notes
Primary level		
Soum health centre ^a	PHC package + medical service	Provides some medical/hospital care such as midwifery and basic surgical services to people in remote areas
Family health centre ^b	PHC package ^c	PHC services
Inter-soum hospital	PHC package + medical service	Provides specialized medical services to soum population plus population of neighbouring soums
Drug revolving fund	Drug supply to rural area	There are no private pharmacies, thus these funds sell essential medicines to SHCs and also to soum population
Secondary level		
Aimag general hospital	Inpatient and outpatient care for medicine, paediatrics, obstetrics, communicable diseases, emergency, mental care, surgery, traumatology, traditional medicine, diagnostics and tests	Provides specialized care to aimag population and works in tandem with PHC providers
District health centre	Outpatient care for medicine, paediatrics, obstetrics, communicable diseases, neurology, mental health, surgery, traumatology, plus diagnostics and public health	Predominantly outpatient care and oversight over FHCs
District general hospital	Inpatient wards for internal medicine, paediatrics, neurology, traditional medicine plus diagnostics	Predominantly inpatient care; however, limited types of services
Maternity hospital	Obstetrics and gynaecology	Obstetrics and gynaecology services to capital city population
Ambulance care centre	Ambulance services	Provides ambulance services to capital city population
Other health care providers	Dentistry, narcology, surgery, internal medicine, neurology, traumatology, diagnostics and tests	Provides health services to capital city population and to personnel in railway, army and special forces
Private clinics and hospitals	Predominantly specialized in the fields of dentistry, maternity, traditional medicine, neurology	Clinics with few beds
Sanatorium	Nursing care, traditional medicine	Treatment of chronic conditions based on minerals and other natural resources in the localities

a. There are about 20 village health centres in Mongolia.

b. A family health centre is a privately run but publicly funded health institution.

c. In accordance with the Alma-Ata Declaration.

Continues...

6 STEP survey in Mongolia, 2013: WHO, Public Health Institute.

Health facilities	Service package	Notes
Tertiary level		
Regional diagnostic and treatment centre	Internal medicine, paediatrics, obstetrics, communicable diseases, emergency, mental care, surgery, traumatology, traditional medicine, diagnostics and tests	Provides medical care to population in the region and has higher institutional capacity than aimag general hospital
Central hospital	Emergency, surgery, internal medicine, ophthalmology, ear, nose and throat (ENT), diagnostics and tests, organ transplant	Provides specialty care at national level
Single specialty centre	Paediatrics, obstetrics, communicable diseases, mental care, oncology, traumatology, traditional medicine, diagnostics and tests	Provides specialty care in specific fields at national level
Private general hospital	Internal medicine, paediatrics, obstetrics, communicable diseases, emergency, ENT, mental care, surgery, traumatology, traditional medicine, diagnostics and tests	Bigger private hospitals provide specialty care at national level
Policy and management		
Ministry of Health		National policy-making and management
Health department		Implements medical services and public health care in designated areas
Public health		
Public Health Institute	Policy and programming for public health, researches and trainings	National centre tasked to implement public health policies; cooperates with all institutions in health sector and beyond
National Zoonotic Disease Research Centre	Prevention, surveillance and quarantine for zoonotic diseases	In charge of surveillance and control of zoonotic diseases at national level; has branches in risk-prone areas

Mongolia imports 80% of its medicines from overseas (1). The pharmaceutical sector operates largely through private suppliers, manufacturers and pharmacies.

For government-owned health care institutions, the budgets for medicines and supplies are approved in the annual expenditure line items. The health care institutions procure medicines, drugs and supplies within the approved budget through competitive bidding.

- Tertiary-level care providers: direct procurement through open bidding.
- Primary- and secondary-level care providers and other government providers: the local health departments organize integrated procurement through open bidding.

The selected supplier delivers the medicines and medical supplies as agreed in the bidding agreement, though the medicines and supplies used for SHCs

distributed to the drug revolving funds in soums are directly delivered to the larger hospitals. The budgets for medicines and supplies are higher for SHCs as they provide basic medical care, while FHCs purchase required essential medicines and supplies themselves.

The Health Insurance Fund reimburses pharmacies for discounted sales of essential medicines to insured people when prescribed by SHC and FHC physicians. However, the implementation of this measure is poor, as the allotted budget depletes in the first seven days of the month. The FHCs keep essential medicines and supplies they have purchased as a reserve, as indicated in the relevant standards, and do not necessarily use them for their clients. This reserve is kept at 90% of what is required but reduces to 50% when there are outbreaks of infections and emergencies. The bidding for medicines and supplies provides 70% to 80% of the needs of SHCs, and facilities make direct purchases from the suppliers

and drug revolving funds for the remaining 20%. In the past, the SHCs experienced chronic shortages of essential medicines; however, the situation is likely to be corrected with the new budgeting methodology approved in 2016.

The budget amounts for medicines and supplies of secondary- and tertiary-level care providers vary, and are also subject to exchange rate risks due to the high level of imported medicines and supplies. In the past five years the Mongolian tugrik has depreciated by 55% but the budget for medicines and supplies has not increased. This has resulted in the procurement of items of questionable quality as the suppliers opt for cheap, poor-quality and substandard medicines and supplies in order to reduce costs.

2.5 Geographical availability and equity

PHC providers are located based on establishments of the administrative units throughout Mongolia, as stipulated in the Law on Administrative Units. There are 21 aimags (provinces), 330 soums (rural villages), 20 villages, and 9 districts in Ulaanbaatar. There are 67 baghs in aimag centres and 151 khoros in 9 districts of Ulaanbaatar. The SHCs and FHCs operate in soums, baghs in aimag centres, and khoros in districts. The lowest level of administrative unit in rural remote areas is the bagh; each bagh has an established medical point with a trained bagh feldsher (rural

health worker). On average, an SHC registered 2854 people and an FHC registered 8582 people in 2015.

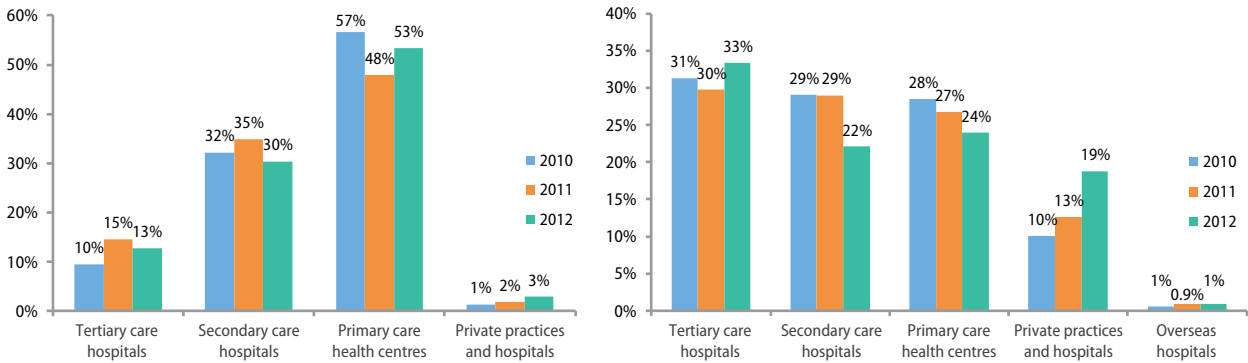
2.6 Socioeconomic equality

PHC providers are evenly distributed across the country regardless of socioeconomic differences of administrative units. However, the wave of internal migration in recent years has added to the number of residents in peri-urban areas of Ulaanbaatar, making equitable access to PHC services more difficult. A 2015 study conducted by the Mongolian Association of Family Medicine Specialists reveals that 21.4% of all FHC clients are poor and vulnerable people. The share of poor and vulnerable patients is 11.4% in central districts compared to 20.4 in peri-urban districts. The situation is most challenging in FHCs located in khoros on the outskirts of Ulaanbaatar, where 66% of clients are poor and vulnerable people.

The per capita visit rate is 2.8 in the FHCs, with 2.9 per capita visits in Ulaanbaatar and 2.8 visits in aimags. About 42% of the total visits are disease prevention check-ups. The comparative rate for SHCs is 1.8 per capita visits in rural Mongolia, with 38.1% of visits for disease prevention check-ups (2).

