Original Research Article

Status Of Maternal, Neonatal And Child Health Services In Primary And Secondary Health Facilities Of Public Sector In Pakistan

Abstract

Objective: The study aimed to assess the efforts being carried out by the public sector to decrease Maternal, Neonatal, and Child mortality in Pakistan to establish an information base for future planning, and assessment of the Maternal, neonatal, and child health services being provided in primary and secondary health facilities to establish an information base for future planning.

Methods: It was a descriptive/cross-sectional study. A universal sample of the District Head Quarters Hospitals, Tehsil Head Quarters Hospitals, Rural Health Centers, and 20% Basic Health Units by using a stratified sampling technique surveys were conducted. Data was collected by using a questionnaire.

Results: The findings of the study showed the assessment of the availability of essential staff as per the required standard of the facility and availability was determined at 4,33, 53, and 86 percent in public sectors respectively. Preventive services are rendered at 86% of Basic Health Units, basic emergency obstetric and newborn care at 6% of Rural Health Centers, and comprehensive emergency obstetric and newborn care is being rendered at 4% and 33of by District Head Quarters Hospitals, Tehsil Head Quarters Hospitals respectively. Status of resuscitation with incubation is poor in Tehsil Head Quarters Hospitals (17%) and District Head Quarters Hospitals (51%), it is a very essential service to save the life of neonates if in the presence of staff at 4% of District Head Quarters Hospitals.

Conclusion: The study recommended the expedited indefinite quantity of Maternal, neonatal, and child health services in primary and secondary health facilities of public sectors to drop off the mortality rate and to achieve targets regarding maternal and child mortality.

Key words: Maternal, Neonatal, Child Health, Primary & Secondary Health, Public Sectors

Introduction

Since the 1980s, the global health community has focused on reducing Maternal, Newborn, and Child (MNC) mortality through a sequence of initiatives, taken for MNC Health in 2005, The priority accorded to reducing MNC mortality is reflected in its choice as one of the eight Millennium Development Goals (MDGs).

Despite these efforts and visibility, there was broad concern there had been no progress at all in reducing the number of global MNC deaths. This prompted intensified efforts by the UN Secretary-General through the launch of Every Woman Every Child in 2010 and the subsequent creation of the Commission on Information and Accountability for

Women's Children's Health, In 2010, a comprehensive assessment of global trends in MNC mortality suggested that there had been slow, but important, declines of -1·3% per year in the mortality ratio since 1990. Some estimates reported even larger rates of decline from -1·9% to -3·1%, This evidence collectively suggests that while the concerns about the rate of decline have been too pessimistic, there is substantial uncertainty prevailing in large populations. If policy debates about accelerating mortality declines are to be usefully informed, including establishing goals and target setting for reproductive health, up-to-date monitoring of the levels and trends in MNC mortality are essential.

Compared to child mortality levels, maternal mortality has been more difficult to track over time at the national level. Major challenges include misclassification of maternal deaths to other causes in the country with complete vital registration and medical certification of causes of death; substantial sampling error in measurements that depend on survey recall because of a small number of reported maternal deaths; large non-sampling error in survey and census measurements as demonstrated in settings with repeated overlapping measurements; variation in the demographic assessment of reproductive-aged mortality from all causes particularly in the 1990s; and the need for models to synthesize data from multiple studies or generate estimates where data are scanty, At times, substantial differences between global modeling efforts highlight the influence of each of the analytical steps used to estimate maternal mortality. Political attention on where countries are relative to MDG5 targets is rising, Donors, global health partners, and national program managers are understandably frustrated by the wide ambiguity and the variability of estimates from different analysts.

Pakistan is the sixth most populous country in the world with a population of 197 million. More than half of its population lives in the province of Punjab (58%), followed by Sindh (23%), Khyber Pakhtunkhwa (14%), and Baluchistan (4%), and less than one percent each in Islamabad and Gilgit-Baltistan.

