The Republic of the Union of Myanmar

2014 Myanmar Population and Housing Census

Policy Brief on Maternal Mortality

MYANMAR Census 2014

UNFPA

Key points

(1) Based on results from the 2014 Myanmar Population and Housing Census, there were 2,797 maternal deaths in the 12-months preceding the Census. This translates to a maternal mortality ratio (MMR) of 282 maternal deaths for every 100,000 live births. It is two times higher than the MMR ratio in South-East Asia, which is 140 per 100,000 live births. Myanmar is committed to reducing maternal mortality as part of its commitment to the Sustainable Development Goals.

(2) The MMR is high especially among the youngest and oldest population groups. There were 171 maternal deaths among those aged 15-19, translating to a MMR of 228.6 per 100,000 live births, while it was 1,132 per 100,000 live births for the age group 45-49 years, with the number of maternal deaths recorded at 129.

(3) High fertility rates impact on maternal mortality. Although overall fertility rates are relatively low, declines in fertility among high-risk age groups, i.e. the youngest and the oldest, could decrease maternal mortality levels significantly.

(4) Maternal mortality levels vary between states/regions and between urban and rural areas. Chin (357 per 100,000 live births) and Ayeyawady (354 per 100,000 live births) had the highest MMR, while Tanintharyi (157) had the lowest. The MMR in urban areas was 193 per 100,000 live births compared to 310 in rural areas. For maternal mortality to decline further, maternal mortality must be addressed as a priority in rural areas and in states/regions where population groups live in remote places or in relatively under-developed areas.

(5) Fertility is relatively high in some states/regions such as Chin where the total fertility rate is five children per woman. A reduction in fertility rates through stronger family planning and reproductive health programmes in those states/regions where both fertility and maternal mortality are correspondingly high, could help reduce maternal mortality.

(6) Analysis shows that the availability of health facilities and physical access to health facilities alone does not reduce the risk of maternal deaths. Low educational levels of women, and cultural factors affecting the status of women in the community could account for women's lack of understanding about the risks associated with pregnancy and when medical attention is essential. More attention should be given to reducing the barriers that uneducated and poor women face in remote areas that prevent them from accessing health facilities. Higher levels of socioeconomic development in every part of the country will also contribute to reduced maternal mortality.

(7) Maternal deaths during the postnatal period (42 days after delivery) account for 38.5 per cent of all maternal deaths. The current focus of resource allocation is concentrated in antenatal care and delivery care. Allocation of resources for postnatal maternal care must be given equal importance.

Figure 1: Mortality indicators, Myanmar 2014 and the world
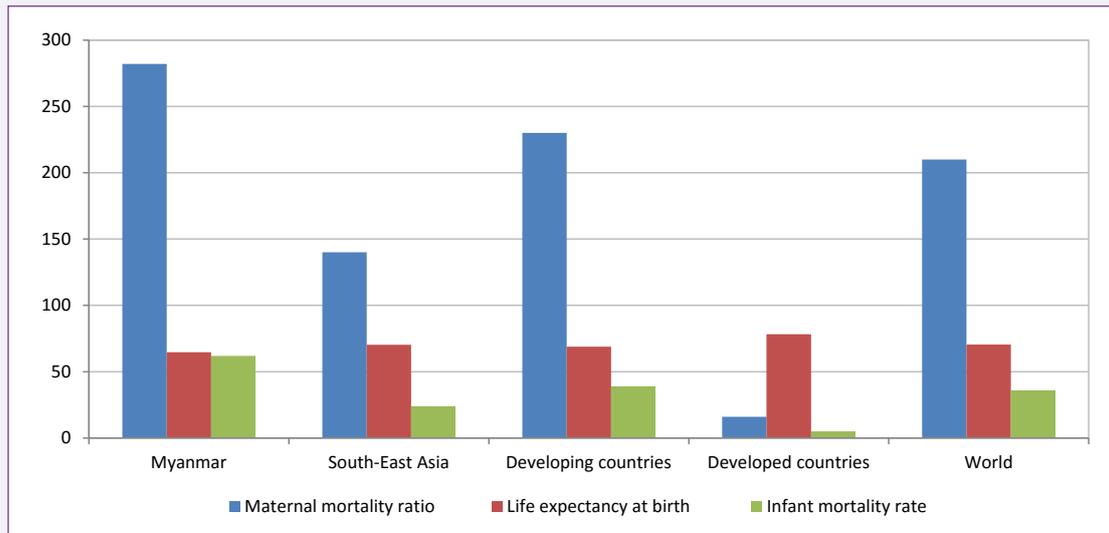
Counting maternal deaths helps to measure progress