The study results on service utilization by income quintiles are shown in Figure 2, which depicts outpatient care utilization patterns for the lowest and highest expenditure quintiles. The poorest clients

Figure 2. Outpatient care utilization by the lowest and highest expenditure quintiles and by health facility



Source: Tsolmongerel, Oyungeregel and Enkhbaatar (3).

mainly use PHC facilities rather than the specialized centres and clinical hospitals at tertiary level. Despite being relatively limited, the use of private health facilities increased for the poorest population in Mongolia. Their rate of attendance at SHCs and FHCs is twice that of the richest people, and the rate of attendance at private hospitals is 5–10 times less. The

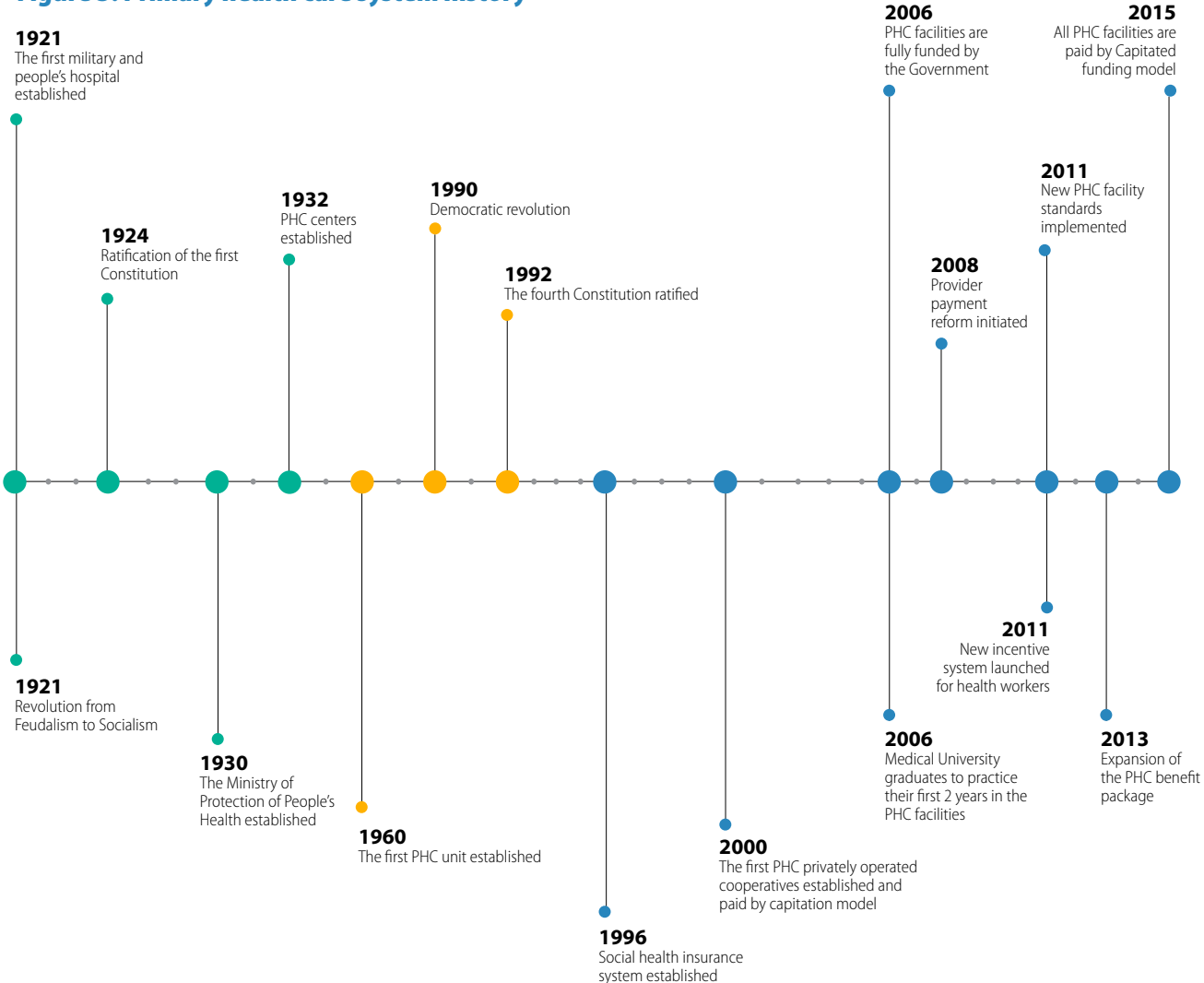
richest people accessed health services at central clinical hospitals and specialized centres 2–3 times more than the poorest people. Both poorest and richest expenditure quintiles had fairly equal access to the secondary-level care providers, such as aimag and district general hospitals.

3. Timeline

In 1921, when Mongolia embarked on a path of socialist revolution, the country replaced the previous feudalistic society with a centrally planned socialist economy. Thus, the health system has evolved from traditional medicine and private alternative practices to a modern evidence-based medical system. During the period of the centrally planned economy, many medical doctors and other specialists were trained in the former Soviet Union countries. Moreover, Mongolia organized eight rounds of rigorous countryside campaigns, deploying teams of medical doctors and paramedical specialists to improve the health of the population, which was on the brink of a serious public health crisis.

Since 1990, when Mongolia moved to a free market and democratic regime, the health system has been changed to one of mixed health service delivery by public and private health care providers. In 1995/1996 Mongolia introduced a Social Health Insurance System and reorganized PHC (family health units) into privately operated family health group practices in urban settings, including the capital city Ulaanbaatar. The timeline (Figure 3) shows the historical calendar of major reforms in the health system. Additional information is presented below on key events in the development of PHC in Mongolia, along with the relevant successes, barriers and opportunities.

Figure 3. Primary health care system history



1921. Victory of the People's Revolution and the first army and people's hospital established

Success. The Soviet Union provided assistance to Mongolia's People's Revolution. The health status of Mongolian people was in severe deterioration. For example, the life expectancy was 30 years, the maternal mortality rate was 13 per 1000 live births, and infant mortality reached 500 per 1000 live births. Furthermore, a high prevalence of communicable diseases slowed down the population growth. On 15 August 1921, however, the first hospital was established to provide free medical services for army and people. This paved the way for the development of modern medicine in Mongolia.

Barriers. Buddhist superstition and strong beliefs in alternative healing among the population hindered the development and spread of modern medicine in Mongolia.

Opportunities. The People's Government implemented formal and obligatory coverage of services to all citizens and started nationwide campaigns and curative programmes. Such programmes helped people to change their views with regard to a science-based, modern medical system (4).

1924. Mongolia's first Constitution ratified

Success. Mongolia announced its independence and ratified the country's first Constitution. The Constitution enshrined the right of people to access free health services, which was a significant leap forward to improve the health of the population (4).

1930. Creation of Ministry of Health Protection

Success. Despite the establishment of hospitals and clinics and the Department of Health Protection, the health status of the population remained low while disease prevalence rates remained high. Therefore the government created the Ministry of Health Protection to oversee health policy and administration.

Barriers. A lack of trained personnel led to overreliance on medical specialists from the Soviet Union.

Opportunities. The Ministry of Health Protection assumed leadership on matters related to the health of the population and started to educate Mongolians on medical matters, including through short- and long-term training courses for midwives, physicians and nurses with the support of medical doctors and professionals from the Soviet Union. The Soviet Union assisted Mongolia on many occasions by sending medical expeditions and teams to improve access to health services for Mongolian citizens (4).

1932. First soum hospital established

Success. The Ministry of Health Protection and the health protection departments in the provinces continued to establish new hospitals in rural areas as a foundation for PHC in Mongolia. The new soum hospital was laid out in three gers with 15 beds. There were two physician assistants, three nurses and support staff in each soum hospital.

Barriers. Although new hospitals and medical institutions have been established in localities, the Second World War slowed down further development of the health sector due to resource shortages.

Opportunities. During this period, training and education of medical personnel were intensified, and as a result Mongolia's human resources for health situation improved. Within only five years (1930–1935) Mongolia established 66 soum hospitals (4).

1960. Primary health care units established in urban settings

Success. After the Second World War, Mongolia embarked on construction of cities and urban settlements, along with PHC units to provide PHC services to the population.

Barriers. These and other medical establishments paid attention to building up service infrastructure rather than taking account of the subsequent cost

and efficiency implications. During this period the government and State allowed people to become accustomed to easy access to medical services and hospitalization, creating a culture of dependency on curative care that has been one of the major obstacles to promoting modern public health and health prevention in Mongolia.

Opportunities. The PHC providers throughout the country played a pivotal role to gaining the population's trust in the modern medical system. In addition, the government's socialist plan placed importance on investing in the health system to achieve population health objectives (4).

1990–1992. Victory of Democratic Revolution and the new Constitution ratified

Success. The shift from a centrally planned economy to a market system enabled the proliferation of private health care providers in Mongolia. The new Constitution established the right of people to access medical services. However, regulation of private sector service provision has not been clear, leading eventually to high out-of-pocket payments.

Barriers. During the opening up of the economy in line with the free market system, government expenditure for health declined, and the supply of medicines and medical supplies worsened. Such shortages affected the operations of health care institutions and consequently the quality of health services (4).

1996. Social Health Insurance System established

Success and failure. The Mongolian health system was no longer able to sustain an inefficient and unwieldy hospital system and infrastructure, as the government could not fund the required costs. Therefore, the Social Health Insurance System was established to share health-related financial risks

among the population and mobilize earmarked funding sources for health.

Barriers. The introduction of a Social Health Insurance System faced challenges due to poor knowledge and awareness among the population.⁷

2000. Family group practices established

Success and failure. The specialized medical services previously provided by the family health units were reorganized in terms of changes in their operational scope and management into family group practices. This reform was supported by the Health Sector Development Programme of the Asian Development Bank. Several changes were implemented: (a) services provided by the specialized medical doctors were delivered by general practitioners trained in family medicine; (b) government health facilities funded by general revenue were converted into cooperatives; and (c) public–private partnerships were introduced in the health system. However, a lack of overall understanding and awareness, and a shortage of trained professionals, led to challenges subsequently. The family group practices were paid by the capitation payment system. SHCs also went through management contracting out, though this led to the bankruptcy of some facilities, so this initiative was discontinued.