The Maternal Mortality Ratio (MMR) of Pakistan is 276 deaths per 100,000 live births. Under-five mortality (U5MR) is 89 deaths per 1,000 live births and infant mortality rate (IMR) is 74 deaths per 1,000 live births- Over 60 percent of deaths under-five years occur during the neonatal period (55 per 1,000 live births). Almost three-quarters of mothers (73 percent) consult a skilled provider at least once for antenatal care. Coverage is much higher in urban areas (88 percent) than in rural areas (67 percent). As the mother's educational level rises, her likelihood of antenatal consultation rises. Overall, 35 percent of currently married women in Pakistan are currently using a contraceptive method. The total fertility rate (TFR) is 3.8. Sixty-four percent of the last births are fully protected against neonatal tetanus. Fifty-four percent of children ages 12-23 months are fully vaccinated with BCG, measles, and three doses of DPT and polio. It is also considerably lower for children in rural areas (48 percent) than in urban areas (66 percent). Acute respiratory illnesses (ARIs) are responsible for 18% and diarrhea for 15% of deaths of children under 5 years of age. Only 38 percent of children are exclusively breastfed for the first six months of life. Similarly have to combat HIV/AIDS, Malaria, and Other Diseases.

Pakistan's progress against MDG Commitments is:

· **MDG 4** (Reduce Child Mortality), the number of deaths of children (< 1 year) per 1000 live births is 69 against the desired target of 40 per 1000 live births. <5 child mortality rate reported is 89 deaths per 1,000 live births in 2013. The incidence of child mortality in Pakistan is indicative of access to medical and healthcare services available for the mother and child.
· **MDG 5** (Improve Maternal Health) Pakistan lags seriously behind to achieve this goal and considered due to the non-accessibility of services

MNC community is still deprived of basic health services. as prescribed by United Nations (UN) charter and Pakistan is behind the MDG targets as per the commitment. Therefore this study was planned to find out the causes by assessing MNCH services being provided by the public sector in primary and secondary health facilities of Pakistan.

Aims and Objectives

The study aimed to assess the efforts being carried out by the public sector to decrease MNC mortality in Pakistan.

The objectives of the study were:

1. To establish an information base for future planning
2. To assess the MNCH services being provided in primary and secondary health facilities (District Head Quarters Hospitals (HQs), Tehsil Head Quarters Hospitals (THQs), Rular Health Centers (RHCs), and 20% Basic Health Units (BHUs))
3. To identify the causes of not achieving targets regarding maternal and child mortality

Method

We took a universal sample of the DHQs (108/108), THQs (280/280) and RHCs (638/638), and 20% BHUs (992/4996) for a survey, prepared a questionnaire containing questions regarding 6/6 preventive MCH services at BHUs, 24/7 Basic MCH services at RHCs and 24/7 comprehensive MCH services at THQs & DHQs being provided in the public sector. The health facilities were assessed according to the MNC package and services components of basic emergency obstetric and newborn care (EmONC) complementary services were not included Availability of HR as per the level of health facility was also assessed

We used the broad data analysis strategy for measuring national trends in maternal, and neonatal child (MNC) services provision. The study was carried out in 2011 in all of Pakistan including FATA and Gilgit-Baltistan. There were three components of the process, started with :

· an analysis of the raw data where we employed improved formal
· demographic methods to analyze empirical data
· Reported from censuses, registration systems, disease surveillance systems, and various surveys.

Synthesized data for each province following a three-step process:

· First, we applied a non-linear mixed effects model to examine the relationship between MNC services availability in primary and secondary health facilities in all provinces.

· Second, examined the relationship between availability of essential staff and outcome in the form of three types of MNCH services,1) EmONC as per facility standard definition, 2) New Borne resuscitation as per facility standard definition, and 3) Delivery as per facility standard definition

· In the third stage results from the second step were to find out the gaps in various geographical areas of Pakistan to generate the best estimates with +/- 2 Standard Error.

Results

Out of 6021 primary and secondary health facilities working in Pakistan, 2018(33.5%) were surveyed to find out the causes of not achieving MDG goals as per the commitment.

Details of optimal maternal, neonatal, and child health services being provided by BHUs, RHCs, THQ, and DHQ hospitals are given in figure 1.