Maternal mortality is a serious public health issue in many less developed countries. It refers to deaths among women while pregnant, during delivery, or within 42 days of delivery from any cause arising from the pregnancy or its management. The improvement of maternal health is recognized as an international development goal, and the reduction of the maternal mortality ratio to 70 deaths per 100,000 live births by 2030 is an important target under the Sustainable Development Goals (SDGs).

In the absence of complete and reliable death registration statistics, the 2014 Myanmar Population and Housing Census provides an authentic platform to measure maternal mortality both at the Union and subnational levels. From this data, estimates of different maternal mortality indicators can be drawn, of which the most commonly used is the maternal mortality ratio (MMR). Using the indicator from the Census data as a benchmark would enable Myanmar to track and report progress on the state of maternal health.

Using accepted statistical methods, the 2014 Census counted 2,797 cases of maternal deaths during the 12-month period preceding the Census. From this information on maternal deaths and the number of live births from the Census, the MMR was estimated at 282 maternal deaths for every 100,000 live births in the same period. This level is over three times higher than the global 2030 target of 70 per 100,000 live births.

## Myanmar maternal mortality levels - issues and challenges

Myanmar faces a challenge with respect to maternal health and mortality. As shown in Figure 1, the MMR for Myanmar is two times higher than the MMR ratio in South-East Asian countries, and is higher than the global and developing country averages.

One in ten of all deaths among women of reproductive age (15-49 years) were maternal deaths. This proportion was much higher, at 21 per cent, among women in the 20-24 age group, while it was 18 per cent for those in the 25-29 age group. The usual pattern is for the share to be lower for the 20-24 age group than that of the 25-29 age group, where fertility rates are higher. See Figure 2 for the relationship between age-specific fertility rates (ASFR) and the proportion of maternal deaths (PMFD). The general pattern is for the ASFRs and PMFD distributions to be similar. However this is not the pattern here where there is a spike in the proportion of maternal deaths for the age group 20-24. Further details are found in the 2014 Census thematic report on Maternal Mortality. More research is needed to understand the reasons behind the higher proportion of maternal deaths for the 20-24 age group.

If maternal deaths among those in the 15-19 age group, where the MMR is 228.6 per 100,000 live births, are added to the number of maternal deaths among the 20-24 year olds, then 15.3 per cent of deaths among women in the age group 15-24 years are maternal deaths. This is a high proportion of maternal deaths among young women, and should be of concern to policymakers.