Barriers. Low awareness and understanding among the general public and lack of funding from the Health Insurance Fund affected the financial situation of family group practices, due to low levels of health insurance coverage.

Opportunities. The political commitment and favourable policy environment contributed to establishment of family group practices across country.⁸

7 Interview with President of Mongolian Association of Family Medicine Specialists, Ulaanbaatar, 2017.

8 Ibid.

2006. Changes in primary health care human resources policy

Success. When citizens were allowed to choose their place of residence, medical personnel left rural health facilities, leading to severe shortages of human resources to provide services. In addition, the human resources training and education programme for family group practitioners had not been well established, so the Ministry of Health issued a policy by which new graduates of the Medical University were placed in PHC facilities for their first two years of professional experience as physicians or medical doctors. By 2015, all SHCs and FHCs employed medical doctors. However, the newly graduated personnel lacked experience and expertise, and this affected overall confidence in the PHC facilities and the quality of services. There were also issues with continuity of care, as young medical doctors left PHC facilities soon after completion of the two years.

Opportunities. Medical personnel shortages in family group practices and soum hospitals were addressed, and corresponding positions were filled with new graduates.⁹

2006. Primary health care providers are funded directly by government budget

Success and failure. PHC funding sources were changed from a partial Health Insurance Fund and State budget system to a full State budget funding system. This arrangement ensured financial reliability for PHC facilities and their operations. They were no longer obliged to organize coverage of citizens through the Social Health Insurance Scheme. The State became ultimately responsible for providing PHC all people through full funding, enabling all citizens to access needed PHC services regardless of their health insurance coverage eligibility.

Opportunities. The positive economic outlook helped the government to take on some financial responsibility.¹⁰

2008. Revision of soum hospital payment system

Success and failure. As noted above, family group practices were already paid on the basis of a capitation payment system. Reform of the soum hospitals payment system aimed to shift them from line item-based finding to capitation payment. However, the initiative failed to be taken up nationwide at grass-roots level as health care workers were not well sensitized and trained to work with the new model. Further, changes in government staffing stalled the reform process.

Barriers. The government failed to provide adequate support to the reform of the capitation payment system.

2011. Soum hospitals and family group practices converted into health centres

Success and failure. In 2011, Mongolia revised the Health Act and aimed to clarify and potentially improve the operational scope of PHC facilities, with an emphasis on public health and prevention. The Health Act resulted in modification of PHC facility standards and enforced public health as one of the main streams of work. This helped to create a shift in people's perceptions from a hospital-based, curative care mindset to a higher awareness of prevention and health education. However, the expected changes are yet to materialize.

Barriers. A lack of support for the new functions in terms of adequate human resources and funding has affected implementation, and providers continue to be faced with difficulties.¹¹

⁹ Health Act, interview with Ministry of Health officer.

¹⁰ Interview with Ministry of Health officers.

¹¹ Ibid.

2011. New incentive system for PHC providers

Success and failure. In order to address staff shortages in rural areas, a new policy to reward health workers with monetary incentives equal to six monthly salaries was implemented for personnel employed for five consecutive years in rural health facilities.

Opportunities. A positive economic outlook and political stability worked in favour of introducing a system of incentives to remunerate the efforts of health workers.¹²

2013. Service delivery package for family and soum health centres expanded

Success and failure. An enhanced or expanded benefit package provided by the FHCs aimed to increase the service scope and thus support the achievement of universal health care coverage. It was decided that basic laboratory tests would be performed at PHC institutions, thus helping citizens who previously accessed higher-level institutions or paid for verification of diagnosis services. However, the expanded services were mismatched or failed to be supported by necessary resources, and implementation was flawed.

Barriers. There is insufficient funding to support the initiative.¹³

2015. All family and soum health centres are paid by the capitation payment system

Success and failure. An attempt was made to rectify inequitable allocation of funding across SHCs by changing to a funding model linked to remoteness, size of population, and facility standard. A similar funding model had been developed earlier (2008), but implementation failed. For the updated model, the Ministry of Health corrected both the design and implementation issues.

Barriers. The objective to ensure equity of resource allocation faced difficulties due to disagreements from health care providers who previously benefited from the line item-based funding system with varying levels of funding.

Opportunities. Decision-makers provided good support to sensitization of stakeholders, training of care providers, and support to the corresponding information technology (IT) system.¹⁴

12 Interview with Ministry of Health officers in charge of budget planning.

13 Interview with Ministry of Health officers.

14 Ibid.

4. Governance

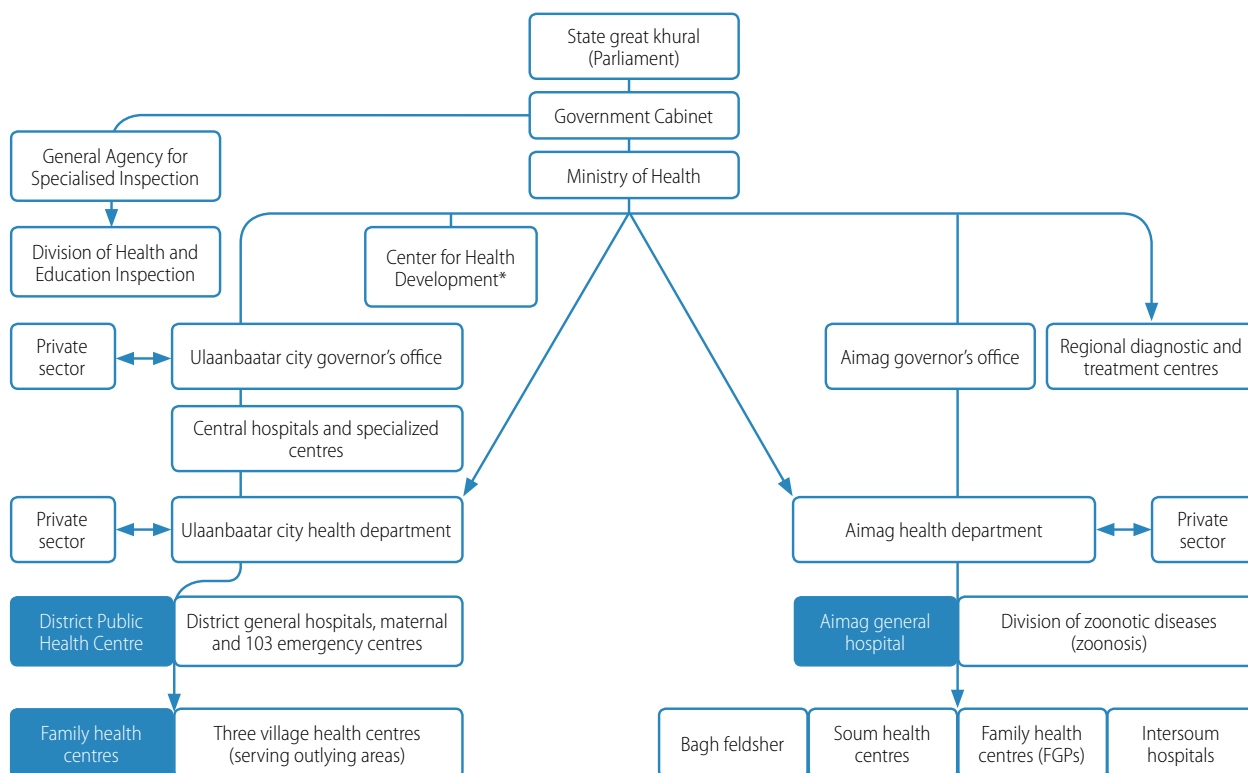
Mongolia has a parliamentary system. The government is the executive arm of the State, which manages 21 provinces, 9 districts, 330 soums and 264 baghs to implement the laws approved by Parliament. The health system is organized in accordance with the administrative units, and there are health institutions charged with implementing health policies in aimags (provinces) and in the capital city.

The Ministry of Health develops national-level long- to medium-term policies and strategies for health, and delegates implementation to the aimag and city health departments and health facilities. The Ministry of Health has attached to it tertiary-level care providers, and the local administrative or government units are responsible for overseeing the aimag (provincial) and district general hospitals,

district health centres, and the SHCs and FHCs (primary-level health care facilities) in their localities. Figure 4 depicts the overall structure of the health care system.

In each aimag and in Ulaanbaatar city there is a health department tasked to ensure coordination and implementation of health policies at local level. The health departments are vital to ensure effective implementation of policies through technical supervision and guidance, though they lack the financial leverage to affect PHC provision in health care facilities. A change came with the revised Integrated Budget Law (2013), whereby decentralization brought basic public services such as health and education under the responsibility of the local government units.

Figure 4. Structure of health care system



*Center for Health Development was an implementing agency of the Ministry of Health until 2012.

Source: Mongolian health system review (5).

Under the Budget Law, all health facilities and institutions funded by the government budget conclude service delivery and performance agreements with higher-level budget managers. For the whole of the health sector, the general budget governor is the Minister of Health, who develops agreements with local governors and tertiary-level care providers as to the details of the payments, performance conditions and responsibilities, and allocates funds to the localities. Aimag and Ulaanbaatar city governors also have similar service delivery and performance agreements with aimag and district governors and these officials conclude agreements with SHCs and FHCs. As noted above, such agreements define service scope, funding level, output and performance requirements.