Figure 1 Optimal MNCH services

108 (100%) DHQs were surveyed for assessing the following services in Pakistan;

Human Resource; one each (Gynecologist, Anesthetist, pediatrician, BTO) is essential staff for the provision of comprehensive EmONC at DHQ hospital. It was found that in Pakistan all essential HR was available in 33% of DHQs only, 100, 44,40,24,22,18, and zero percent staff was available in AJK, Punjab, Gilgit, KPK, Baluchistan, Sindh, and FATA respectively (Fig 2).

Comprehensive EmONC services; For the provision of Comprehensive EmONC services basic requirement is the availability of essential staff which has been found poor, the position of Comprehensive EmONC was 10, 18, 17, 9, 7, 5, 0, and zero percentage in Pakistan, Punjab, AJK, Sindh, Baluchistan, KPK, Gilgit and FATA respectively, which is very poor?

New Born resuscitation and incubation; This service has defined The availability of incubators in the Paediatrics ward, but the results of the study are very different and surprising as in FATA& Gilgit there was no essential staff, despite 20-25% resuscitation was being done in DHQs there. The overall country result is 51%. Provision of this service may be given more attention for saving the lives of newborns and decreasing IMR.

C. Section; C. section intervention status is encouraging in AJK, KPK, FATA, and Gilgit C-sections are being carried out >80% DHQs, In Sindh and Punjab condition is satisfactory, Baluchistan needs to improve from 44%. If FATA and AJK 100 DHQs can manage C-sections then why not in other provinces, which have many more all types of resources.

Overall conditions of MNCH services at DHQs need special attention from authorities

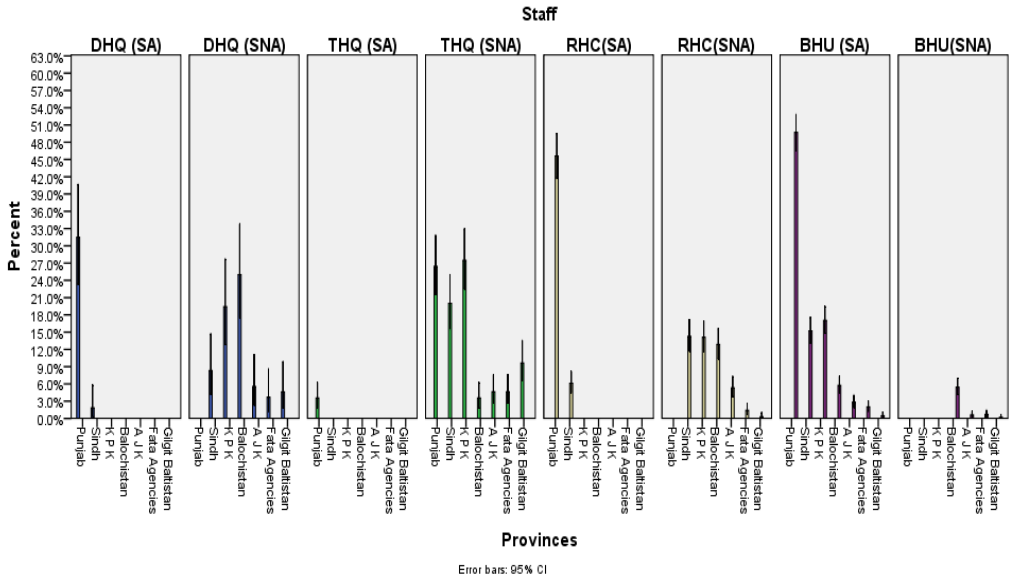


Figure 2 Province wise staff availability at secondary and primary health facilities in Pakistan

280 THQs were surveyed for assessing the MNCH services and found very much neglected in all provinces as shown in figure No. 3, some work is being done in Sindh and Punjab but that is also not up to standard to achieve the goal. The point to be noted is that C-sections are being done in a significant number of THQs; even availability of essential staff is zero percentage, which reflects that in those THQs MO/WMOs are doing C-sections, if they are qualified enough then their services should be acknowledged.

