

Maternal mortality in Afghanistan

A CRITICAL REVIEW TO UNDERSTAND STRATEGIC PRIORITIES

Dr. Soumyadeep Bhaumik

THE REPORT WAS WRITTEN IN 2015 FOR AN ACADEMIC PURPOSE TO UNDERSTAND A POST CONFLICT STATE.
IT IS BEING MADE AVAILABLE PUBLICLY ON 31ST AUGUST 2021 TO SERVE A REMINDER TO DEMOCRATIC
NATIONS THAT:

PEACE IS THE MOST IMPORTANT DETERMINANT OF HEALTH.THERE IS NO HEALTH WITHOUT HUMAN
RIGHTS.

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1. Introduction

Afghanistan, a landlocked mountainous nation, situated strategically between Central and South Asia, has been in conflict since the Saur Revolution in 1978 when the socialist People's Democratic Party (PDP) of Afghanistan seized power from the then secular government^{1 2}. This led to a civil war between PDP, supported by the Soviet Union, and the *Mujahidin*, supported by the United States via Pakistan. The vicious cycle of conflicts continued till November 2001 when the *Taliban* (a radical offshoot of *Mujahidin*) was routed out, ironically by military action of United States².

In 2001, as multi-pronged reconstruction efforts started, it brought hopes that conflict, social upheaval, and food shortages would end³, and Afghanistan would march towards the Millennium Development Goals (MDG), along with the 191 other countries that had adopted it. Among the eight ambitious MDG's, adopted was the goal to "reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio (MMR)"⁴. Afghanistan however was accorded the unfortunate title of being the "riskiest place on earth for health of mothers" a few years back Save The⁵.

The article aims to critically analyse maternal mortality in Afghanistan from the year 2000 to the present¹- a period roughly corresponding to the era of US-led reconstruction action³.

2. Current Status and Health Indicators in relation to maternal mortality

Maternal Mortality Ratio

Interagency estimates for MMR in 2013 was 400 per 100,000 live births - a 67% decrease from 1990⁶. Detailed trends are presented in Table 1.

Table 1: Maternal Mortality Ratio per 100,000 live births (Inter-agency estimates)⁶

	1990	1995	2000	2005	2010	2013	Average annual % change in MMR between 1990 & 2013
Afghanistan	1200	1200	1100	730	500	400	-4.7 %
South Asia*	530	440	360	270	210	190	-4.4%
World	380	360	330	270	230	210	-2.6%

* Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Sri Lanka.

¹ The timeline of the report is till 2015 and uses up-to-date data as of then. It is being released publicly on 31st August 2021 without any changes.

The interagency estimates however are in sharp contrast to the data from the Global Burden of Disease (GBD) Study ⁷ which instead of showing an improvement show that the MMR worsened from 501 per 100,000 live births in 1990 to 885 per 100,000 live births in 2013 (Table 2).

Table 2 : Maternal Mortality Ratio per 100,000 live births In Afghanistan (1990-2013)[GBD estimates]⁷

	1990	2003	2013	Average annual % change in MMR between 1990 and 2013
Afghanistan	501.0	716.3	885.0	2.4%
South Asia*	480.4	399.7	310.6	-1.9%
World	283.2	273.4	209.1	-1.3%
*Afghanistan, Bangladesh, India, Nepal, Pakistan				

