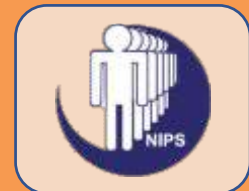
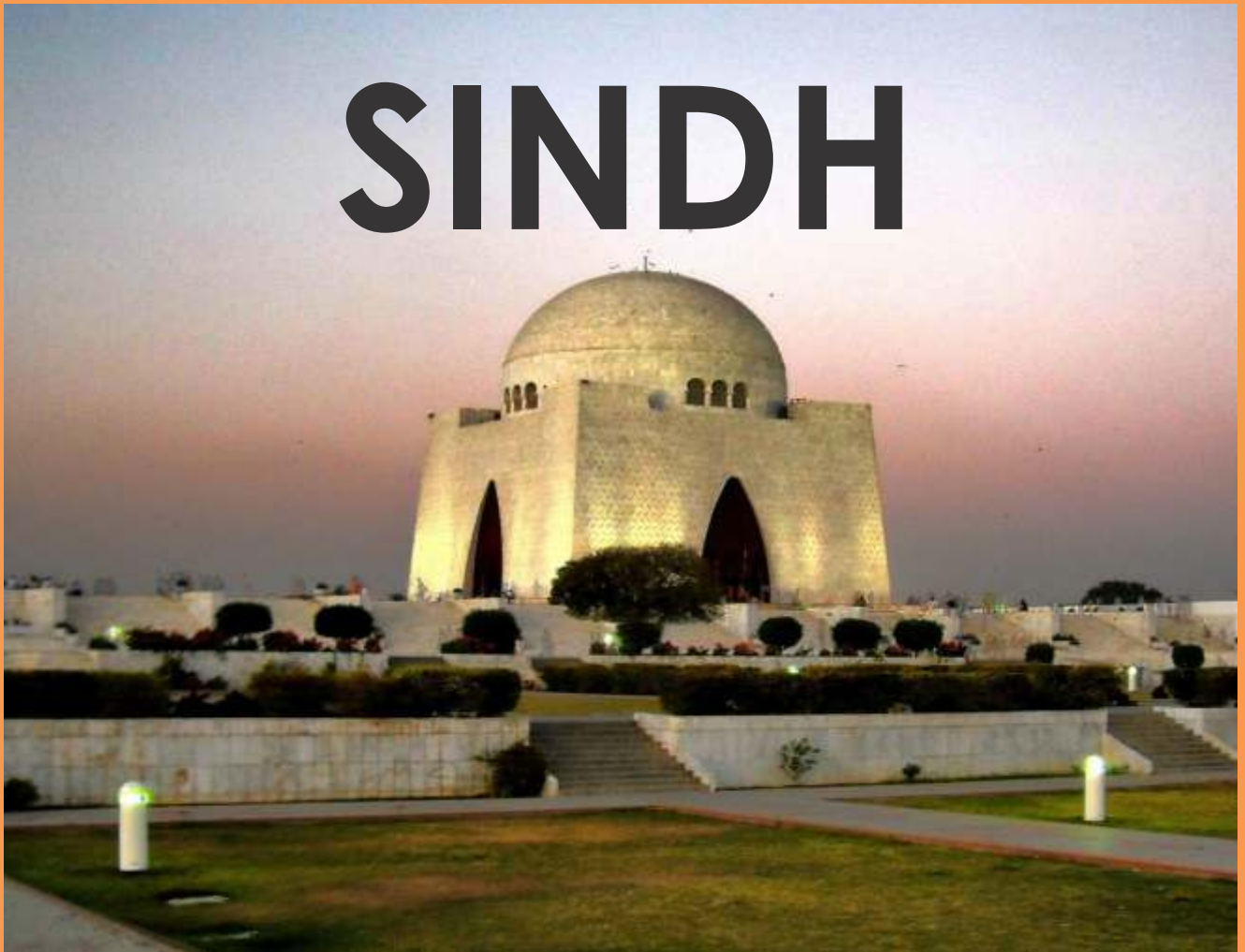


