

Annotated Bibliography: Addressing Health Challenges in Mongolia

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1. Guillon, M., Mathonnat, J., Narantuya, B., Dorjmyagmar, B., & Enkhtsetseg, E. (2022).

Exploring the efficiency of primary health care provision in rural and sparsely populated areas: a case study from Mongolia. *Health Policy and Planning*, 37(7), 822–835.

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“Exploring the Efficiency of Primary Health Care Provision in Rural and Sparsely Populated Areas: A Case Study from Mongolia” is an article discussing developments in Mongolia’s healthcare systems such as progress with universal healthcare coverage for its citizens, maternal and child health, and Soum Health Centers (SHCs) that provide primary health care. The country has expanded its attempt for universal healthcare via the 2006 health insurance law that required health insurance for the entire population. Despite this, however, 32.4% of health expenditure still comes out-of-pocket (OOP) and severely limits the amount of care poorer families are able to access. The nomadic tribes of Mongolia face the hardest challenges due to geographically desolate living locations with little access to primary health care facilities in tandem with the financial inequalities caused by this lifestyle. Maternal and child health have also been heavily targeted in recent years and rates of mortality for these groups have been reduced greatly. The article recommends the continued use of SHCs in Mongolia to alleviate financial burdens through further reduction of OOP expenditures and large co-payments. When these costs come down for the people the government can continue to reduce numbers of mortalities and overall improve the health and well-being of their citizens.

Looking specifically at The UN’s Sustainable Development Goals to reach by 2030, and even more specifically SDG 3: Ensure healthy lives and promote well-being for all at all ages, Mongolia has made significant advances despite the challenges mentioned above. Target 3.1 has

been partially achieved as their maternal mortality ratio is only 45 per 100,000 live births, below the indicator 3.1.1 goal of 75 per 100,000 live births. However, the amount of live births attended by a skilled health personnel remains low due to the nomadic nature of many of the people living in the country. Target 3.2 has also partially been achieved as their under-5 mortality rate is 17 per 1,000 live births, below the indicator 3.2.1 goal of 25 per 1,000 live births. This, however, varies by province with some not meeting the goal. Further aid in these areas to reduce the numbers by province would still greatly impact this country. Lastly, target 3.8 is actively being addressed and revised concerning universal healthcare coverage for the entire population of Mongolia.

Although everyone is required to have healthcare, underfunded healthcare infrastructure in rural areas of the country lead to problems accessing quality care and most are too poor to pay their co-pays.

Overall, the article highlights the progress Mongolia has made towards better healthcare in their country and evaluates the effectiveness of their recent developments. It also gives recommendations on how to improve healthcare systems in the country through data sourced from the SHCs and mortality rates. Mongolia's progress shows potential and can be readily applicable to similar low-middle income countries with similar geographical layouts. The recommendations regarding non-communicable disease treatment and facilities to treat disease in rural areas, if implemented, could be a great step in the right direction for Mongolia and similar countries alike.

2. Tumur-Ochir, G., Perenleisambuu, E.-U., Vanchindorj, B., Lkhagvasuren, N., Oka, T., &

Lkhagvasuren, B. (2023). Prevalence of alcohol dependence in Mongolia: a nationwide

population-based, cross-sectional study. *Neuroscience Research Notes*, 6(2), 181.1–181.10. <https://doi.org/10.31117/neuroscirn.v6i2.181>

“Prevalence of Alcohol Dependence in Mongolia: A Nationwide Population-Based, Cross-Sectional Study” is a published work of research notes aimed at collecting and analyzing data from the population Mongolia based around alcohol dependence in the country’s population. In 1996 and 2006, two previous studies were attempted to research the same topic, however neither were peer-reviewed, both were written in the Mongolian language, and contained incredibly small sample sizes. Although the study outlined in these research notes also contained a relatively small sample size, the study extended across all regions of Mongolia, both rural and urban, and categorized alcohol dependence by gender, employment status, marital status, and age rather than just residents of a specific area or town. The study utilized the WHO approved AUDIT questionnaire to class level of alcohol dependency and likelihood of future dependency. Following the questionnaire 6.4% of 18-64 year olds were determined to be at a high risk of alcohol dependence, 9.1% at a moderate risk, and 39% at a low risk. Of those determined to be at a high risk, 522, or 4.4%, of participants were diagnosed with alcohol dependency by ICD-10. Among these participants it was determined that those living in rural areas had a significantly higher risk of forming alcohol dependency, as well as those who were unemployed, widowed or divorced, between the ages of 20-29, and male. Compared to the previous studies done, the number of those with alcohol dependency had increased by a factor of 21. This trend signifies a rising prevalence of alcohol consumption in Mongolia.