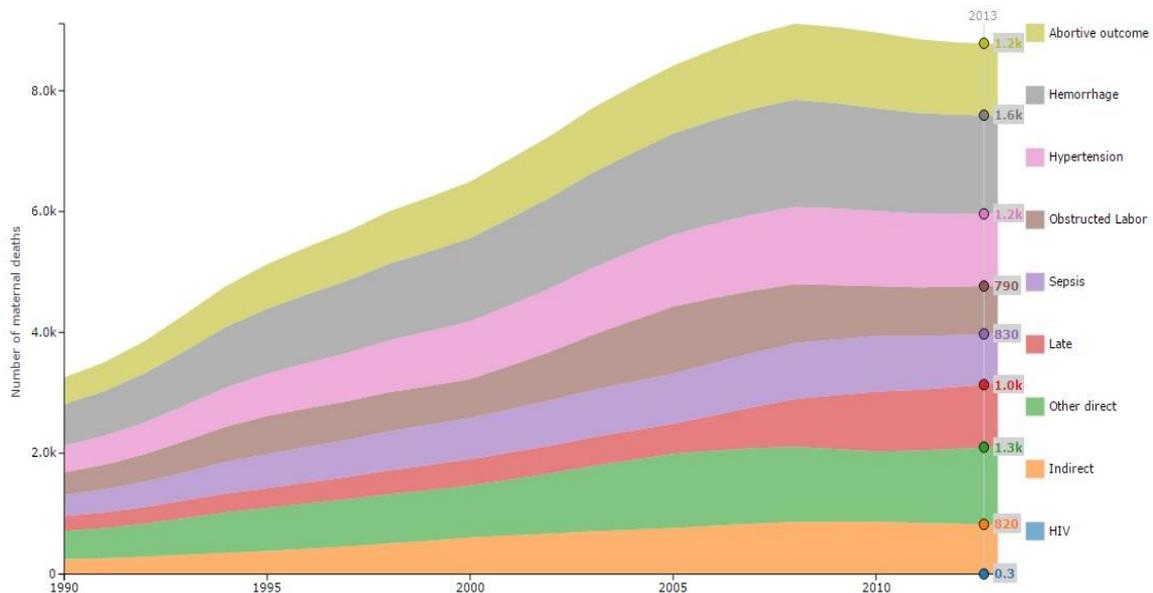
The baseline interagency estimates are substantially higher than GBD estimates, due to a higher fraction of reproductive age deaths being accorded to maternal causes and the difference is large in South-east Asia including in Afghanistan. ⁷ .GBD estimates use a more extensive and varied data source and a greater number of predictor variables in regression models, compared to interagency estimates, thus increasing its precision and reliability.

Though debates on exact estimates exist, there is no doubt that maternal mortality in Afghanistan is unacceptably high, when compared to neighbouring nations in South Asia (Table 1 and Table 2).

Cause of Maternal Deaths

The major reasons for maternal deaths in 2013 were haemorrhage, other direct causes , abortion and hypertensive disorders of pregnancy⁸. The relative proportions of causes of death has largely remained the same, over time, with the notable exception of late and other direct causes of maternal deaths which has increased over time⁸. Increase in late maternal deaths might be due maternal mortality being 'delayed' on account of greater accessibility or due to increased data capture on account of increased awareness. The cause of death analyses for maternal deaths over time is shown in [Figure 1](#).

Figure 1: Number of Maternal Deaths, by cause of death in Afghanistan 1990-2013 (GBD estimates) *[Graph vide ⁸ under Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.]



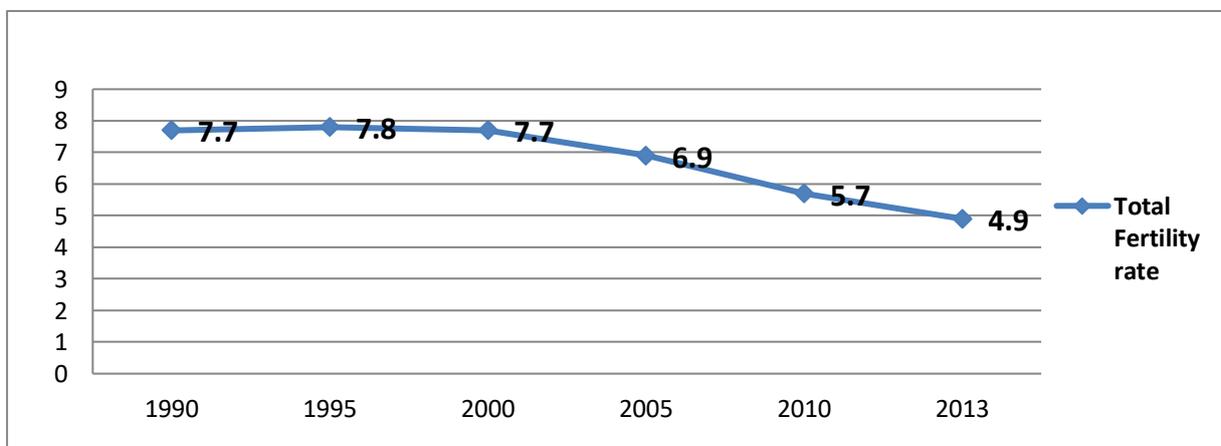
Process indicators for maternal mortality