# Pakistan Maternal Mortality Survey 2019

## POLICY BRIEF

# SINDH



# Preface

The 2019 Pakistan Maternal Mortality Survey (2019 PMMS) was executed by the National Institute of Population Studies (NIPS) under the aegis of the Ministry of National Health Services, Regulations and Coordination, Islamabad, Pakistan. ICF provided technical assistance through The DHS Program, a project funded by the United States Agency for International Development (USAID) that provides support and technical assistance in the implementation of population and health surveys in countries worldwide. Support for the survey was also provided by the Foreign, Commonwealth and Development Office (FCDO), the United Nations Population Fund (UNFPA), and Bill and Melinda Gates Foundation (BMGF). The Pakistan Bureau of Statistics (PBS) assisted in the selection of the sample and the household listing for the sampled primary units. The technical assistance were provided by the National Committee for Maternal and Neonatal Health (NCMNH) in reviewing verbal autopsies and coding causes of death using the ICD-10 to identify maternal deaths.

This policy brief for the Government of Sindh has been developed by the National Institute of Population Studies, with technical support of Dr. Nasser Mohiuddin, Public Health Professional/ Technical Expert. The contents of this policy brief are the sole responsibility of NIPS and do not necessarily reflect the views of USAID, the United States Government, or any other donor agencies.

Additional information about the 2019 PMMS may be obtained from the National Institute of Population Studies, Ministry of National Health Services, Regulations and Coordination, National Institute of Health (NIH) premises, Park Road, Chak Shahzad, Islamabad, Pakistan; internet: [www.nips.org.pk](http://www.nips.org.pk).



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# Background

In 2019, Pakistan achieved an important milestone by completing its first independent nation-wide study on maternal mortality and morbidity – the 2019 Pakistan Maternal Mortality Survey (2019 PMMS). The 2019 PMMS provides a snapshot of maternal health, morbidity and mortality across Pakistan through a largescale household survey that is representative of the Country, the Provinces and Regions including Sindh.

The 2006-07 Pakistan Demographic and Health Survey (2006-07 PDHS) collected information on maternal mortality for the first time in the country. A comparison of the maternal mortality ratio (MMR) at the national and provincial/ regional levels between the 2006-07 PDHS and 2019 PMMS provides an excellent opportunity to evaluate the country's progress in this area, while the data from the 2019 PMMS provide useful insights into the current situation and how best the country can prepare its health systems to better serve the needs of mothers and children.

This policy brief on Sindh provides a summary of the important findings from the 2019 PMMS to reflect the situation of maternal health and maternal morbidity & mortality in Sindh. It also makes some evidence-based recommendations to improve the health status of women in Sindh.

Maternal mortality is one of the most common causes of death among women of reproductive age in developing countries, even though it is completely preventable in most cases. Although South Asia has reduced its MMR by nearly 60% between the years 2000 and 2017, the region still contributes one-fifth of all maternal deaths globally <sup>1</sup>. Pakistan had an estimated MMR of 276 maternal deaths per 100,000 live births in the years 2006-07 <sup>2</sup>. In general, there was an overall decrease in the MMR between the 2006-07 PDHS and the 2019 PMMS, from 276 maternal deaths per 100,000 live births to 186 (for the 3 years preceding the survey), showing a one-third decline <sup>3</sup>. In Sindh, the MMR between the corresponding periods has declined from 314 maternal deaths per 100,000 live births <sup>4</sup> to 224 (reflecting 29% reduction). The SDG target for MMR is to reduce it to 70 maternal deaths per 100,000 live births by 2030. At the current rate of decline, Pakistan, including Sindh, is unlikely to achieve this target, and the MMR in Pakistan in 2030 will be approximately 110 maternal deaths per 100,000 live births.

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1. "Maternal Mortality." World Health Organization. Accessed November 2020. <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>.

2. National Institute of Population Studies (NIPS) [Pakistan], and Macro International Inc. 2008. Pakistan Demographic and Health Survey 2006-07. Islamabad, Pakistan: National Institute of Population Studies and Macro International Inc.

