PRIMARY HEALTH CARE SYSTEMS (PRIMASYS)

Case study from Mongolia

Abridged Version
Overview

Mongolia has a population of 3 million, 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) 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 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 are 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 primary health care 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 primary health care services. As of 2015, there were 3244 health care facilities, of which 218 were family health centres, 291 were soum health centres 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 transited 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 its Millennium Development Goals in maternal and child health outcomes.

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 primary health care service is free of charge to citizens and financed directly from the government budget revenue, as assured by Mongolian law.

Table 1 presents key demographic, macroeconomic and health data for Mongolia, while Figure 1 shows a timeline of actions relevant to primary health care.
Table 1. Mongolia: key statistics for primary health care

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
<th>Source of information</th>
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<tbody>
<tr>
<td>Total population of country</td>
<td>3,057,778</td>
<td>NSO Mongolia statistics, 2015</td>
</tr>
<tr>
<td>Sex ratio: male/female</td>
<td>1:1.03</td>
<td>NSO Mongolia statistics, 2015</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>2.06%</td>
<td>NSO Mongolia statistics, 2015</td>
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<tr>
<td>Population density (people/sq km)</td>
<td>2</td>
<td>NSO Mongolia statistics, 2015</td>
</tr>
<tr>
<td>Distribution of population (rural/urban)</td>
<td>Urban 68.6%, rural 31.4%</td>
<td>NSO Mongolia statistics, 2015</td>
</tr>
<tr>
<td>Gross domestic product (GDP) per capita</td>
<td>US$ 4,182</td>
<td>NSO Mongolia, 2015</td>
</tr>
<tr>
<td>Income or wealth inequality (Gini coefficient)</td>
<td>0.32</td>
<td>World Bank data indicator</td>
</tr>
<tr>
<td>Life expectancy at birth (years)</td>
<td>69.89</td>
<td>Mongolia health indicators, 2015</td>
</tr>
<tr>
<td>Top five main causes of death (ICD-10 classification) per 10,000 population</td>
<td>I00–I99: 18.47, C00–C97: 13.18, S00–T98: 8.47, K00–K93: 4.33, J00–J99: 2.03</td>
<td>Mongolia health indicators, 2015</td>
</tr>
<tr>
<td>Infant mortality rate per 1000 live births</td>
<td>15.3</td>
<td>Mongolia health indicators, 2015</td>
</tr>
<tr>
<td>Under-5 mortality rate per 1000 live births</td>
<td>18.3</td>
<td>Mongolia health indicators, 2015</td>
</tr>
<tr>
<td>Maternal mortality rate per 100,000 live births</td>
<td>26</td>
<td>Mongolia health indicators, 2015</td>
</tr>
<tr>
<td>Immunization coverage under 1 year (including pneumococcal &amp; rotavirus)</td>
<td>98.3%</td>
<td>Mongolia health indicators, 2015</td>
</tr>
<tr>
<td>Total health expenditure as proportion of GDP</td>
<td>4.73%</td>
<td>WHO, 2014 (<a href="http://www.who.int/nha/en/">http://www.who.int/nha/en/</a>)</td>
</tr>
<tr>
<td>Primary health care (PHC) expenditure as % of total health expenditure</td>
<td>9.1%</td>
<td>WHO, 2014 (<a href="http://www.who.int/nha/en/">http://www.who.int/nha/en/</a>), NSO statistics</td>
</tr>
<tr>
<td>% of total public sector expenditure on PHC</td>
<td>16.5%</td>
<td>WHO, 2014 (<a href="http://www.who.int/nha/en/">http://www.who.int/nha/en/</a>), NSO statistics</td>
</tr>
<tr>
<td>Per capita public sector expenditure on PHC</td>
<td>US$ 17.3</td>
<td>WHO, 2014 (<a href="http://www.who.int/nha/en/">http://www.who.int/nha/en/</a>)</td>
</tr>
<tr>
<td>Public expenditure on health as proportion of total expenditure on health</td>
<td>55%</td>
<td>WHO, 2014 (<a href="http://www.who.int/nha/en/">http://www.who.int/nha/en/</a>), NSO statistics</td>
</tr>
<tr>
<td>Out-of-pocket payments as proportion of total expenditure on health</td>
<td>42%</td>
<td>WHO, 2014 (<a href="http://www.who.int/nha/en/">http://www.who.int/nha/en/</a>)</td>
</tr>
<tr>
<td>Voluntarily health insurance as proportion of total expenditure on health</td>
<td>1.2%</td>
<td>Mongolia health system review, 2013</td>
</tr>
<tr>
<td>Proportion of households experiencing catastrophic health expenditure</td>
<td>0.9% (2012)</td>
<td>Analysis of catastrophic health payments and benefit incidence of government spending for health in Mongolia, 2015</td>
</tr>
</tbody>
</table>