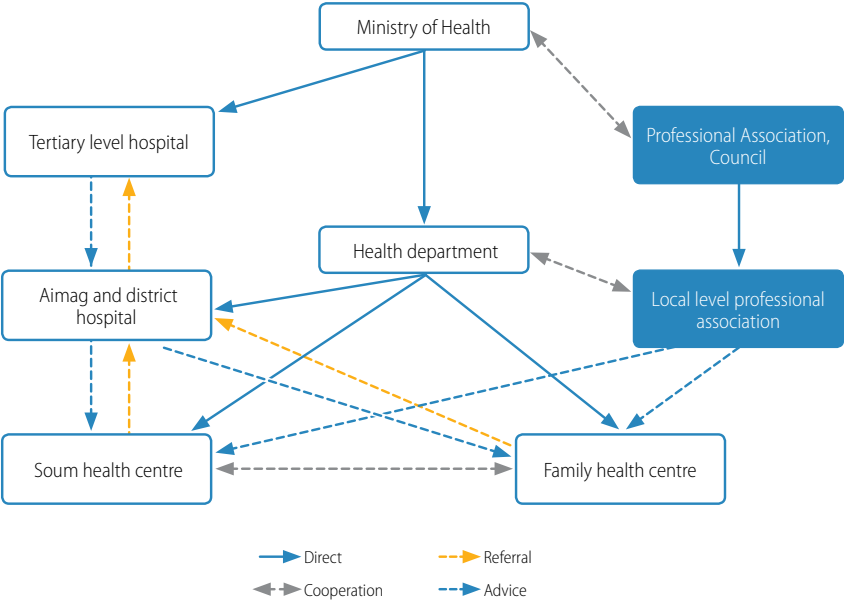
Mongolia established the Social Health Insurance Scheme at national level and has branch department in each aimag and Ulaanbaatar district. The General Authority for Social Insurance provides supervision and stewardship, and local departments are administratively reportable to local governors. The General Authority for Social Insurance concludes service delivery and performance agreements with

aimag and district governors for some decentralized decision-making.

There are 3244 health care institutions operational in Mongolia, of which 21.5% are government owned. The health system has a vertical structure in terms of policies, though each administrative unit has its own local government unit, so the respective health care facilities and institutions operate under their direct administration and management.

The government is in charge of organizing and ensuring access to PHC and provides the necessary support, including building structures and fixtures, funding human resources, and ensuring their social welfare. The PHC providers do not rely on the support of private sector entities and NGOs. However, the international partners, including the World Health Organization (WHO), the Asian Development Bank, the World Bank, and other international NGOs, support the government in terms of funding, technology transfer and training of personnel for PHC. Figure 5 provides a service map of organizational structures and decision-making bodies in the PHC system, with special attention to key organizations delivering primary care and interlinkages and referral systems.

Figure 5. Service map for PHC system



The PHC providers interact amongst themselves through their professional associations. There are two associations: the Mongolian Association of Family Medicine Specialists and the Association of Soum Health Centres. In addition, PHC providers interact and exchange information for referral of patients from one locality to another, especially for cases of pregnant women. The associations organize periodic events, such as sharing good practices and trainings. The officers in charge of PHC at the aimag and Ulaanbaatar city health departments provide technical guidance and supervision to local-level providers. The secondary- and tertiary-level care providers assist clinical specialized care support to the PHC providers in cases of complications and verification of diagnosis and treatments of patients. For example, when an SHC physician needs an additional technical opinion on care for obstetrics, they will approach an obstetrician in an aimag general hospital. There is a referral line to transfer patients from the lower level to the next level of care provision. If the health care provider is unable to provide certain services or they are out of the service package, then a patient is referred to the next level of health care facility (see Figure 5).

Development partners provide policy and legal systems as well as direct supports to health care facilities. In addition, they assist introduction

and implementation of new technologies and approaches.

The government provides primary health services through government-owned and operated SHCs and also privately run but State-owned FHCs. With regard to public health, all health care facilities and institutions are charged with ensuring public health prevention and promotion services. For example, the vaccination rate in Mongolia reached 93% in 2016. Nevertheless, SHCs provide somewhat limited health promotion, prevention, and information, education and communication (IEC) activities. Moreover, 28% of the activities¹⁵ of FHCs are dedicated to public health, 56% to medical services, and 16% are of an administrative nature. However, while the PHC facilities are tasked to provide and undertake public health services and activities, the services provided have been predominantly medical due to population care preferences. Table 3 summarizes the organization and provision of primary care services.

There is a good model of public–private partnership for PHC service delivery in Mongolia, as private cooperatives operate FHCs through government-owned and funded facilities. The PHC providers do not encounter service duplication or overlap issues, as they are situated in designated and separate catchment areas.

15 Presentation by Mongolia Association of Family Medicine Specialists, 2016.

Table 3. Organization and provision of primary care services

Type of facility	Family health centre	Soum health centre/ inter-soum hospital
Type of sector (public or private)	Private, (company, LLC)	State owned
Nature of facility	Provide health services	Provide health services
Mode of employment of providers	Labour and performance of services agreement	Civil service regulation
Range of services provided	<p>Outpatient medical services:</p> <ul style="list-style-type: none"> • Paediatrics • Rehabilitation • Elderly • Noncommunicable • Communicable • Emergency services • Nursing • Physiotherapy • Exercises • Rehabilitation • Home care • Day care • Palliative care • Diagnosis and tests <p>Public health:</p> <ul style="list-style-type: none"> • Assessment of health status • Health education • Education for prevention from risk factors • Physical exercises • Public health programmes 	<p>Outpatient medical services:</p> <ul style="list-style-type: none"> • Paediatrics • Rehabilitation • Elderly • Noncommunicable • Communicable • Emergency services • Nursing • Physiotherapy • Exercises • Rehabilitation • Home care • Day care • Palliative care • Diagnosis and tests <p>Public health:</p> <ul style="list-style-type: none"> • Assessment of health status • Health education • Education for prevention from risk factors • Physical exercises • Public health programmes <p>Inpatient medical services</p>
Remarks	Provide health services included in the service package	Provide health services included in the service package Inter-soum hospitals provide specialized medical services to population in nearby soums
Source of information	Order No. 129, 2017, of the Minister of Health	Order No. 246, 2013, of the Minister of Health

5. Financing

The PHC facilities are funded by the government general revenue. This ensures equal accessibility to primary care services free of charge for every citizen. Before 2006, the FHCs were paid from the Health Insurance Fund; however, the government has taken over funding responsibility since then. The SHCs are paid by line item expenses from the government budget. Resource allocation is based on the number of population formally registered with FHCs according to official statistics, and local population and remoteness data are used in the case of SHCs. Figure 6 shows general government health expenditure as a percentage of gross domestic product (GDP). The share of public expenditure for health was 2.5% of GDP in 2015. GDP has been growing, and the general government budget allocation for health has increased in nominal terms.

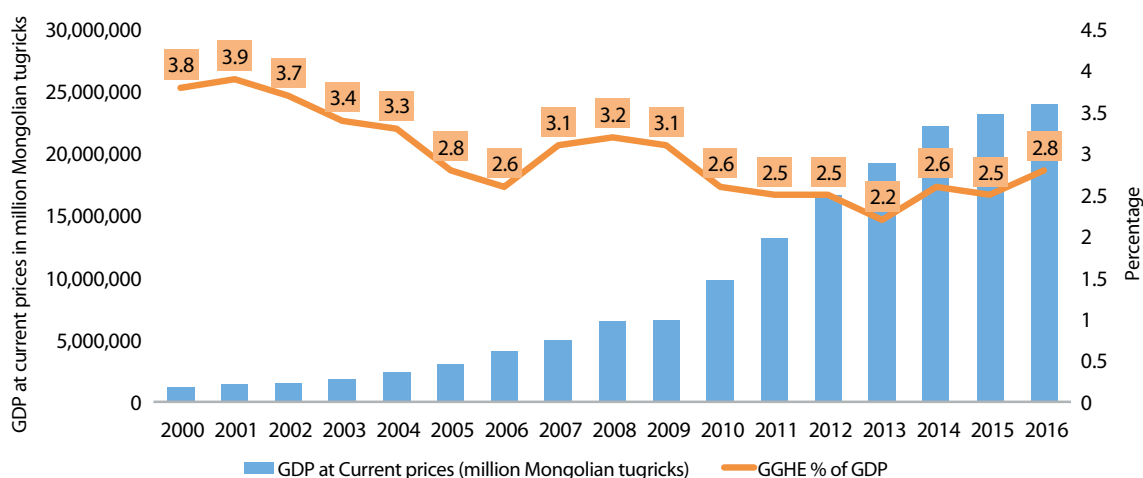
Out-of-pocket health payments accounted for 42% of total health expenditure in 2014 (Figure 7). The high level of out-of-pocket health expenditure is a particular concern for Mongolia. The large share of out-of-pocket payments is due to user fees imposed by the private care providers in the form of balance billing in addition to health insurance reimbursement. The percentages and numbers of

households incurring catastrophic health payments in Mongolia were estimated at 1.5% or 10 778 households in 2010, 1.8% or 13 602 households in 2011, and 0.9% or 6683 households in 2012 (3).

