

CHALLENGES IN ACCESS TO AND UTILIZATION OF REPRODUCTIVE HEALTH CARE IN PAKISTAN

Moazzam Ali, Mohammad Ayaz Bhatti*, Chushi Kuroiwa

Department of Health Policy and Planning, Institute of International Health, Graduate School of Medicine, The University of Tokyo, Japan,
*Islamic International Medical College, Rawalpindi, Pakistan

Background: Pakistan's maternal mortality rate is high, and adequate and timely emergency services could prevent most maternal deaths. A woman's right to life-saving services of skilled health care providers in childbirth is undeniable. This paper examines factors restricting women's access to emergency obstetric care services in Pakistan. **Method:** This cross-sectional survey on emergency obstetric care services collected information at the health facility level using UN process indicators. The study enrolled 170 health facilities from nineteen randomly selected districts in Punjab and NWFP.

Results: Diverse factors limit women's access to Emergency Obstetric Care (EmOC) services. EmOC services were unavailable in most health facilities surveyed. Staff absenteeism, geographic remoteness, delayed access, and ambulance shortages jeopardize the transferral of seriously ill patients to higher level care facilities. Cultural norms dictate that women should be examined by women doctors, whose dearth makes these services inaccessible. **Conclusion:** Many maternal deaths would be avoidable if EmOC health services were accessible. The geographic obstacles to timely access, poor hospital infrastructure, and high staff absenteeism rates require immediate attention. Health facilities' working hours were inconsistent with the provision of around-the-clock essential services, depriving and endangering the lives of many in need. It is imperative to increase skilled female workers capable of managing EmOC problems through proper incentives. A focused approach at local levels through proper supervision, motivation, and management would unquestionably save women's lives.

Keywords: Maternal health, social access, women mobility, referral hospitals; EmOC services.

INTRODUCTION

Women have a basic human right to be protected when they undertake the risky enterprise of pregnancy and childbirth.¹ Every death in pregnancy and childbirth is a multiple personal tragedy. It is a biological or medical event. It is a health system malfunction. It may entail family or community responsibilities.² We cannot close our eyes to the overwhelming figure of 600,000 maternal deaths worldwide, every year, due to pregnancy-related complications.³ Life threatening complications of pregnancy are generally not preventable or predictable, but when nothing is done to avert maternal death, natural mortality is around 1,000 to 1,500 per 100,000 births.¹ Such high maternal mortality is a denial of women's human rights.^{4,5} The provision of quality services to reduce maternal mortality is a human rights issue for women and their children.⁶

The availability of services is generally determined by the geographic distribution of fixed and mobile health care facilities and their service hours. The accessibility of services includes both their cost to users in money and time and their social acceptability. The physical accessibility of a primary health facility where the necessary staff is posted and available is defined as the proportion of the served population living within 2 to 5 km or alternatively at 20 to 60 minutes walking distance. Social accessibility can be understood in terms of religious, tribal, and cultural barriers and accessibility of services. For example, in Pakistani society, female health care providers are

essential for the provision of antenatal, natal and postnatal care.⁷

Women's inability to travel alone as and when they wish is viewed as an important barrier to improving their health.⁸ The majority of Pakistani women report they are unable to go to a health facility unaccompanied; male family members must accompany them.^{9,10} In such a conservative society, women understandably feel uncomfortable discussing reproductive health issues with male doctors and prefer to be seen by women doctors for gynecological and obstetric consultations.¹¹⁻¹³ Thus the absence of female doctors makes many otherwise accessible health facilities unacceptable socially, hence inaccessible, depriving these women of their human rights to equality of treatment and dignity.

This paper examines the geographic, temporal, and socio-cultural factors and circumstances restricting or increasing women's access to emergency obstetric care (EmOC) services in Pakistan.