Process indicators, which measure output or intermediate outcome, unlike MMR, provide information on how maternal mortality can be improved. Interagency recommended process indicators for monitoring reproductive health ⁹ and relevant to efforts required to reduce maternal death ¹⁰ are described. HIV prevalence in pregnant women, though a relevant indicator, is not described, since the number of deaths due to HIV/AIDS is relatively very less and data on this indicator is not reliably available in Afghanistan¹¹.

Total Fertility rate

The total fertility rate has fallen significantly from 7.7 in 1990 to 4.9 in 2013 (Figure 2).

Figure 2 : Trends for total fertility rate in Afghanistan [Based on datasets ¹²]



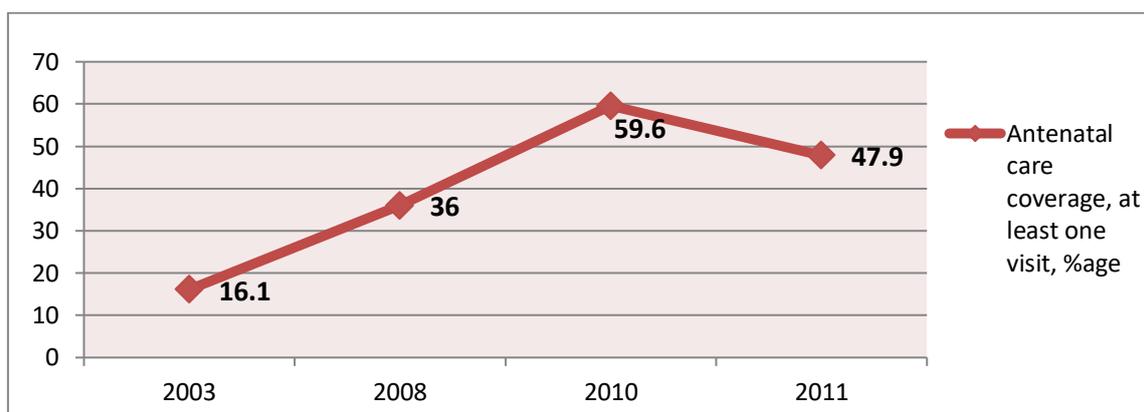
Contraceptive Prevalence

Contraceptive prevalence, a measure of output of family planning program, has increased rapidly till 2008, but stagnated thereafter to around only 20% .

Antenatal Care Coverage

Antenatal care coverage (ANC), improved rapidly to 59.6% till 2010 but has significantly fallen to more than 10% thereafter (Figure 3). A single antenatal visit however has not been linked to improved maternal health outcomes⁹. An ANC, of at least four visits is related to improved outcomes but this has remained abysmally low to 16.1 % in 2010 and fallen further lower to 14.6% in 2011¹².