3. This evidence of a decline does not take account of statistical uncertainty in the estimates from the two surveys.

4. Multiple Indicator Cluster Survey (MICS), 2007-08, Pakistan Bureau of Statistics, Planning & Development Department, AJK

## Key Findings from the 2019 PMMS

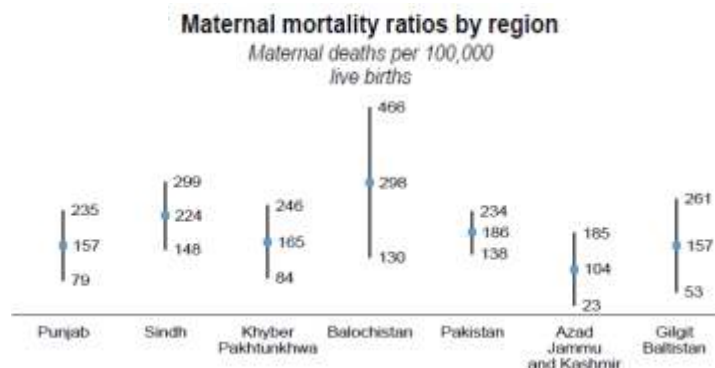
The overall MMR of Pakistan (excluding AJK and GB) has been estimated to be 186 maternal deaths per 100,000 live births, with the distribution by region described in Figure-1. The MMR in rural areas is greater (199, compared with 158 in urban areas). In Sindh, MMR (224 with a confidence interval of 148-299 per 100,000 live births) is 2nd highest in the country.

The overall MMR in Pakistan has declined from 276 in 2006-07 PDHS to 186 in 2019 PMMS.3 Observing the trend, the largest decline was observed in Balochistan where the MMR declined from 785 in 2006-07 to 298 in 2019. Declines were also observed in Punjab (from 227 to 157), Sindh (from 314 to 224), and KP (from 275 to 165; note that in the 2006-07 survey, FATA was not part of the KP). The MMR decreased from 175 to 158 in urban areas and from 319 to 199 in rural areas. In Sindh, the MMR has declined from 314 in 2007-08 to 224 in 2019.

The 2019 PMMS indicates that the major proportion of deaths is due to the direct causes (96%) such as obstetric hemorrhage, hypertensive disease of pregnancy, abortion-related complications and pregnancy-related infections, as compared to indirect causes (4%). This finding may indicate that while the quality of maternal health services might have improved in the country, there is still a need to improve access to emergency obstetric care. The same stands true for Sindh.

## SINDH

- MMR is 224 with confidence interval: 148-299 (2nd highest in the country)
- 14% deaths are due to maternal causes
- Pregnancy-related Mortality Ratio is 345
- 96% maternal deaths are attributable to direct obstetric causes
- Obstetric hemorrhage, hypertensive disorder, abortion-related complications and pregnancy-related infection are the major direct causes
- Maternal mortality Indirect causes (4%) include problems of nervous, digestive and respiratory systems, and infections
- In rural areas majority of the deceased women utilized public sector health facilities for seeking treatment
- In urban settings, private sector was the larger provider of treatment for the deceased women
- Many of the deceased women received treatment from both the public and private health facilities
- Utilization rate of public/ private health facilities is greater among educated women
- In rural areas, many women died on way to hospital or while returning home



## Maternal Morbidity

For the first time in Pakistan, and the Sindh, the 2019 PMMS collected information on maternal morbidity from women who had a pregnancy during the last three years preceding the survey. In Sindh, overall 88% of the women interviewed said that they experienced an illness during the last pregnancy, while 33% reported having experienced a complication during the last delivery, and 69% reported that they suffered from an illness during the postpartum period. However, only 44% of women reported that they sought medical treatment for one or more complications during pregnancy, delivery or the postpartum period. 62% of women with livebirths or stillbirths in the 3 years preceding the survey received ANC, assisted delivery and PNC, however, 5% did not get any antenatal care, assisted delivery or the postnatal care.

In Sindh, the most commonly reported symptoms during pregnancy (reported by 29-55% of women) were feeling of extreme weakness, body aches, lower/ general abdominal pain, severe headache, excessive vomiting, shortness of breath and fever. The most commonly reported complications during delivery were prolonged labor pains (10%), laceration in the vagina (8%), excessive bleeding after placenta delivered (6%) or before baby delivered (5%) and after baby delivered (4%); breech presentation (4%), premature baby (7%) and the newborn not able to breathe (7%) after birth were also reported. Feeling of extreme weakness, pallor, heavy bleeding, increased frequency of urination, breast tenderness and fever during the postpartum period were reported by 8%-41% of women. In addition, during pregnancy, 11% of women reported that they were informed by their healthcare provider that they had high blood pressure, while 4% of women were told about fetal malposition, 4% were diagnosed to have uterine prolapse and 4% were told about slow growth of the fetus.