The formal user fee collection of the government-owned health care providers is about 3% to 5% of annual budget. The formal user fees are applied as co-payments for health insurance-covered services and diagnostics. The cost coverage of the health insurance-covered services has been enhanced, for example to pay for high-cost surgical devices and supplies. However, in the Mongolian health system the regulation is weak and ineffective with regard to the user fees of private health care providers, and also to address the unnecessary admissions across all levels.

In general, there is a tendency to charge user fees at point of service delivery, largely due to poor purchasing capacity to monitor the providers' behaviour. The private care providers set their own user fees, whereas the public ones rely on averages of so-called market rates or what is being applied in the private sector. These user fees have not been regulated to check against or compare with the actual costs of services.¹⁶ For example, the

Figure 6. General government health expenditure as % of GDP, 2000–2015



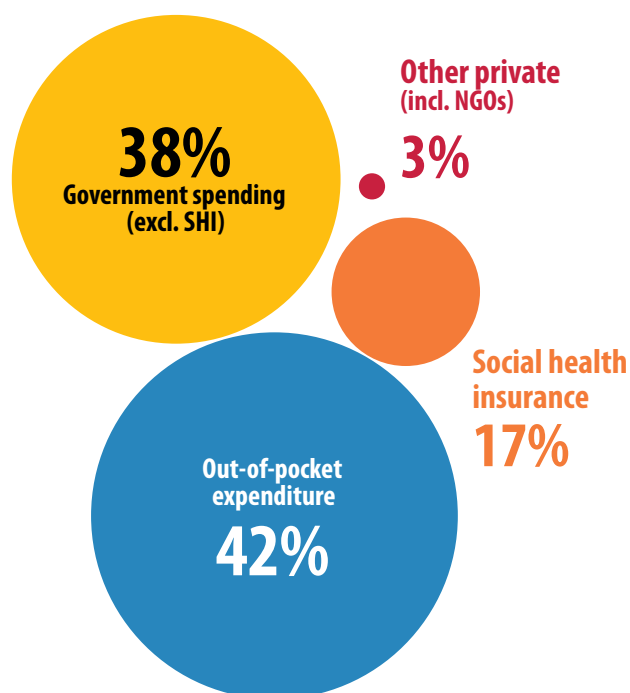
Source: Mongolian health system review (5).

16 Interview with Ministry of Health officers.

health facility costing study (2013) estimated 4300 Mongolian tugriks for an ultrasound investigation, whereas the average charges to patients were set at almost 5 times higher, or 20 000 tugriks.

However, there is fairly effective regulation of user fees of PHC providers due to full funding by the government budget. Nevertheless, users are expected to shoulder the co-payments for essential medicines prescribed by the PHC physicians and dental services. Dental services and others subject to user fees are excluded from the FHC and SHC service package and are expected to be provided in nearby inter-soum hospitals. However, in response to the demand of soum citizens that such services be provided closer at SHCs, the local development fund and private donations assisted in purchasing the necessary dental equipment. The costs of medicines and supplies are borne by citizens. In Ulaanbaatar, 729 or 25% of the private outpatient clinics provide dental services, contributing to higher out-of-pocket payments. Table 4 presents an overview of provider payment systems used in Mongolia.

Figure 7. Structure of total health expenditure, 2014



Source: Total health expenditure, Mongolia, 2014: WHO National Health Accounts (6).

Table 4. Overview of provider payment systems used in Mongolia

Type of provider	Purchaser/payment methods (% of revenue)		
	Ministry of Health	Social Insurance General Office	Clients
Central hospitals and specialized centres	Line item budget (12–83%)	Case-based payment using DRGs (7–83%)	Fee for service (4–10%)
District health complexes and maternity homes	Line item budget (17–100%)	Case-based payment using DRGs (0–80%)	Fee for service (0–3%)
Aimag general hospitals	Line item budget (58–60%)	Case-based payment using DRGs (30–40%)	Fee for service (1–10%)
Regional diagnostic and treatment centres	Line item budget (60%)	Case-based payment using DRGs (34%)	Fee for service (6%)
Soum and inter-soum hospitals	Line item budget (75–96%)	Case-based payment using DRGs (4–20%)	Fee for service (0–5%)
Soum health centres	Line item budget	–	–
Family health centres	Capitation (100%)	–	–
Sanatoria	–	Case-based payment using DRGs (19–90%)	Fee for service (no response)
Private hospitals	–	Case-based payment using DRGs (10–30%)	Fee for service (70–90%)
Private pharmacies	–	Reference prices	Fee for service

DRGs: diagnosis-related groups.

Source: Cashin et al. (7).

In 2016, 15.7% of the general government health expenditure was allocated to PHC. In the past decade, the total general government health expenditure has grown by almost 9 times in nominal terms, though the share for PHC has declined by 9.1% (Figure 8). This shows that the growth of public health care expenditure does not support PHC to the extent it supports the secondary and tertiary hospital care system in Mongolia. Over the last 10 years, the per capita public health spending in Mongolia has increased 7.3-fold.

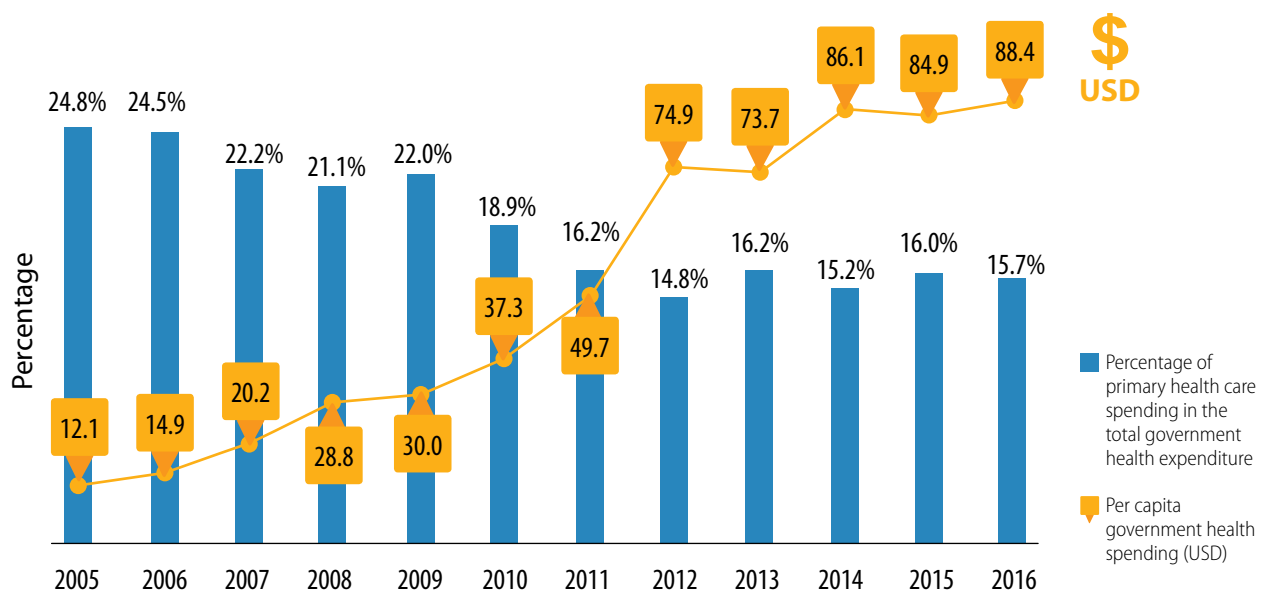
Of the total allocation for PHC facilities, 25% is for FHCs, due to varying service packages and the payment system. FHCs do not cater for inpatients and are paid by the capitation funding model. The SHCs are paid by line item expenses (Table 4).

Figure 9 shows the budget allocated to SHCs and FHCs in nominal and real terms. The nominal increases of funding for PHC facilities do not match the real budget allocation, or even decline in real terms. In other words, the budget increases do not offset the price hikes of consumables and other operation expenses, leading to shortages of resource items and compromising the quality of services. During this

same period, for example, FHCs consistently catered for about 5.9 million outpatient visits, but their budget decreased by 31% in real terms. In addition, the capitation payment rates do not reflect price inflation but are only adjusted in cases of broad-based increases in the salaries or wages of health personnel. This limits the real support provided to FHCs, where the funding is linked to population size and varies accordingly. As such Mongolia fails to support and implement one of its health system policy objectives – to prioritize PHC over hospital care.

The national public health programmes (11 types of programmes in 2016) and their funding and operational plans are approved by the government, but the financial allocation is inadequate for effective implementation. These national programmes are mainly implemented by PHC facilities, and thus the government pushes for implementation within the approved recurrent budget. Due to the lack of financial support, the benefits of these programmes are often questionable; in the meantime, however, they add to the workload of care providers.¹⁷ The international partners provide critical support to implementation of national programmes, but no integrated database is available.