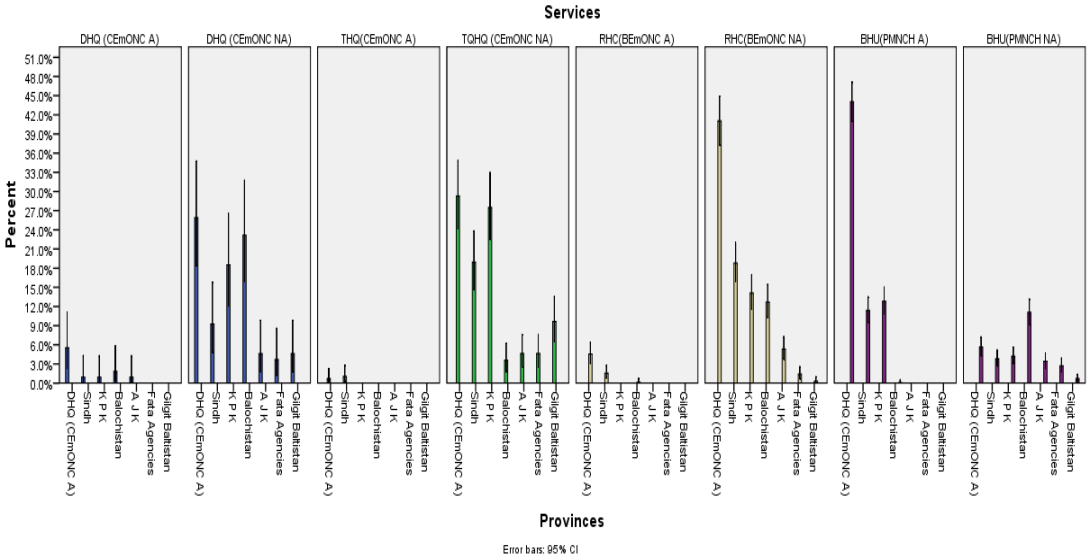


Figure 3 Province wise MNCH service at secondary and primary health facilities in Pakistan

638 RHCs were surveyed for assessing the MNCH services and found batter than DHQs and THQs as shown in figure No. 4 At RHCs basic EmONC services are poor as compared to other components but still better than DHQs and THQs, a little attention can improve the situation in Pakistan.

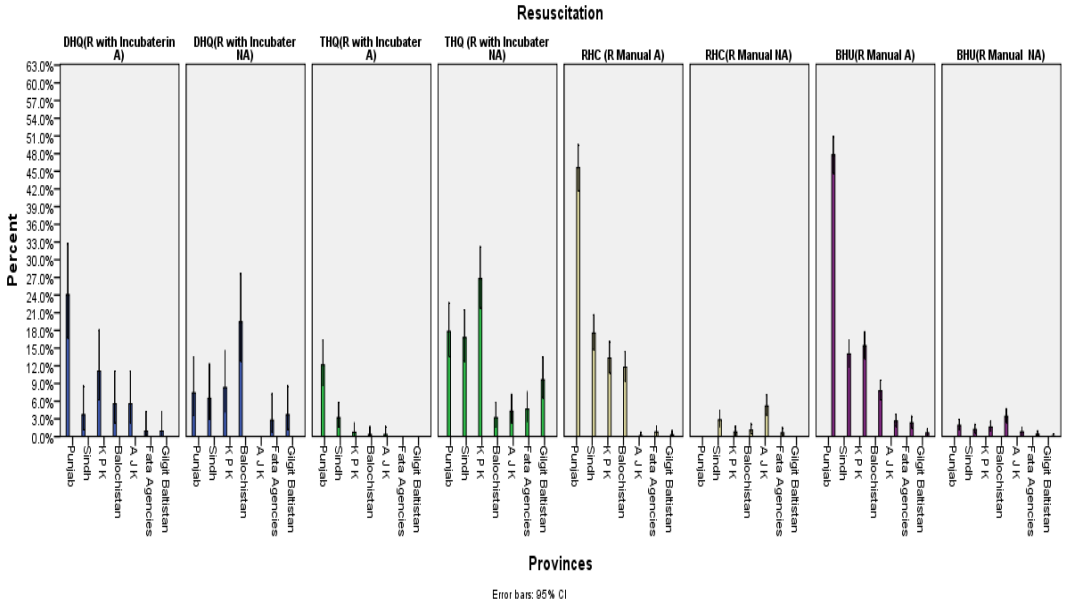


Figure 4 Province wise resuscitation services at secondary and primary health facilities in Pakistan