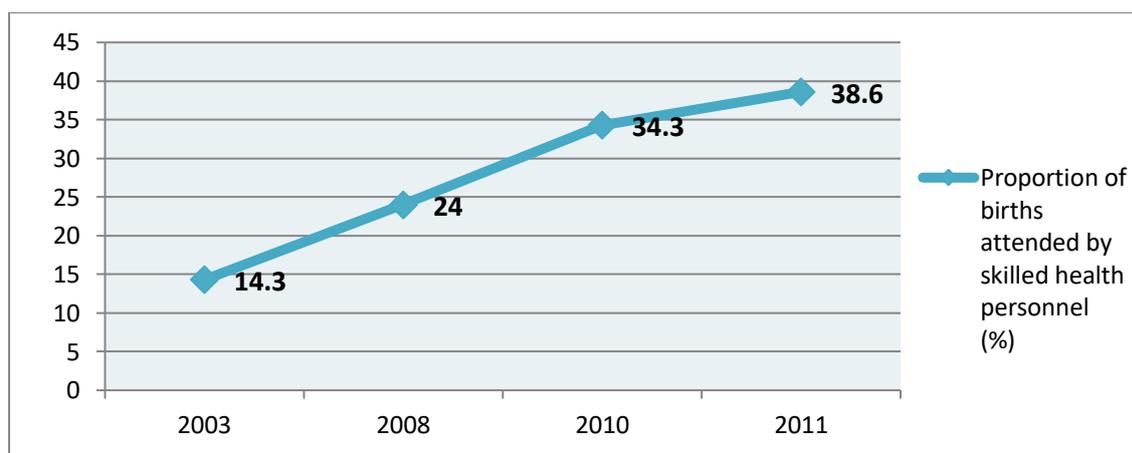
Figure 3 : Antenatal Coverage in Afghanistan trends (2003-2011)[Based on datasets¹²]



Birth Attendants by Skilled health personnel

Birth Attendance by skilled health personnel in Afghanistan has increased by about 2.6 times between 2003 and 2011 but at 38.6% it is still extremely low (Figure 4).

Figure 4 : Trends for proportion of births attended by skilled health personnel [Based on datasets¹²]



Availability of Essential obstetric Care

The number of health facilities with functional Basic Essential Obstetric Care has remained stagnant at around 17 per 500,000 of the population (latest data available only till 2010) ¹³. There is no data available on availability of facilities with Comprehensive Essential Obstetric Care in the WHO-EMRO database.

Percentage of obstetric and gynaecological admissions owing to abortion

Abortion is legally restricted in Afghanistan and only permitted when done to save a woman's life¹⁴ and such most abortions are not documented. A study has estimated an abortion rate of 36 per 1000 women in reproductive age group (15-44 years) in Afghanistan ¹⁵.

Prevalence of Anaemia in Women of Reproductive Age

The prevalence of anaemia in women of reproductive age is a proxy measure of nutritional status and has increased from 24.7% in 2004 to 40.4% in 2013 ¹⁶.

3. Equity issues in maternal mortality

Inequity with respect to gender issues

Social and religious constructs, accord women a subservient status in the society and in 2012, Afghanistan ranked second from last in the gender inequality index ¹⁷.

Women do not have autonomy in reproductive choices or for seeking healthcare and are allowed to travel only with chaperones¹⁸. Gender or social norms are a major cause for women not delivering at a health facility (no accompanying person 13.6%; no permission to go 6.9% ; not customary 19.2 ; no female healthcare 13.1% ; religious reasons 2.3%) ¹⁹. A women's reputation gets tarnished irreversibly if they are touched or seen by a non-family male person, even if for medical reasons, resulting in severe health consequences when female health care workers are unavailable¹⁸.

Deeply ingrained traditional practices like *baadal* (exchange marriage), *baad* (settlement of disputes by giving away girls) and forced child and widow marriages lead to unwanted pregnancy, unsafe abortions and miscarriage^{20 21}. There is no specific data available on the effect of gender based violence on reproductive health ²².

Socio-economic Inequity

Key indicators in relation to maternal mortality are substantially better for women in wealthier families and those who are educated as per the nationwide mortality survey in 2010¹⁹. The differences in between indicators with respect to wealth and education in 2010 are illustrated in [Table 3](#) and Table 4. A secondary analyses of nationwide data found that the adjusted odds ratio for non-institutional delivery was 4.07 (95% CI, 3.45–4.80) for poorest household compared to women from richest household, and 2.02 (95% CI, 1.43–2.84) for women with no education relative to women with higher education ²³.