Figure 2: Relationship between fertility (ASFR) and the proportion of maternal deaths (PMFD).
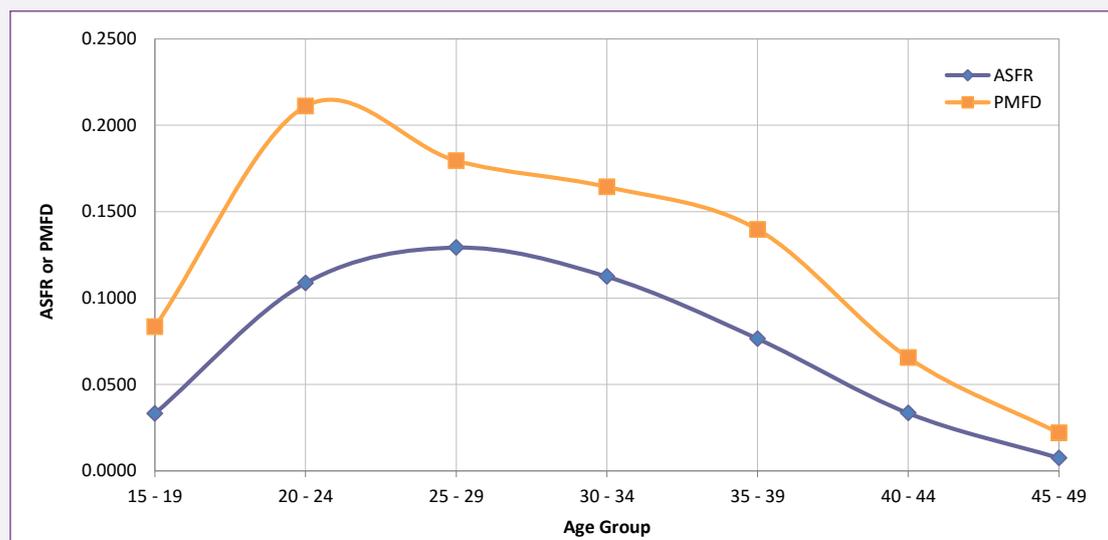
Figure 3: Maternal mortality ratios, Union, urban-rural and state/region, Census 2014
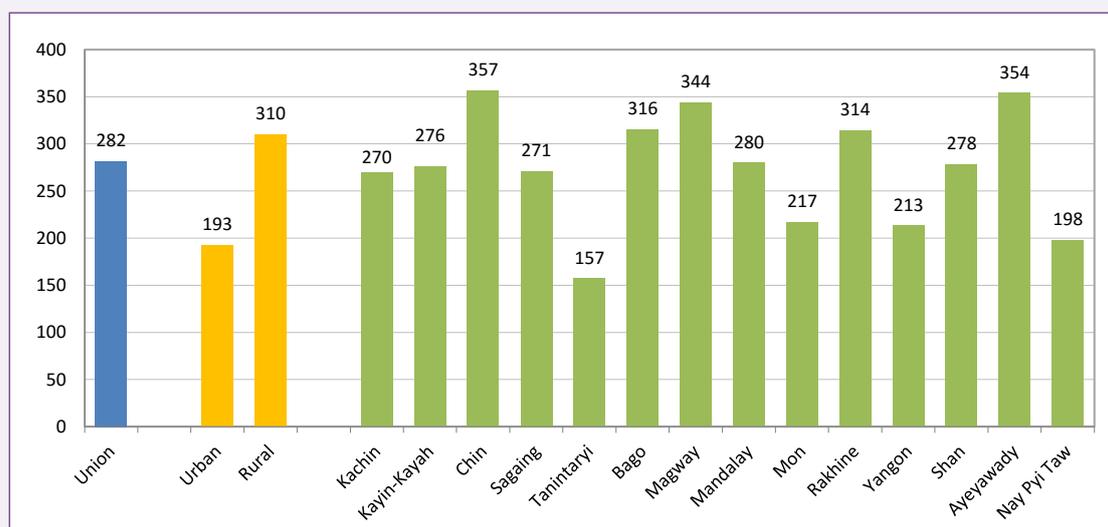
The MMR for the age group 45-49 is 1,132.4 per 100,000 live births, which is four times higher than the overall MMR. While the actual number of maternal deaths among this age group is small, at around 5 per cent of all maternal deaths, it is likely that women at such an advanced age who become pregnant are unable to access contraception and reproductive health information due to inherent social and economic constraints, which need to be addressed.

Maternal mortality varies by urban and rural areas, and among states/regions

Figure 3 shows the variations in the MMR between urban (193) and rural (310) areas. Similarly, variations can also be seen across the 15 states/regions. Chin (357) and Ayeyawady (354) have the highest MMRs, while Tanintharyi (157) and Nay Pyi Taw (198) have the lowest. Five of the states/regions have an MMR higher than the average at the Union level.

Note: Due to its small population, and therefore, its small number of recorded maternal deaths, the data for Kayah has been combined with that of Kayin.

Maternal Mortality: understanding the dynamics

The discussion so far raises an important set of questions: Why is maternal mortality high? Why does it vary across states/regions and between urban and rural areas?

Several analyses were undertaken in the past to try to understand the dynamics of maternal mortality. One of the findings was that the risk of maternal death is related to whether a woman delivers her child in a facility with basic and emergency obstetric services. However, to reach this facility, she faces three barriers: (i) a delay in the decision to look for care; (ii) a delay in reaching care; and (iii) a delay in receiving adequate care.

Another finding relates to the timing of the pregnancy, that is complications related to pregnancy, during delivery, or during the postnatal period. This sequence of events, pregnancy, related complications, and maternal death is influenced by a woman's: (i) health status; (ii) reproductive status; (iii) access to health services; (iv) health care behaviour, and (v) some unknown factors. All these, in turn, are affected by socioeconomic and cultural factors.