Seeking treatment of the complications was much less common: The Sindh, data indicated that only 22% of women reported that they got treatment for anemia (the most probable cause of 'extreme weakness' and 18% and 11% of women received treatment for severe nausea & vomiting during pregnancy and high blood pressure, respectively.

## SINDH

- 88% of women received ANC from a skilled birth attendant (Obstetrician or Specialist, Doctor, Nurse, LHV, Midwife/ CMW)
- Obstetricians or Specialists (42%) and Doctors (41%) are the major providers of ANC
- Urban women seek ANC early and more frequently than rural women
- ANC components-wise coverage is generally good compared with the national averages
- 60% women received 2 or more injections of tetanus toxoid vaccination
- 73% deliveries are conducted at Public (20%) or Private (53%) health facilities; while 27% deliveries are conducted at home
- 72% of live births are conducted by skilled birth attendants; Obstetrician/ Specialists (37%) and Doctors (26%) are the major delivery assistance providers, 2% were none assisted
- Live birth (84%) is the usual outcome of the pregnancy whereas 12% end-up as miscarriage, 3% stillbirths and 1% abortions
- 31% women undergo caesarian section
- 25% women receive no postnatal checkup
- Of those who receive PNC, 75% have postnatal check within first 2 days of delivery
- 66% of women received PNC from a skilled provider; Doctor (24%) and Nurse/ Midwife/ LHV (23%) are the Major PNC provider followed by Obstetrician/ Specialist (19%) and
- 44% of women received treatment for one or more complications they experienced during pregnancy, delivery or postnatal period
- 5% of women did not get any ANC, assistance for delivery and PNC
- 1st childbirth is more prone (41%) to complications

## Conclusions and Recommendations

The good news is that the MMR has declined in Pakistan, and so in Sindh. Unfortunately, this decline has been slow, and it is unlikely that at this rate of decrease, Pakistan will achieve an MMR of 70 or less by the year 2030, which is the target for SDG-3 and ICPD25. However, looking at the past trend of MMR reduction, it can safely be envisaged that with concerted and strenuous efforts, Sindh can achieve the said target of lowering the MMR to 70 or less by 2030.

The decline in MMR is observed in all over the country; however, substantial differences exist between urban and rural areas and more developed and less developed regions and provinces of Pakistan. A comparison of the causes of maternal deaths in 2006-07 and 2019 suggests that women suffering from acute maternal complications such as obstetric hemorrhage and hypertensive disease of pregnancy are more vulnerable to die in the remote rural areas where access to emergency obstetric care is limited.

As the trends in antenatal care, skilled birth attendance, and delivery in a health facility, have increased remarkably over the past two decades, a corresponding decrease in maternal mortality has not been observed. This indicates that the quality and coverage of the reproductive health services in Pakistan and the Sindh is generally not up to the mark. There are several other indicators to that effect:

- Family planning is an important intervention to prevent unwanted/ unintended pregnancies and unsafe abortions which, in turn, results into a decrease in maternal deaths. In Pakistan, the Contraceptive Prevalence Rate (mCPR) for modern methods is only 25% and has remained stagnant since 2013. However, as per 2017-18 PDHS, the modern contraceptive prevalence rate in Sindh is 24% (much closer to the national average).
- The 2019 PMMS shows an increase in maternal deaths in Pakistan due to abortion-related complications (from 6% in 2006-07 to 10% in 2019). This indicates that family planning services are unable to meet the demand, especially in rural areas.
- Maternal deaths due to obstetric hemorrhage (ante partum and post partum hemorrhage) have also increased from 33% in 2006-07 to 41% in 2019. This indicates that quality emergency obstetric care services may not be accessible to all women. The situation may be worse in Sindh.
- According to the WHO Maternal Mortality Working Group, maternal morbidity is defined as “any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman's wellbeing.” While self-reported information on the symptoms and description of maternal morbidity is subject to personal and recall biases, it does provide a general picture of prevailing complications during pregnancy, childbirth, and the postpartum period.
- Not all women seek medical treatment for obstetric complications, particularly if they live in remote rural areas. In Sindh, only 22% of women received treatment for anemia and just 11% for high blood pressure. Although, 88% of women in Sindh receive antenatal care from a skilled provider and 44% sought treatment for one or more complications during pregnancy, delivery or postpartum period. This observation again raises questions about the quality of health care available to women during pregnancy, childbirth, and the postpartum period.
- In Sindh, even though 72% of deliveries are conducted by skilled birth attendants (73% in a public or

private health facility), the proportion of women having prolonged labor, vaginal laceration, and excessive bleeding after delivery are high particularly in remote rural areas.