Pakistan's population of approximately 153 million, two-thirds rural, is the world's sixth largest. Almost one-third of the population lives below the poverty line¹⁴ and two-thirds earn less than US\$2 a day.¹⁵

In Pakistan an estimated 16,500 maternal deaths occur annually¹⁶; the maternal mortality ratio is estimated at 500 per 100,000 live births. One of every 38 women risks dying of childbirth related causes in her lifetime.^{17,18}

Female literacy, particularly among rural women, is among the lowest in the world; girls rank

far below boys in educational attainment. A report reveals that percentage of illiterate population comprise of 38% males and 65% females.¹⁹

In Pakistan, despite the fact that every health policy and program announced in the past two decades has emphasized increasing the availability of female health staff, facilities in rural areas are still understaffed¹⁶, a situation partly attributable to security and safety issues.²⁰ Available evidence shows that many women have no access to modern health services, particularly during pregnancy and childbirth.^{21,22} Studies have concluded that family planning/reproductive health clinics are accessible to only 10 percent of the population, with only 5 percent living within easy walking distance.²³ To increase access and empower women, the Lady Health Workers (LHW) program was introduced in the mid-1990s; it now covers 60% of the population and uses the concept of community services and referral systems delivered to the doorstep to circumvent proscriptions against woman's mobility. The employment of female fieldworkers who visit women in their homes has increased the uptake of services, especially family planning and immunization, but little change has been observed in antenatal visits or hospital deliveries.^{9,24}

A recent report found that, while the availability of female providers increased substantially during the 1990s, the availability of *skilled* birth attendants remains so low that only about half of mothers received antenatal care during their last pregnancy, and 80% of women in labour receive no assistance from a skilled birth attendant during delivery - and this trend is even stronger in rural areas.²⁵⁻²⁹

A study in Sindh province pointed out that 12% of facilities are open for only 6 hours daily; 24-hour coverage is provided only by the district headquarters hospital. Transport for referral is available at only 35% of facilities. Maternal mortality records are available in 55% of facilities. Only 33% of government hospitals are equipped to offer obstetric care. Users consequently visit private hospitals for such services.³⁰

Once complications in pregnancy become apparent, the mother's course, which may lead to her death and the death of her infant, is determined by, *inter alia*, whatever barriers prevent a woman in labour from receiving the care that might save her life. The 'three-delay' model³¹ explains that a third delay may occur at the facility before care is received. Better staffing of peripheral health facilities and improved access to obstetric services could reduce maternal mortality.³² Reports also indicate that in Azad Jammu and Kashmir³³, Sindh³⁴, NWFP and Punjab³⁵, most tertiary, secondary, and primary referral facilities do not provide EmOC—the key to saving maternal lives—or meet minimum acceptable levels set by WHO.

MATERIAL AND METHODS

This current study was conducted in conjunction with a larger survey designed to collect EmOC information at the health facility level. UN process indicators³⁶ were used to identify the availability, use, and quality of emergency obstetric care. For the purpose of the study, two of Pakistan's four provinces; Punjab and North West Frontier Province (NWFP) were selected, where it was the first study on EmOC situation analysis and also these two provinces account for some 70% of Pakistan's population.

In Pakistan, provinces are further divided for administrative purposes into districts. Depending on population size, each district has four or more rural health centres (RHC), two or three 'Tehsil' Hospitals (THQ) and one district hospital (DHQ). The RHCs are providing basic EmOC services. The Tehsil and District hospitals provide comprehensive EmOC.³⁶

Two teams undertook the study, one in each province, both trained by the chief investigator. To minimize bias, random sampling was done at both area and health-facility levels. To better evaluate the situation, in the first stage of sampling, 30% of districts in both provinces (n=19 districts) were randomly selected. In the second stage of sampling, all public health facilities providing EmOC in 11 districts in Punjab and 8 in NWFP were included (n=170; 120 hospitals from Punjab and 50 from NWFP). From Punjab, districts were Jhelum, Sialkot, Mianwali, Toba Tek Singh, Okara, Sahiwal, Khanewal, Multan, Vehari, Lodhran and Bahawalpur districts. From NWFP, they were Swat, Lower Dir, Charsadda, Swabi, Haripur, Kohat, Karak and Bannu districts. Data collection took place from July to September 2003. The records reflect 12 months of facility data. Data sources were the health facility's records, including the registries of labour and birth, operating theatre, antenatal care, and gynaecological ward records.