c. Male 66.02, female 75.84.
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. Moreover, Mongolia organized eight rounds of rigorous countrywide campaigns, deploying teams of medical doctors and paramedical specialists to improve the health of the population, which was on the brink of a serious 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 addition, in 1995 Mongolia introduced a social health insurance system and reorganized primary health care (family health units) into privately operated family health group practices in urban settings, including the capital city Ulaanbaatar.
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 the tertiary-level care providers, and the local administrative or government units are responsible for overseeing the aimag (provincial) and district general hospitals, health centres, and the soum and family health centres (primary-level health care facilities) in their localities. Figure 2 depicts the overall structure of the health care system.

The Ministry of Health develops agreements with local governors and tertiary-level care providers as to the details of the payments, performance conditions and responsibilities. The local governors also have similar performance agreements with aimag and district general hospitals, health centres, and soum and family health centres. The urban area is divided into khoroo, which are the smallest administrative units in aimag and city centres. Each such unit has a family health centre, which signs a four-party agreement with the local governor, the health department and the Association of Family Health Physicians.

The primary health care facilities administratively report to the local governors but operate under the technical oversight of the local health departments. The government agency in charge of independent professional inspection monitors the implementation of laws, regulations and standards and issues recommendations for improvements. The Ministry of Health and local health departments conduct accreditation, certification, licensing and regular monitoring of health care providers.

Figure 2. Health system structure

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

Source: Mongolian health system review, 2013.
Financing

Primary health care in Mongolia is funded by the government budget and thereby enables citizens to access essential primary health care services at family and soum health centres without any charges. The family health centres were previously paid by the Social Health Insurance Fund; however, the government undertook funding responsibility using general tax revenue in 2006 (Figure 3).

Out-of-pocket health payments accounted for 42% of total health expenditure in 2014. The high level of out-of-pocket health expenditure is a particular concern for Mongolia, and is explained largely by the situation whereby private providers practise balance billing to charge patients for the cost of health insurance-covered services. The government hospitals collect 3–5% of their revenue from formal user fees. Such fees include co-payments on health insurance-covered services and also direct payments for some diagnostic and laboratory services. Figure 4 indicates trends in primary health care funding, 2005–2016.

The share allocated for primary health care was 15.7% of the total government health budget in 2016. The government total health budget has increased 8.7 times in nominal terms over the past 10 years; however, the share for primary health care decreased by 9%. The hike of the government health budget does not translate into more funding for primary health care, as it is rather spent on hospital care in Mongolia. Over the last 10 years, the per capita public health spending in Mongolia has increased 7.3-fold.

Figure 3. Structure of total health expenditure, 2014

Figure 4. Primary health care funding, 2005–2016

Source: Ministry of Health, Division of Finance and Economy, 2017.
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 medical workers, of which 8,545 were employed in primary health care facilities. Of the total health personnel, 20.2% are medical doctors (including dental specialists) and 23.9% are nurses (Figure 5). The ratio of medical doctors to nurses is 1:1.18 nationally and 1:1.45 in primary health care. There are eight medical universities and higher-level institutions where medical doctors, nurses and other medical personnel are trained. The new graduates take exams to obtain professional practice licences in a Ministry of Health institution. The existing medical workers can extend their professional licences through periodic exams or earn credits through specialty trainings.

The health care facilities are accredited and licensed by local health departments and professional inspection agencies of the government.

The government aims to retain medical doctors and other medical workers in rural areas by implementing additional remuneration and incentive schemes. For example, medical workers have been entitled to avail retirement benefits since 2011.

The primary health care facilities provide eight types of care, including internal medicine, paediatrics, surgery, obstetrics, infectious disease treatment, and emergency and laboratory services. When necessary the higher-level health care facilities provide on-the-job support and consultation.