Based on those findings, variation in maternal mortality between urban and rural areas and among states/regions could easily be explained by the differentials in health facilities and services across the country. If the lack of facilities is the cause of delay, then the answer would be to have more facilities and more services. Analysis however, shows otherwise. There was no significant relationship between maternal mortality levels and indicators of the availability of health services such as the number of nurses, midwives and hospital beds per 100,000 population. The mere availability of health services does not guarantee lower maternal mortality levels.

The analysis also revealed that only: (i) the percentage of women with no education or only primary education, and (ii) the percentage of households with access to communications means show a relationship with maternal mortality. According to the 2014 Census thematic report on Maternal Mortality, the first indicator is indicative of the first delay as a result of women being unable to identify pregnancy-related complications that require urgent medical attention. It could also correspond to women's status in the family and community. The second indicator refers more to the remoteness and the level of development in the area in which the woman lives.

Thus, states/regions who have a lower proportion of their population with access to communication devices would mean that the second delay related to reaching care, and the third delay, that is receiving adequate care due to adequacy of facilities, poor quality staff or inadequate referral systems could negatively impact on maternal mortality.

Policymakers may want to consider addressing the underlying issues that cause the three delays that in turn result in high maternal deaths. This would include efforts to improve health care behaviour and the utilization of health services, especially by women living in under-developed areas and in isolated communities. Overall socioeconomic development in all parts of the country would also contribute to a reduction in maternal mortality. Reducing poverty and increasing income levels; improving transportation and communications; enhancing educational opportunities; and improving access to health care services among the entire population will help to eliminate barriers and delays that keep maternal mortality ratios high.

Maternal mortality levels were also found to be higher among women living in households without motorized transport and electricity, and with unimproved sanitation facilities and sources of drinking water. This finding confirms that the physical availability of health services alone does not help overcome the barriers to accessing health care. Economic, social and cultural factors also have to be addressed before the poor and uneducated can have better access to antenatal and emergency obstetric health care.

High fertility rates also have an impact on maternal mortality. However, Myanmar is a relatively low fertility country, and there are limits to how much a reduction in fertility can assist in decreasing maternal mortality. The 2014 Census thematic report on Maternal Mortality argues that high maternal mortality occurs most among the youngest and the oldest. In light of this, if fertility were to decline further among high risk women in the age groups 15-19, 40-44, and 45-49, then there would be a reduced risk of maternal deaths among these women.

Furthermore, fertility levels in some states/regions are high. Chin for instance has a total fertility rate (TFR) of five. It has also the highest MMR of 357 per 100,000 live births. Improvements in family planning and reproductive health programmes that particularly target the young and older populations could reduce maternal mortality in those states/regions where fertility levels are relatively high.

Table 1: Per cent distribution of the timing of maternal mortality, 2014 Census

Age group	Death occurred during:				
	Pregnancy	Delivery	6 weeks after delivery	Total	Number of cases
15 - 19	26.6	32.3	41.1	100.0	171
20 - 24	19.1	35.5	45.4	100.0	512
25 - 29	30.8	29.7	39.5	100.0	505
30 - 34	29.6	30.1	40.3	100.0	562
35 - 39	29.4	37.2	33.4	100.0	584
40 - 44	31.3	33.3	35.4	100.0	334
45 - 49	55.3	17.0	27.7	100.0	129
Total	**29.1**	**32.4**	**38.5**	**100.0**	**2,797**

Do not disregard postnatal maternal health care

Census data on the timing of maternal deaths revealed that the postnatal period (42 days after delivery) accounted for the largest proportion (38.5 per cent) of all maternal deaths. Deaths during pregnancy and during delivery accounted for 29.1 per cent and 32.4 per cent of all maternal deaths respectively, as reflected in Table 1.

This finding will necessitate changes in the current resource allocation practices, as the practice is to concentrate resources for maternal health care in antenatal and delivery care. If maternal mortality is to be lowered, resources should be allocated for all the above three phases - antenatal, delivery and postnatal health care. Most of these deaths during the 42 days after delivery could be prevented if only more care and resources were provided.