The needs assessment was conducted mainly using pre-established tools³⁶, a few questions were added. The reliability and validity of information in the hospital records were checked by repeating data collection from a 10% sample of hospitals. Permission was obtained from the ethics review committee at the University of Tokyo, Japan, and from the Ministries of Health in Punjab and NWFP, Pakistan. Data processing and analysis were carried out using SPSS version 10 (SPSS Inc., Chicago, IL, USA) to produce frequencies and percentages. Chi-square tests were used to observe the strength of associations between variables.

Punjab Province: The average literacy rate was 46% (female literacy 33%), the per capita income, US\$1752. The urban population was 26%, with an unemployment rate of 21%. Access to TV, radio, and newspaper was 71%, 38%, and 39% respectively.

Eighty-five percent had access to water in their homes; 24% had running water (pipe water). Electricity was accessible to 71% of the population. In the NWFP Province: The average literacy rate was 37% (female literacy 19%), the per capita income, US\$ 1627. The urban population was 14%, with an unemployment rate of 29%. Access to TV, radio, and newspaper was 44%, 43%, and 23% respectively. Fifty-seven percent had access to water in their homes; 38% had running water (pipe water). Electricity was accessible to 85% of the population.³⁷

RESULTS

Range of EmOC service availability

In our survey assessing the current status of emergency obstetric care services in Pakistan, we found that EmOC services were far from universally available: only 60 (35%) of 170 public health facilities in 19 randomly selected districts actually provided EmOC services.³⁵ Further, 14.7% provided only basic services, and only 21.2% provided comprehensive services. In NWFP 76% of hospitals did not provide any EmOC services, while in Punjab (59%) it was comparatively better (χ^2 : 3.5, $p<0.040$).

It was found that 75% of DHQ hospitals in NWFP and 83% of DHQs in Punjab provided comprehensive EmOC services. Similarly, in NWFP, at the THQ level, 67% of facilities provided basic EmOC services, whereas in Punjab, at the THQ level, 14% provided basic EmOC, 52% comprehensive, and in both provinces 33% of THQs were providing no services.

At RHC level, in Punjab only 25% of health facilities provided basic EmOC services; while none of the RHC in NWFP were providing EmOC services.

Convenience of service hours

Our study sample consisted of 170 hospitals, i.e. 20 DHQs, 27 THQs, and 123 RHCs. All 20 DHQs were providing services round-the-clock; 41% of THQs provided services up to 6 hours (NWFP: 50%, Punjab: 38%); 59% claimed to provide services round-the-clock (NWFP: 50%, Punjab: 62%). At the same time, 54% of RHCs (NWFP: 62%, Punjab: 50%) were providing services for up to 6 hours and others (46%) provided services round-the-clock (NWFP: 38%, Punjab: 50%).

Availability of human resources

We found that 49% of all health facilities studied did not have allocated staff as recommended by the Ministry of Health. In Punjab, only 42.5%, in NWFP, while 72% of the required staff per allocated vacancies was present, this result was also found to be statistically significant between the two provinces (χ^2 : 12.3, $p<0.000$). In Punjab province, however it was also observed that the allocated staff presence was better in higher-level health care facilities than in RHCs (χ^2 : 6.5, $p<0.037$).

It was also noted that staff remained on duty even at night in 69% of sampled hospitals where staff were interviewed (DHQ: 95%, THQ: 89%, RHC: 60%). The vast majority of facilities (91%) also claimed that they had female staff, though not necessarily skilled in EmOC services (DHQ: 100%, THQ: 96%, and RHC: 88%).

Social accessibility: Availability of women doctors

Almost every public health facility providing EmOC services is required to have at least one female doctor on the medical staff. Findings however revealed that women doctors were available in only 41.8% (n=170) of facilities. In NWFP, 32% of the hospitals had women doctors, in Punjab, 45%.