Table 3: Inequity in maternal mortality related indicators in relation to economic status in Afghanistan [based on 2010 Afghanistan Mortality survey ¹⁹]

	Lowest Wealth Quintile	Highest Wealth Quintile
Total Fertility Rate	5.3	4.8
Contraceptive Prevalence, any method (%age)	17.1	34.0
Contraceptive Prevalence, modern method (%age)	16.2	29.2
ANC from medically skilled provider (%age)	44	77.9
Delivered in health Facility (%age)	10.8	63.3
Delivered with skilled birth attendant (%age)	11.7	68.0
No postnatal check up (%age)	87.1	53.1

Table 4 : Inequity in relation to maternal mortality related indicators and education status of women in Afghanistan [data from 2010 Afghanistan Mortality survey ^{19]}

	No education	Higher education
Total Fertility Rate	5.3	2.8
Contraceptive Prevalence, any method (%age)	20	44.6
Contraceptive Prevalence, modern method (%age)	18.5	34.8
ANC from medically skilled provider (%age)	56.9	89.1
Delivered in health Facility (%age)	28.4	76.2
Delivered with skilled birth attendant (%age)	30.1	80.0
No postnatal check-up (%age)	74.2	37.1

Geographical Inequity

There is huge disparity in maternal mortality geographically and a study ²⁴ reported that MMR (per 100 000 live births) between four provinces varied from 418 in Kabul to 774 in Laghman , 2182 in Kandahar and 6507 in Badakshan. The MMR in Badkashan is the highest ever reported across the world. The study used the Reproductive Age Mortality Studies method which relies on multiple and varied sources of information, depending on context, to identify all deaths in women in reproductive age groups, thus preventing underreporting ²⁵ The maternal mortality ratio in rural areas is about 4.3 times higher than in urban areas ¹⁹. Several studies have documented transport delay in relation to poor maternal health outcomes ²⁶⁻²⁸. The difference between rural and urban areas of Afghanistan for various indicators related to maternal mortality is illustrated in Table 5.

Table 5 : Inequity in maternal mortality related indicators between urban and rural areas of Afghanistan [data from 2010 Afghanistan Mortality survey ^{19]}

	Urban	Rural
MMR (per 100,000 live births)	95	417
Total Fertility Rate	4.7	5.2
Contraceptive Prevalence, any method (%age)	36.4	18.4
Contraceptive Prevalence, modern method (%age)	31.2	17.2
ANC from medically skilled provider (%age)	85	54
Delivered in health Facility (%age)	65.6	24.6
Delivered with skilled birth attendant (%age)	70.9	25.7
No postnatal check-up (%age)	53.8	75.7

4. Key Policies and Strategies to address maternal mortality in Afghanistan

The key strategies and policies to address maternal mortality in Afghanistan is analysed as per the building blocks of the WHO Health Systems Framework ²⁹.

Governance

Intense US bombing for weeks, sanctions and more than two decades of war had left Afghanistan with virtually no health systems in 2001^{30 31}. When democratic structures developed a Ministry of Public Health (MoPH) was formed with a mandate for health governance. To its credit the MoPH identified maternal health as priority area and soon developed a National Reproductive Health Policy, which has been revised once ³². It was instrumental in increasing access to family planning and maternal health services. The MoPH has also actively been involved with WHO to devise strategies for ensuring gender sensitivity in service delivery ¹⁸. Maternal health has been a key theme in other broad sectoral strategies adopted by MoPH and has been discussed in relevant sections

Service Delivery

The MoPH devised a strategy of develop primary and secondary healthcare to increase access and thus a Basic Package of Health Services (BPHS) was formulated ³³. Service delivery in primary care facilities is through non-governmental organisations (NGO) by contract bidding. The BPHS includes Basic Emergency Obstetric Care (BEmOC) ³² and has been revised from time to time to increase its scope and ensure greater access ^{34 35}. BPHS is complemented by the Essential Package of Hospital Services (EPHS) for tertiary care facilities which also focuses on maternal health and has provision for Comprehensive Emergency Obstetric Care (CEmOC) ³⁶.