Figure. 5 displayed that Baluchistan is a little behind providing preventing MNCH services in 50% facilities, but in present sanario this is encouraging sign Surprisingly in FATA and Gilgit where in DHQs and THQs, staff position is very poor , essential staff is available in >70% BHUs.

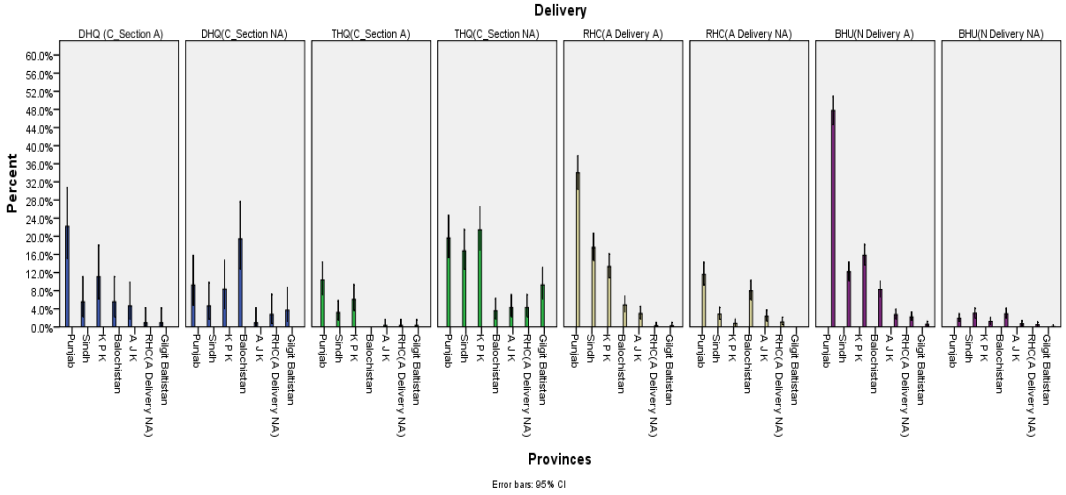


Figure 5 Province wise

An optimistic prediction for maternal fatalities in the worldwide scenario is 184,100 in 2030. Pakistan will still have an MMR of more than 100, along with 53 other nations. Figure 1. Indicated Optimal MNCH available facility services of 6/6 BHUs (Preventive MNCH Services), 24/7 RHCs (Basic EmONC Services), and 24/7 THQs/ DHQs hospitals (Comprehensive EmONC services).

As shown in figure No. 3, 280 THQs were polled to assess the MNCH services. It was discovered that these services were severely underutilized in all provinces, except for Sindh and Punjab. A considerable number of THQs do C-sections, and even in those THQs where there is no availability of needed staff, MO/WMOs are performing C-sections. If these individuals are competent, then their services should be recognized. Is it acceptable that 24% of THQs perform C-sections while having required personnel on-site in 4% of this?

In 2013, 26 countries accounted for 80% of child deaths worldwide including Pakistan. Globally there are nine countries with slower than expected decrease including Pakistan.xx The MNCH services were evaluated by 638 (100%) RHCs, and they performed better than DHQs and THQs in all provinces, as shown in figure No. 4. Although basic EmONC services at RHCs are subpar compared to other components but still superior to DHQs and THQs, Pakistan's position might be made better with a little more attention.

The results show that these BHUs performed better than all other public sector health facilities, as shown in figure No. 5 in all provinces, and that significant progress is being made toward achieving MDG goals 4 and 5. Little attention can be given to the problem because the necessary staff is underrepresented in all provinces, ranging from 94 percent in Punjab to a minimum of 69 percent in Baluchistan.