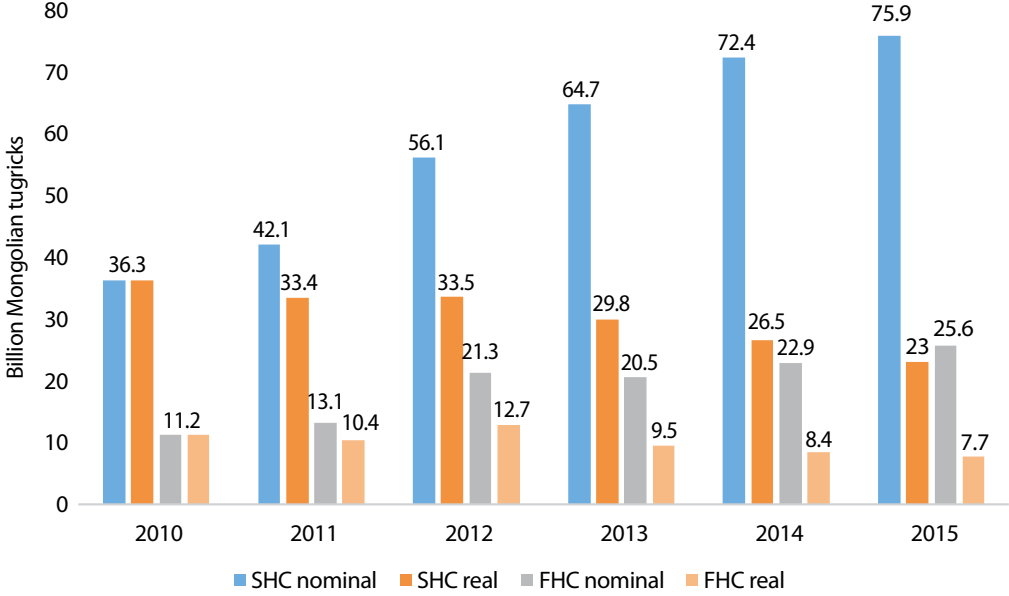
Figure 8. Primary health care funding, 2005–2016



Source: Ministry of Health, Division of Finance and Economy, 2017.

¹⁷ Interview with primary health care medical doctors.

Figure 9. Budget allocated to SHCs and FHCs in nominal and real terms (2010 GDP deflator base year)



Source: Ministry of Health, Division of Finance and Economy, 2017.

6. Human resources for health

Mongolia has a high number of licensed medical workers, particularly medical doctors. In 2015, there were 47 429 medical doctors and other medical workers, of which 8545 were employed in PHC facilities. Of the total health personnel, 20.2% are medical doctors and dental specialists, and 23.9% are nurses (Figure 10). The assistant workers or support staff comprise one third of the total health personnel in Mongolia.

Mongolia's ratio of medical doctors to nurses is 1:1.18 nationally and 1:1.45 in the PHC system – much lower than the international averages. There are more doctors and nurses in urban settings than in rural Mongolia (Table 5).

Table 5. Basic indicators of health human resources

Indicators	Results
Number of physicians per 1000 population	3.16
Number of nurses per 1000 population	3.75
Relative geographical distribution (rural/urban) of doctors and nurses	Doctors 2.26/4.23 Nurses 3.31/4.28

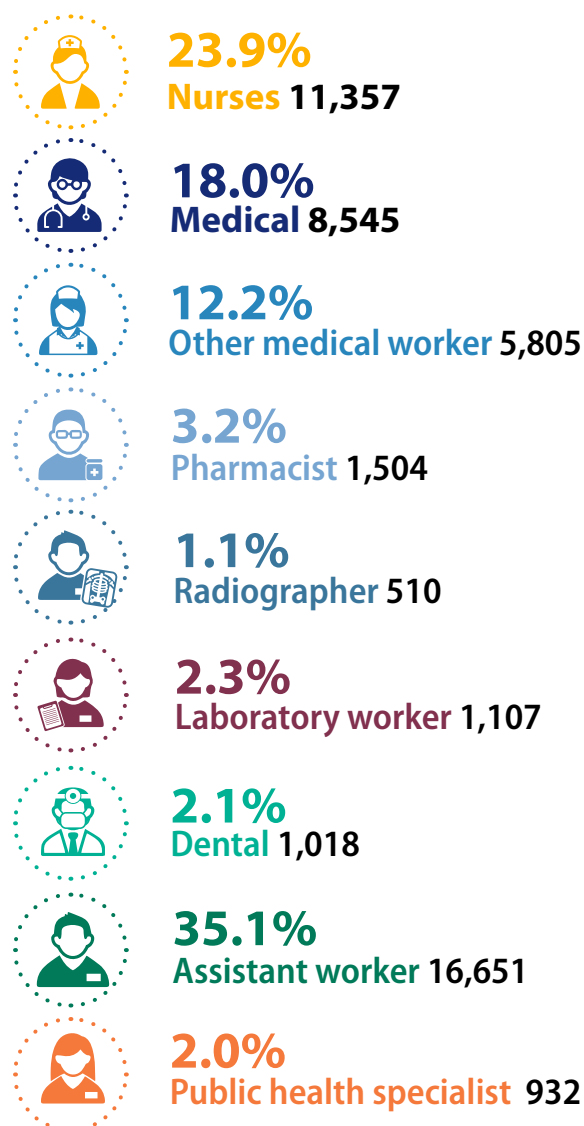
Source: Mongolia health indicators, 2015 (2).

In 2015, there were 31.6 medical doctors per 10 000 population. In FHCs, there were 4.8 medical doctors per 10 000 population, and in SHCs and inter-soum hospitals the figure was 11.23 medical doctors per 10 000 population. Consequently, medical doctors and physicians in FHCs cater for 2.3 times more patients than medical doctors in SHCs.

The distribution of medical personnel by ownership of health facilities is shown in Figure 11. In Mongolia, PHC is predominantly provided by medical personnel in the public sector, as all SHCs are government-owned and operated entities with much higher numbers of medical personnel than private FHCs.

Of the total number of medical doctors, 61% are specialized and only 21% are generalists (Table 6).

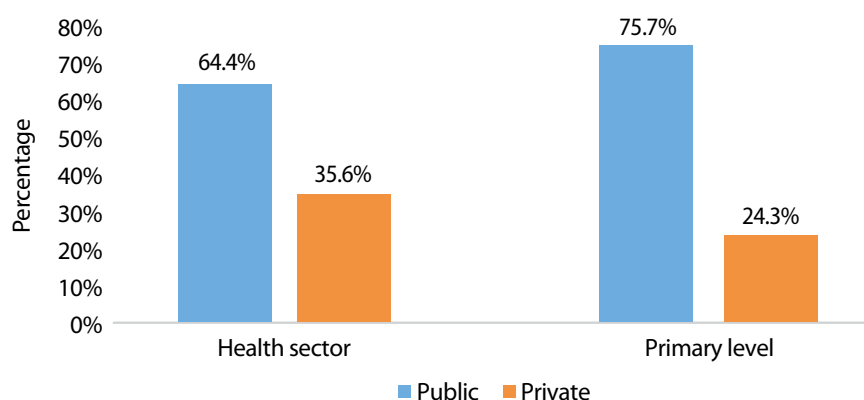
Figure 10. Distribution of personnel in the health system



Source: Mongolia health indicators, 2015 (2).

Although PHC is provided by generalist medical doctors, often they do not possess multidisciplinary knowledge, due to the situation whereby medical university graduates are considered generalists and can work as generalist medical doctors, though they lack experience. Annually there are 1693 new medical graduates in the Mongolian health system, of which 30% are generalists.

Figure 11. Shares of medical personnel in private and public sector, 2015



Source: Mongolia health indicators, 2015 (2).

Table 6. Specialization of medical doctors, 2015

Levels		Generalists	Specialty doctors	Traditional medicines	Dentistry	Total
Primary care level	Number	1352	381	119	35	1887
	%	71.6%	20.2%	6.3%	1.9%	100%
Other levels	Number	660	5452	581	983	7676
	%	8.6%	71.0%	7.6%	12.8%	100%
Total	Number	2012	5833	700	1018	9563
	%	21.0%	61.0%	7.3%	10.6%	100%

Source: Mongolia health indicators, 2015 (2).

The PHC providers, such as medical doctors and nurses, complete medical university curricula and programmes, and are awarded with practice licences for a certain period of time. This licence is extended when the medical doctor takes certain credit-hours of training and passes the licensing exam. Often such credit-hour trainings are offered through projects and programmes of international partners and trainers, but on an ad hoc basis. It is necessary to match training system needs with clear and sustainable institutional capacity.¹⁸

The aimag health department assigns general specialists to eight disciplines (including internal medicine, paediatrics, surgery, obstetrics, infectious disease treatment, and emergency and laboratory services) in the aimag general hospital, and when necessary they provide on-the-job supports and

consultations to PHC providers (see Figure 5). Such arrangements offer good support to PHC providers, and in some circumstances the tertiary care specialists and teams from aimags and Ulaanbaatar are sent to remote soums to assist PHC doctors.

The government aims to retain medical doctors and other medical workers in rural areas by implementing additional remuneration and incentive schemes. For example, additional bonuses are awarded to medical workers if they stay in a rural PHC facility for three years or in an aimag general hospital for five years. This programme has been very important in incentivizing young medical doctors to work in rural PHC facilities. In addition, medical workers have since 2011 been entitled to avail retirement benefits equal to 36 months of salary.

¹⁸ Interview with Ministry of Health officers.