Human Resources

Midwives are the key providers for maternal care and family planning services ^{37 38}. The MoPH started and endorsed a pre-service Community Midwifery Education program in 2003, which trained midwives at community level. This was a new program in addition to the existing programs at the Institution of Health Sciences and is being scaled up³⁹.

To improve recruitment and retention as well as improve quality of care a National Midwifery Education and Accreditation Policy was adopted in 2005 and a National Midwifery and Nursing Education Accreditation Board formed for monitoring⁴⁰.

Financing

Funding for key strategies to reduce maternal mortality- BPHS, EPHS and training of midwives is mostly through three external funders- World Bank, USAID and European Commission ^{39 41 42}. Government funding is limited to operational costs to pay for staff wages, salary and purchase of medicines for public hospitals⁴².

Information

Well defined indicators are used for monitoring of each of the components of BPHS, including maternal services and standardised reporting and data collection forms are used

⁴¹. In 2010 a national household survey to measure mortality and its causes¹⁹ was conducted.

Medical Products & technologies

The integrated and comprehensive delivery of medical products and interventions is through the BPHS and EPHS structure ^{35 36}.

5. Challenges to address maternal mortality in Afghanistan

Broader issues in Afghanistan

The peace dividend in Afghanistan did not last long and the *Taliban* soon regrouped to control large swathe of lands ³. By 2007, Afghanistan has become home to 90% of world's poppy cultivation and their conversion to opium, fuelled by an illicit *hawala*² economy³. With majority of the population having no meaningful employment ⁴³ people are being forced to take up illegal means. Some key indicators like contraceptive prevalence and antenatal coverage started faltering at the same time and continue to do so. Attacks on health workers and health facilities have meant irregularity on the supply side of service delivery. As for example the International Committee on Red Cross only works in urban areas and Médecins Sans Frontières (MSF) has previously withdrawn from the country altogether in 2004 ⁴⁴ only to return back in 2009 and be attacked again and again ^{45 46}.

Lack of roads and telecommunication infrastructure is another challenge on account of the difficult terrain in Afghanistan and contribute to not only delays in reaching healthcare facilities but also lead to concentration of healthcare workers in urban areas. A secondary analyses of the Afghanistan Mortality Survey 2010 found that lack of improved water access was a risk factor for pregnancy-related mortality, even after adjusting for confounders ⁴⁷. Only 64% of Afghans have access to improved drinking water⁴⁸.

Status of Women in Afghanistan

The resurgence of the Taliban means that any gains made in terms of women's autonomy and empowerment on account of donor support is under threat⁴⁹. This poses a significant challenge in terms of training, recruitment and retention of female healthcare workers ⁵⁰ and healthcare utilisation by women.

Health System Issues

Several bilateral and multilateral agencies as well as international non-profits continue implementing their own 'humanitarian' agenda, with little or no co-ordination between them, as they perceive the Afghan government too weak for any purpose. As for example donors like USAID and World Bank, in spite of official commitment to BPHS, are more inclined to build big hospitals which give quicker and greater visibility⁴⁴. The system of contract bidding to non-governmental organisations for BPHS services makes ensuring quality of care difficult and negatively impacts citizens' perceptions about government legitimacy.

² *Hawala* means money transfer without money movement.

The MoPH continues to rely financially on donors and as a result have little budgetary flexibility or the 'strong-arm' to enforce long term health system development. With 'donor fatigue' setting in ⁵¹ financing for maternal health related activities is a major challenge.

The density of physicians is 2.9 per 10,000 of its population and that of nurses and midwives is 3.6 per 10,000 of its population- both very low compared to recommended densities⁴⁸. A study found that none of the facilities designated to provide CEmOC met the minimum staffing requirements ⁵². Most obstetricians and gynaecologists are concentrated in urban centres ⁵² causing geographic inequity.