Figure 6 showed the facilities-wise provision of MNCH services in Pakistan, we assessed the availability of essential staff as per the required standard of the facility, and availability was determined at 4,33, 53, and 86 percent at THQs, DHQs RHCs, and BHUs respectively. Again status of resuscitation with incubation is poor in THQs and DHQs, it is a very essential service to save the life of neonates if in the presence of staff at 4% THQs, it is being done in 17% THQs, why not in 100% facilities. Overall it is concluded that the given task is not being carried out at THQs and DHQs which needs special attention of concerned authorities as it seems that this is the main obstacle to achieving MDG goals 2015.

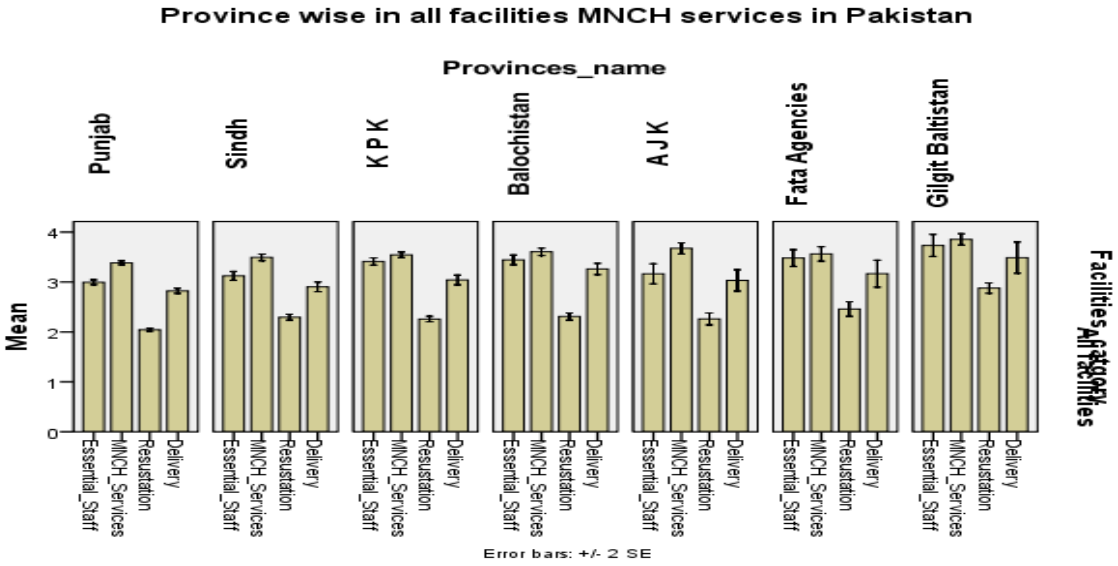
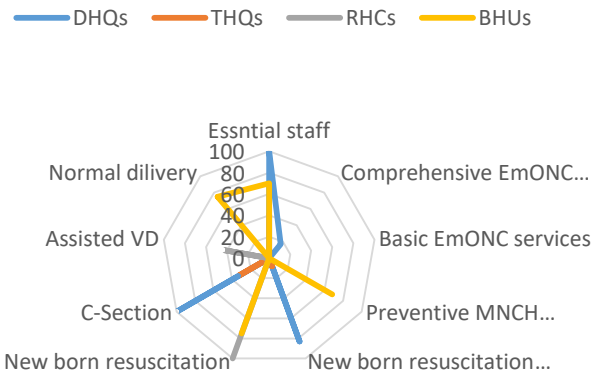


Figure 6 Consolidated facility wise MNCH service provision in Pakistan

figure 7 .Spidergram Showing gaps among the Service Delivery Components at all levels in the AJK



Discussion

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Conclusion

This Study recommended expedited planning to provide an indefinite quantity of Maternal, neonatal, and child health services in primary and secondary health facilities of public sectors to drop off the mortality rate and to achieve targets regarding maternal and child mortality in Pakistan.

Declaration

Ethical Approval

The University Institute of Public Health's Committee and the Research Ethics group gave ethical approval.

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