This study highlights the need for a reduction in the abuse and harmful use of alcohol as outlined in target 3.5 of SDG 3. Although the study doesn’t include those aged 15-17, those aged 18-64 were studied and a large increasing trend in alcohol use and abuse was determined. The

national level of alcohol consumption in Mongolia in 2010 was seven litres of pure alcohol per person, higher than the global average of 6.2 litres. Use of and dependency on alcohol has only increased since then, straying from the intended goal of indicator 3.5.2 that attempts to limit alcohol consumption per litres per capita. By reducing these statistics through advocacy for those with alcohol abuse disorders and education on the matter, meeting this target is foreseeable by 2030.

The study recommends including the AUDIT questionnaire into existing primary health care practices in Mongolia to gain a better understanding of alcohol use prevalence in the country. This, along with resources for those with alcohol abuse disorders in clinical settings and the expansion of these resources towards rural regions, would greatly benefit Mongolia's population by readily diagnosing and treating abuse disorders before they get untreatable and unmanageable. In addition to this, education on the dangers of overconsumption of alcohol in school settings across the country, as well as primary healthcare facilities, can help bring levels down to those hoped to see by 2030 in accordance with SDG 3 target 3.5.

3. Tsolmon Boldoo, Otero, L., Borgil Uranchimeg, Anuzaya Purevdagva, Temuulen Enebish, Oyunchimeg Erdenee, Islam, T., & Morishita, F. (2023). Epidemiology of tuberculosis in Mongolia: analysis of surveillance data, 2015–2019. *Western Pacific Surveillance and Response*, 14(1), 40–51. <https://doi.org/10.5365/wpsar.2023.14.1.931>

The article “Epidemiology of tuberculosis in Mongolia: analysis of surveillance data” serves to display data collected on tuberculosis (TB) prevalence within Mongolia as well as highlight MDR strains, treatment outcomes, and prevalence among prisoners. Mongolia has a high TB burden, ranking among the top 30 countries with the highest TB prevalence. Mongolia

has, however, implemented a National Program to survey cases and analyze trends in order to attempt to reduce cases and gauge effectiveness of treatment protocols. The country utilizes both paper and digital records and has a close contact system to help isolate cases before they begin to spread rampantly. Urban cities within the country tend to see higher rates of cases and prevalence among their populations with their capital city, Ulaanbaatar, having 59.3% of its 1,515,593 population having confirmed cases of TB. Screening typically consists of a sputum smear and chest X-rays to confirm, followed by a referral to a TB specializing clinic if positive. The data suggests cases do not seem to be rising in prevalence but also indicate no trend in declining either. Despite high prevalence numbers, treatment success is improving every year with 2019 having a 90% success rate. Deaths from TB have also decreased with only 2.5% dying from TB in 2019, as well. Further progress in screening methods, such as bacteriologically diagnosing individuals, and surveillance measures improve the country's TB situation more and more each year.

SDG 3 target 3.3 outlines reduction in communicable disease epidemics and prevalence. One of these communicable diseases seen plaguing a lot of lower-middle income countries is TB and Mongolia is taking action to reduce these numbers and help meet this goal, if not by 2030, in the foreseeable future. Indicator 3.3.2 aims to categorize and lower TB prevalence per 100,000 of the population. In 2019 there were 133 per 100,000 new and relapsed reported TB cases, 31% of the WHO-estimated incident cases. It is clear from the data there is a serious problem with TB in Mongolia but the country actively is taking steps to reduce incident rates, and despite this 2019 increase, has seen an overall decline.

As recommended by the article, continued use of surveillance and emerging technologies for screening and fighting against TB is the key to reducing numbers across the country and even globally. Despite lowering, yet high, prevalence of TB in Mongolia, the country serves as a model for other low-middle income countries to show that diagnosing, treating, and reducing TB rates is possible with the proper government intervention and citizen proactiveness. The article argues for an increase in efforts by Mongolia's National Tuberculosis Programme with a particular emphasis on Ulaanbaatar. It also argues for the continued use of bacteriologically detecting TB as it appears to be considerably more effective in diagnosing cases of TB where other screening methods would produce false negatives. Overall, reducing the incidence and prevalence of TB in Mongolia and around the world through the above mentioned methods is possible, but due to the current state of the disease more time may be needed beyond 2030 to tackle this issue.