### Figure 5. Distribution of personnel in the health system

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>23.9%</td>
<td>11,357</td>
</tr>
<tr>
<td>Medical</td>
<td>18.0%</td>
<td>8,545</td>
</tr>
<tr>
<td>Other medical worker</td>
<td>12.2%</td>
<td>5,805</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>3.2%</td>
<td>1,504</td>
</tr>
<tr>
<td>Radiographer</td>
<td>1.1%</td>
<td>510</td>
</tr>
<tr>
<td>Laboratory worker</td>
<td>2.3%</td>
<td>1,107</td>
</tr>
<tr>
<td>Dental</td>
<td>2.1%</td>
<td>1,018</td>
</tr>
<tr>
<td>Assistant worker</td>
<td>35.1%</td>
<td>16,651</td>
</tr>
<tr>
<td>Public health specialist</td>
<td>2.0%</td>
<td>932</td>
</tr>
</tbody>
</table>

Source: Mongolia health indicators, 2015.

*Mother and her newborn baby, maternity ward, National Centre for Mother and Children in Bayangol district, in Mongolia.*
Planning and implementation

There are several vertical health programmes for each disease condition, and disease detection, monitoring and treatment guidelines are specified. Most disease management functions are undertaken by primary health care providers, while the specialty centres provide support and emergency responsiveness measures. Each health care facility has teams for infection control and nursing care quality, and they adhere to national programmes, guidelines and standards.

Mongolia has legal regulations on health care referral, and levels of implementation are generally good. However, feedback to lower-level care providers on referred cases has been questionable. The referral and feedback system is effective only for emergency and urgent surgical and cancer cases.

Health promotion and physical strength exercise activities are offered in primary health care settings. However, these services are weak in terms of the numbers enrolled, and the equipment and environment provided. The higher-level health facilities are organized to provide mainly hospital care to patients.

Primary health care providers adhere to treatment and diagnosis guidelines and standards appropriate for their level. Guidelines show clear instructions as to service provision and referral to the next level. Civil society organizations participate actively in planning and coordination of health service delivery, especially for public health activities. Primary health care providers are responsible for protection, disease prevention and health of the people in their specific catchment area, and they regularly monitor and reach out to at-risk groups.

Regulatory processes

Periodically, medical doctors and other personnel participate in accreditation of health facilities, and accreditation teams and inspection organizations monitor them. The accreditation monitors whether health care providers meet the requirements of standards and regulations, and medical personnel are professionally licensed. Medically irresponsible actions or wrongdoings by medical doctors and workers are subject to criminal law, though there is a lack of legal support to protect and insure them against incidents. During the period 2010–2015, 35 medical doctors faced sentences, especially midwives, obstetricians and gynaecologists.

Monitoring and information systems

Throughout the Mongolian health system, H-info 3.0 software is used to record morbidities and mortalities based on the International Classification of Diseases, 10th Revision (ICD-10). This software and the data set are important for health facility reporting and performance monitoring. The Ministry of Health and local health departments conduct regular monitoring and evaluation of national programmes. Monitoring and evaluation is organized around outcome targets specific to each national programme. In addition, client satisfaction surveys are conducted annually as part of the monitoring and evaluation exercises. The reports of findings and assessment results are integrated and reported to the government every year.
Policy considerations and way forward

Primary health care in Mongolia continuously needs to be in the centre of the health policy considerations and actions of the government.

As it is today, the poor quality of primary health care services and lack of public trust call for major policy actions. In order to overcome the challenge, a number of systemic issues need to be addressed. First, both the level of funding and the ways it is allocated to primary health care facilities should be increased and refined to reflect current issues, including consideration of mobile and migrating populations, regional morbidity patterns, and the need to improve health education among the population. Second, the knowledge and capacity of medical personnel are key to good-quality primary health care, and are thus in need of substantive nationwide strengthening, as half of medical doctors are new graduates who lack experience and practice. Retention and incentive programmes for experienced medical personnel require more targeted attention in addition to what has been implemented across the board since 2011.

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This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization, as part of the Primary Health Care Systems (PRIMASYS) initiative. PRIMASYS is funded by the Bill & Melinda Gates Foundation, and 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.