7. Planning and implementation

Mongolia has a well established health statistics system whereby morbidities and mortalities are registered and reported to the national-level Centre for Health Development for analysis and utilization for evidence-based policy-making. The health facilities register the diseases and deaths according to the International Classification of Diseases and Related Health Problems, 10th Revision (ICD-10), and for this they use the Health Information System (H-info) software provided by the Ministry of Health. On the basis of the reported health data, policy-makers develop policies such as the National Noncommunicable Diseases Programme and the Mental Health Programme, and also immediate action plans to respond to outbreaks of diseases and emergencies. However, there are challenges with the health data, as detailed information is not generated for all morbidities and conditions. Disease-specific vertical programmes and national public health programmes are more likely to have detailed data.

In general, the PHC providers have a good understanding of the health of the population, as they are tasked with tracking the health of significant groups of the population, including mothers, infants, children and the elderly. Each population group has specific health needs for which there are corresponding medical care and programmes. This is especially the case for SHC medical doctors, as they work in their institutions for long periods of time and maintain good records of people's health conditions. However, there is a high staff turnover of FHC medical doctors and nurses, and thus the longitudinal continuity of care is likely to suffer.

It is common practice for PHC teams to address issues in a comprehensive and efficient manner. For example, there are teams for integrated management of childhood illness, tuberculosis, infection control and nursing care, and working

terms of reference are set out in regulations. On average a primary health facility employs 10–20 staff, half of whom are non-medical support personnel. Medical personnel can participate in several different teams simultaneously, though the teams are not always effective due to the high workload of medical personnel, and their actions can be implemented haphazardly.¹⁹ The PHC doctors stated that the service delivery team member is often also in the monitoring team, contributing to flawed implementation of activities.

The Ministry of Health has specified the list of reserves to be maintained at primary health facilities for them to be able to provide the designated service package. The reserve includes equipment, medicines and medical supplies, and medical devices. The reserve can be used when required in specific conditions. The PHC facilities have varying levels of supplies of medical equipment. According to a Ministry of Health report, 74.5% of all available equipment at PHC level is in use and their average lifetime is 16.9 years. There is limited information on the availability of essential medical equipment, though a study found that only 40% of the equipment required in accordance with the soum health facility standard is available. This is a clear indication that lack of necessary equipment will lead to a situation where PHC services will be undermined and their quality compromised in situations where the equipment is unavailable when required for service delivery.

The PHC facilities are the main gatekeepers of the health system in Mongolia, and the related transfer and mobility of patients are governed by the relevant regulations. The patient referral regulation is based on the service package and facility standard. In reality, there are challenges with regard to the capacity of primary care facilities and the preference among many of the population for hospital care, hindering

¹⁹ Interviews with director of Health Department and FHC and SHC medical doctors.

the effectiveness of the referral regulation. On the other hand, when the upper-level care provider counter-refers a patient to a PHC facility, little is done to share information to track the referral, except in the cases of surgical and cancer patients. However, the referral regulation promotes continuity of care to and from the provider.

As noted above, the PHC facilities previously provided predominantly medical and curative services, though more prevention and promotion services have been introduced in the service package since 2011. The greater proportion of resources is allocated to medical care, as well as health education, promotion of physical exercise and immunization services.

The medical services are based on clinical guidelines and standards. There are 2500 diagnostic and treatment service delivery standards developed for a wide range of conditions. The PHC medical doctors express concern that new services often lack respective service standards and guidelines. In addition, PHC care providers lack knowledge and information about clinical guidelines and standards

and often use unofficial guidelines and protocols developed within international partner-supported projects and programmes.²⁰ These guidelines and standards provide information on what services to provide and when, and in which cases and conditions a patient should be referred to the next level care. The utilization of guidelines and standards has been related and correlated to the stability of medical personnel in facilities.

Policy-making and planning in the health sector is carried out at national level with Ministry of Health stewardship. The Ministry of Health has been making good efforts to involve interested stakeholders and civil society organizations to ensure inclusiveness and comprehensiveness of health policies and plans. For instance, NGOs and their voices are heard, and international partners are involved for their global expertise and experience. In recent years, the Law on Development Policy and Planning has enforced a multi-stakeholder process for policy-making. The Mongolian Association of Family Medicine Specialists actively participates in related policy-making and planning.

20 Interview with State Professional Inspection Agency inspector.

8. Regulatory process

The regulatory process of the government is ensured through laws, strategies, standards, tools and other instruments, including licensing, accreditation, and regular and planned monitoring and evaluation activities conducted by central and local government authorities. The various government institutions are involved in ensuring the effectiveness and accountability of the regulatory processes, while the main purchaser or the Social Health Insurance Scheme plays a vital role. The health insurance entities aims to purchase good-quality health services on behalf of the insured population. Their institutional capacity to act as strategic purchasers has been questioned; however, the government has made substantive progress by trying to separate the health insurance from other social insurance schemes.

Moreover, on behalf of the government, the General Agency for Specialized Inspection (GASI) undertakes random and planned auditing and monitoring inspections of health facilities and providers on the implementation of regulatory documents such as Ministry of Health regulations, health facility standards and clinical service delivery guidelines. GASI covers all types of governmental and nongovernmental organizations, including private health care providers. The inspection is highly effective in ensuring enforcement of regulations and standards and the accountability of the public service delivery institutions. There are three types of monitoring and inspection conducted in health care institutions:

- assessment of health service delivery, including adherence to health service guidelines and standards, outcomes of quality and safety of health services, practice licences of medical personnel, and health facility licences;

- safety of medicines and bioproducts, including ensuring that storage and usage of such products are in line with the standards of the practices;
- environment and state of physical infrastructure, including establishment of a comfortable and safe environment for health service delivery and adherence to infection control.

On the basis of inspection results, follow-up actions are undertaken by GASI to immediately correct faults, inform higher-level governing bodies and even suspend the operations of the facility. In the cases of primary care facilities, most errors and faults are due to insufficient funding and human resources. For example, FHCs operate with the same infrastructure across all localities, even though their funding is linked to the number of registered population, thus undermining service provision of FHCs with fewer population numbers than the average. The challenges related to high turnover of medical personnel negatively affect monitoring and inspection activities, as the health worker to whom the corrective recommendations were issued has often already left the PHC facility.²¹

There is legislation in place to hold health workers accountable for their actions and to penalize them for infractions, though there is a lack of policy or laws to protect the public from or prevent medical errors and faults. In the period 2010–2015, 35 medical doctors received sentences due to medical errors. According to GASI, the main challenge is poor adherence to clinical guidelines and standards, as many of these documents have not been purchased or are outdated, and there is a lack of support for or training related to the guidelines and standards. However, the health care providers use unofficial and freely distributed guidelines, leading them into questionable clinical actions and corresponding errors and mistakes. In addition, clinical guidelines

21 Interview with the State Professional Inspection Agency inspector.

and standards fail to be updated in terms of the introduction of new technologies and treatment approaches and changes in medicinal products.

The Ministry of Health and the Ministry of Education, Culture and Science are the main government ministries in charge of developing health workforce policies and setting related standards of professional education in Mongolia. Those ministries jointly develop professional education standards (such as MNS 5323–124:2012 for general practitioner) and submit them to the Mongolian Agency for Standardization and Metrology for approval. Such standards are developed in line with health policies, clinical guidelines, health facility standards, and in accordance with job requirements, and also with respect to developments in the medical education system worldwide. The Ministry of Health has recently issued a human resources policy paper, which has been integrated and embedded into the State Policy on Health (2017). The Ministry of Health provided projected estimates of health care personnel for 2011–2020, including types of primary care providers. The Ministry of Education, Culture and Science on the other hand registers and issues official licences and curricula for carrying out the pre-service training of health professionals, and also monitors the training institutions. Training institutions had been established following the Soviet model – however, changes have been introduced to stimulate training of some types of health professionals that are common in Western countries, such as general practitioners for PHC. As mentioned above, GASI is mandated as the main government body to enforce the implementation of standards by training institutions.

9. Monitoring and information systems

The main information system for monitoring the functions and performance of PHC is the H-info 3.0 application, where key operational activities, including morbidity, mortality and different types of services, are registered and reported. This reporting is also used to ensure implementation of national programmes and population-specific health services. For example, there are separate forms to report on maternal and child health, adolescents, the elderly, reproductive health care, communicable and noncommunicable diseases, and mental illness among the population. The care providers enter data into H-info 3.0 every day and report to the health department and the Centre for Health Development monthly, quarterly and annually. All PHC facilities have access to the Internet and 60% use high-speed connections to exchange information.²²

The performance of PHC facilities is monitored by a number of local-level authorities. The aimag and Ulaanbaatar city health departments conduct regular process and outcome monitoring of policy implementation, whereas the local professional inspection department checks the adherence to service delivery, facility and environmental standards and regulations. Such inspection involves assessment of PHC providers for quality and performance of buildings, equipment and health services, as well as licences of medical personnel and internal hygiene and infection control. As noted earlier, the local-level governor, together with the health department, assesses the service delivery and performance agreement concluded with the provider.

However, there is a lack of a reporting or monitoring system to oversee adherence to guidelines and regulations and reporting on monitoring and inspection activities. For example, GASI (8) reported that 22% of health care providers failed to follow

treatment and service standards, and that the rate of regular monitoring of the health of children aged under 5 years was 64% in SHCs.