The take-home message from the 2019 PMMS is that while Sindh (and Pakistan as a whole) is on its way to achieving a better health status for its mothers, the progress is slow and the healthcare delivery systems need much improvement to meet the SDG-3 targets related to maternal health. Sindh has a moderate system for healthcare delivery, both in the public and private sectors which should be optimally utilized. In the public sector, its network of basic health units and rural health centers and its Lady Health Workers (LHWs) program are unique and could play a vital role for achieving the SDG/ICPD25 target of MMR below 70, if fully trained and equipped to provide quality obstetric and FP services.

When women have universal access to good quality antenatal care and skilled birth attendance, they remain healthy during pregnancy and childbirth. Evidence from all over the world suggests that providing universal access to maternal health services, including family planning, and improving the quality of healthcare available to women are crucial steps for reducing the MMR. Following are some of the key interventions required/ recommended to reduce maternal mortality and morbidity and improve the maternal health status in Sindh: -

- Concerted efforts need to be made at all levels to increase modern contraceptive use (mCPR) to increase birth spacing and reduce unwanted/ unintended pregnancies and unsafe abortions. Family planning counselling and information and the full range of modern contraceptives should be freely available across the region, particularly in rural and low income urban areas. The federal and Sindh governments must ensure that the supply of modern contraceptives remains uninterrupted in all areas of Sindh. This can only be achieved when family planning is mandated as an essential health service, available at health facilities at all levels in both the public and private sectors. Sindh will not be able to contribute towards country's national and international commitments related to fertility and maternal mortality targets stipulated in the CCI, FP2030, ICPD25 and SDGs unless public and private sectors and community health workers are fully mobilized and supported to meet the huge unmet need for modern contraception.
- Bringing routine maternal health services closer to women's homes by staffing and equipping basic health units and rural health centers to provide ANC, skilled birth attendance, and PNC.
- Improving the quality of maternal healthcare across all health facilities by rigorous training and monitoring of healthcare providers in the public sector and by closely regulating private sector maternity homes and hospitals. The government's initiative of universal healthcare (UHC) focuses on essential health services packages and inter-sectoral interventions, which may go a long way in assuring access to high quality reproductive health services to the entire population. However, the UHC interventions should highlight the importance of reproductive health services including family planning, antenatal care, skilled birth attendance and the postpartum and essential newborn care. Considering that Sindh's MMR and infant and child mortality rates are high than the SDG targets, and that the rate of use of modern contraceptive methods is not optimal, there is an urgent need to bring greater and clearer emphasis on family planning and MNCH services across the province.

# ABOUT US

National Institute of Population Studies (NIPS) is a premier research organization established by the Government of Pakistan since 1986 and currently, it is working under umbrella of the Ministry of National Health Services, Regulations & Coordination (NHSR&C). The NIPS is mandated to act as a technical arm of the Government for undertaking high quality research and to produce evidence-based data, information for utilization by the public sector and others agencies for policy formulation, strategic planning and making references in the spheres of demography, population & development and health.

## Mandate:

NIPS mission is to undertake high quality research, collect statistically reliable data and disseminate to a wide array of internal and external stakeholders, engaged in policy formulation, program management and research in demography, health, population & development sectors.

## Vision:

To become a world renowned research institute, in areas of demography, health, population & development, providing baseline and projected population reliable statistics to national and global policy makers, researchers, planners and program managers, to suggest optimal planning, in the wake of fast depleting resources.

## Objectives:

- To conduct high quality research, surveys and evaluations in the field of demography, population & development and health;
- To disseminate the research findings to the policy and decision makers for policy formulation, strategic planning and improving quality of service delivery components;
- To provide technical assistance to the M/o NHSR&C, other governmental and non-governmental organizations by providing robust data in the field of demography, population & development and health;
- Continuous professional development of NIPS personnel through capacity building and training for concurrent human resource development.

### **Collaborators:**

Inner City Fund (ICF)

United States Agency for International Developments (USAID)

United Kingdom Agency for International Development (UKAID)/

Foreign Common Wealth Development Office (FCWDO)

United Nations Population Fund (UNFPA)

World Health Organization (WHO)

Bill & Melinda Gates Foundation (BMGF)