The number as well as the distribution of BPHS and EPHS facilities is neither adequate nor equitable and this provides a significant challenge in terms of service delivery. Poor quality of care contributes to not only maternal deaths but also negatively to healthcare utilisation ⁴¹
^{53 54}

6. Strategic recommendations to address maternal mortality

Out-of-Health Sector Recommendations

Unemployment, illicit poppy trade, and the resurgence of the *Taliban* are key threats to internal security in Afghanistan and consequently to health. If donors open their markets to Afghan exports, in a tariff free and duty-free manner, it will have a positive impact on employment, foreign exchange, as well as private sector development. Mexico, Guatemala and El Salvador are three post-crisis economies which have benefited immensely from such measures ³. Incentives schemes for substituting poppy cultivation, aggressive pursuing of drug king-pins and corrupt officials and an appropriate tax regime are needed urgently to counter the *hawala* racket ⁵⁵. Large-scale infrastructural projects for roads, railways and telecommunication will not only boost economic activity in the area but also have positive effect on health overall by increasing accessibility of health services and information. However, this should involve substantial technology transfer and local employment to Afghanistan to ensure sustainability of activities. Universal access to drinking water and sanitation should also be prioritised.

Education of girls is another top priority and if combined with school nutritional programs extensively it might be beneficial to prevent dropouts as well as improve nutritional status.

Health Sector Recommendations

Unlike in countries like Kosovo and East Timor, which had also undergone post-conflict reconstruction, WHO carved out a role of only providing technical assistance in Afghanistan ^{56 57}. The MoPH lacked capacity and as a result governance suffered. The WHO needs to exert its influence on donors and implementation partners to assert the MoPH agenda of long-term health system development. Greater engagement with other countries, which have shown interest in the health sector (like Saudi Arabia, Iran, India, United Arab Emirates, South Korea, New Zealand, Estonia and Japan), albeit for their own foreign policy objectives, is essential to counter donor fatigue. The system of contract bidding to NGO's

has to be modified to ensure greater accountability and quality of care. Options for community and micro-insurance schemes should be explored by the MoPH.

The MoPH also needs to monitor sub-national and provincial MMR's and other process indicators to ensure equity. In addition, there is also a need to focus on increasing the proportion of women receiving at least 4 ANC's, but this can only be achieved with increased access. Newer facilities for BPHS and EPHS services should be planned in locations which are underserved such that there is minimal transport delay when unforeseen complications of pregnancy like abortion haemorrhage, and eclampsia develop. They contribute majorly to maternal deaths in Afghanistan.

To increase access, there is a need to not only build more facilities in underserved areas but also provide incentives to healthcare professionals for serving in rural areas. This might be in the form of scholarships, grants, loan repayment schemes and higher salaries ⁵⁸. Scaling up educational programs to produce more female doctors and nurses, in addition to midwives, is essential to provide role-models and change societal perspectives in the long run.

The problems of lack of female healthcare workers and status of women in Afghanistan are intricately linked. While investments into education of women need to be sustained, the effects of it will be visible only after decades. To achieve family planning and maternal health objectives in the short term there is a need for targeted reproductive health educational programs involving men. Involving men has been found to be beneficial in other nations ⁵⁹⁻⁶². There is a strong evidence base that women's group participatory action can substantially reduce MMR in low-resource settings ⁶³, and this should be implemented extensively in Afghanistan. Implementation of such programs in Afghanistan need to be preceded by engagement of tribal and religious leaders. Engaging tribal and religious leaders would also provide some leverage to recruit and retain female health workers as traditional attitudes towards women remains a major factor (along with insecurity) influencing their retention ⁵⁰.

7. Conclusion

Peace, security, and economic activity will be a precondition to implement any strategic response to address maternal mortality as root causes for most issues lie out of the health sector. Global leaders need to discard their own short-term agendas and come together to support peace and sustainable health system development plans- for the sake of the Afghan Mother, if not for anything else.

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