There are mechanisms to ensure the quality of data entered into H-info 3.0, though data entry errors and poor-quality information have created difficulties, as reported by provincial health departments. This is partly due to the workload of PHC providers, as they have to do the data entry work after office hours, and often for many different types of reporting, and also due to the lack of personnel with adequate knowledge of how to handle the data.²³

Client satisfaction surveys are an important input to the performance monitoring of PHC providers. The methodology for such surveys is approved by the Ministry of Health. The surveys are conducted annually and the results are reported as part of the assessment report. Each year, the government receives the report on care provider performance submitted by the Ministry of Health. In reality the survey results are inadequately used for substantive actions and are limited to reporting purposes. There are few external client satisfaction studies, but a survey by an independent researcher showed that the patient satisfaction rate was 86% at PHC level in 2004. The main concerns reported include long waiting times, insufficient medicine, and bureaucracy.

22 Interview with Ministry of Health officers.

23 Interviews with director of health department and an FHC doctor.

10. Policy considerations and ways forward

PHC is the cornerstone of Mongolia's health system, and government policies aim to strengthen and improve delivery of PHC to ensure accessible and equitable basic health services to the population. In this regard, the following main challenges and respective policy considerations are being planned and discussed:

- The modern health system is organized based on population health needs and demand. However, the Mongolian primary care system is still reliant on centrally planned and politically established administrative units. Such an approach can fail to take account of social issues, such as internal migration and the corresponding increased service load in urban settings. It has also led to resource allocation inefficiencies in rural Mongolia. There is a need to conduct a thorough assessment of the current and future health needs of the population and make adjustments and improvement to the PHC organizational model. Each aimag and soum has its own features with regard to geographical area, environment, living conditions and culture. PHC delivery should be organized and structured in line with these factors, taking account of population health status at grass-roots level.
- There is a growing prevalence of noncommunicable diseases among the population due to lifestyle factors, with a related increase in the demand for medical services from PHC providers. This increase in demand has not been matched by an increase in the supply of relevant PHC services, and there is a need for the central policy-makers to plan for increasing health education and prevention activities in their public health efforts. National planning needs to place greater emphasis on population care needs and to provide the financial means and personnel to support prevention and health education by PHC facilities. For example, service needs including dental care should be addressed in the service package.
- The general government budget allocation for PHC has decreased, despite increasing overall allocations for health. Mongolia should make policy decisions to establish a PHC-based health system, and for that purpose more funding needs to be allocated within the national resource prioritization. The per capita payment rate for primary care is low and fails to respond to price increases. It is also below what is recommended by international partners, including WHO. Thus the PHC system needs concrete support in terms of increased per capita funding.
- The implementation of the new capitation payment system should be strengthened across care providers and policy-makers to continue improving and sustaining service provision, taking account of the demographic, geographical and socioeconomic features of localities.
- Mobilizing and retaining qualified and experienced medical personnel in the PHC system is vital to ensure an adequate level of gatekeeping and to increase public confidence in the PHC system. In-service training and incentive mechanisms need to be supported with adequate allocations of funding specifically aimed at human resources development.
- There is a need to improve care providers' understanding and knowledge about laws, regulations, guidelines and standards, and to increase practical utilization of those measures. A more regular and supportive performance monitoring system will help to enhance performance standards.

Annex 1. Sources

Tsolmongerel T, Oyungerel N, Enkhbaatar I. Analysis of catastrophic health payments and benefit incidence of government spending for health in Mongolia. World Health Organization; 2015.

Tsolmongerel T, Bulganchimeg B et al. Mongolian health system review. World Health Organization; 2013.

Cashin C, Batbayar A, Tsolmongerel T et al. Assessment of systems for paying health care providers in Mongolia: implications for equity, efficiency and universal health coverage. Ministry of Health, World Bank and World Health Organization; 2014.

STEP survey in Mongolia. Public Health Institute Mongolia, World Health Organization; 2013.

Natsagdorj T et al. Report of improving efficiency of hospitals in Mongolia. Third Health Sector Development Project. Ministry of Health, Asian Development Bank; 2012.

Annual statistics. National Statistical Office; 2015.

MICS survey, Mongolia. NSO, UNICEF, UNFPA; 2013.

Health indicators, Mongolia. Health Development Centre; 2015.

Health Law 2011, Mongolia.

Health Minister Order No. 129, 2017.

Health Minister Order No. 246, 2013.

Mongolian standards, 2015: structure and activity of family health centre.

Mongolian standards, 2013: structure and activity of soum and inter-soum hospitals.

Alma-Ata Declaration on Primary Health Care, 1978.

Brief introduction of Family Doctors' Association, 2016.

Interview with FGP doctors, presidents of Family Doctors' Association and researchers.

Interview with Ministry of Health.

Interview with province health departments and soum health centres.

Interview with inspectors of General Agency for Specialized Inspection, Mongolia.

Assessment report of health care organizations. General Agency for Specialized Inspection; 2013 (http://inspection.gov.mn/info/index.php?option=com_content&view=article&id=594%3A2014-03-17-13-59-06&catid=41&Itemid=108, accessed 9 September 2017).

Utilization database of health care organizations' equipment. Ministry of Health; 2017 (<http://124.158.109.67/fed/ehealth/>, accessed 13 September 2017).

National Health Accounts. Geneva: World Health Organization (www.who.int/nha, accessed 8 September 2017).

World Development Indicators: Mongolia. Washington (DC): World Bank (<http://data.worldbank.org/indicator/SI.POV.GINI?locations=MN>, accessed 13 September 2017).

Annex 2. Participants in provider interviews

Descriptor	Main areas of expertise	Main constituency represented	Remarks
Provider Ishjamts D	Primary care service	Family health centre	Family doctor, Arkhangai province
Provider Bat-Erdene B	Primary care service	Soum health centre	Soum doctor, Arkhangai province, Tuvshruulekh
Provider Unursaikhan Ch	Primary care service	Family health centre	Family doctor, Songinokhairkhan district
Provider Uuganjargal M	Primary care service	Family health centre	Family doctor, Sukhbaatar district
Provider Sugarbayar Yo	Primary care service	Family health centre	Family doctor, Bayanzurkh district
Provider Khandsuren B	Primary care service	Family health centre	Family doctor, Uvurkhangai province
Provider Otgonbayar B	Primary care service	Soum health centre	Soum doctor, Dundgovi province, Adaatsag
Provider Naran Kh	Primary care service	Soum health centre	Soum doctor, Uvurkhangai province, Taragt
Provider Jargalmaa E	Primary care service	Soum health centre	Soum doctor, Uvurkhangai province, Bayangol

Annex 3. Main participants in stakeholder interviews

Descriptor	Main areas of expertise	Main constituency represented	Remarks
Policy-maker Unurjargal A	Primary care service	Ministry of Health	In charge of primary care service, Department of Medical Service
Policy-maker Baigali T	Primary care service	Ministry of Health	In charge of primary care service, Department of Medical Service
Policy-maker Munkhtsetseg L	Budgeting	Ministry of Health	In charge of primary care service budgeting
Policy-maker Batsukh T	Budgeting	Ministry of Financing	In charge of the State budget
Implementing agency Gandiimaa R	Administrative	Arkhangai province health department	Director of province health department, in charge of health policy and issues
Implementing agency Shivaanurdev D	Administrative	Uvurkhangai province health department	Director of province health department, in charge of health policy and issues
Implementing agency Enkhsaikhan Ts	Administrative	Dundgovi province health department	Director of province health department, in charge of health policy and issues
Implementing agency Ganbat B	Administrative	City health department	Deputy director, in charge of health policy and issues
Regulatory agency for government Batnasan G	Inspection, monitoring	General Agency for Specialized Inspection	In charge of inspecting health facilities
Professional association Sonin S	Primary care service	Mongolian Association of Family Medicine Specialists	President, expert on primary care service
Researcher Orgil B	Primary care service	Individuals	Expert on primary care service
Researcher Dashzeveg G	Primary care service	Individuals	Expert on primary care service

References

1. Natsagdorj T et al. Report of improving efficiency of hospitals in Mongolia. Third Health Sector Development Project. Ministry of Health, Asian Development Bank; 2012.
2. Health indicators 2015. Centre for Health Development, Mongolia; 2015.
3. Tsolmongerel T, Oyungerel N, Enkhbaatar I. Analysis of catastrophic health payments and benefit incidence of government spending for health in Mongolia. World Health Organization; 2015.
4. Orgil B. Yesterday, today and tomorrow of Mongolian medical care. Ulaanbaatar: 2011.
5. Tsolmongerel T, Bulganchimeg B et al. Mongolian health system review. World Health Organization; 2013.
6. National Health Accounts. Geneva: World Health Organization (www.who.int/nha, accessed 8 September 2017).
7. Cashin C, Batbayar A, Tsolmongerel T et al. Assessment of systems for paying health care providers in Mongolia: implications for equity, efficiency and universal health coverage. Ministry of Health, World Bank and World Health Organization; 2014.
8. Assessment report of health care organizations. General Agency for Specialized Inspection; 2013 (http://inspection.gov.mn/info/index.php?option=com_content&view=article&id=594%3A2014-03-17-13-59-06&catid=41&Itemid=108, accessed 9 September 2017).

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