Nurses were present in 18% of NWFP and 2.5% of Punjab hospitals; Lady Health Visitor(LHV) were present in 46% of NWFP and 32.5% of Punjab hospitals; Traditional Birth Attendants (TBA) were present in 2% of NWFP and 9.2% of Punjab hospitals; and 2% of NWFP and 10% of Punjab hospitals had no female staff.

At the THQ level, on average 78% of hospitals had a women doctor (NWFP: 50%, Punjab: 86%) compared to the 28% average at the RHC level (NWFP: 21.6%, Punjab: 31%). In general, fewer women doctors were present in rural health centres than in higher-level hospitals. (χ^2 : 32.4, $p<0.000$)

It was also observed that the provision of EmOC services was directly associated with presence of women doctors in health care facilities (χ^2 : 48.6, $p<0.001$). The data also pointed to the fact that a number of facilities did not provide any EmOC services at all, despite having two or more (non-doctor) female health staff members, emphasizing the need for having a women medical doctor in health facilities, especially in rural areas.

Geographic accessibility: Distance and time to higher referral hospital (i.e., district level)

It was noted that from the first-level of care to the higher referral hospitals, 37% of were up to 30 km away, 39% were from 31 to 60 km away, and 24% were more than 60 km away. In NWFP, only 40% of referral hospitals were up to 30 km range, while in Punjab, 35%. Thus highlighting the fact that almost 60 to 65% of the hospitals in both provinces required patients to travel minimally for more 30 km to more than 60 km.

It was found that, by whatever vehicular means of transportation was available, the median time required to reach a referral hospital providing comprehensive EmOC from a hospital providing only basic EmOC was 45 minutes (q1-q3: 20-60 minutes) in NWFP and 60 minutes in Punjab (q1-q3: 30-90 minutes). Further details show that almost 30% to 40% of hospital in NWFP and Punjab could be reached in more than one hours range to get emergency treatment,

depending on the road conditions and more importantly availability of vehicle.

Serviceability of ambulances

It was found that overall; ambulances in working order were unavailable in 76 (45%) out of 170 health facilities. Province wise, in NWFP, ambulances for patient transportation were non-functional or unavailable in 56% of facilities (THQs: 33%, RHCs: 73%), while in Punjab's health facilities, the figures were 40% (THQs: 29%, RHCs: 48%). Functional ambulances were more likely to be present at higher-level health facilities than at rural health centers ($\chi^2=24.2$, $p<0.000$) and more available in Punjab province than in NWFP ($\chi^2=3.65$, $p<0.041$).

DISCUSSION

The goals set and agreed at Alma Ata for the pursuit for 'Health for all' apply the concepts of universal coverage with provision of accessible, affordable, and efficient services. Besides meeting other primary health care requirements, systems and services should be socially and culturally acceptable. These principles and associated requirements demand a creative practical approach to health care delivery system development.

The fifth millennium development goals include a focus on improving maternal health and advocate the reduction by three-quarters of the maternal mortality ratio between 1990 and 2015. To address its high maternal mortality, Pakistan requires a pragmatic approach, one that is culturally acceptable with a wide base of support in local communities.

Gender is one of the organizing principles of Pakistani society. Local traditions and culture embody values predetermining gender values in society. There is considerable diversity in the status of women across classes, regions, and the rural/urban divide due to uneven socioeconomic development and the impact of tribal, feudal, and social formations on women's lives. This has led to a low level of resource investment in women by the family and the State.

Recently, emphasis of international maternal health efforts has been shifted to the provision of accessible, affordable, and quality EmOC services to save mothers' lives.

We found that the majority of hospitals in our study were not providing EmOC services and that most referral hospitals capable of providing EmOC were geographically inaccessible to potential users.

Timely geographic access is especially important in obstetric emergencies or complications at or shortly after delivery. In many rural areas in Pakistan, the transportation infrastructure is underdeveloped, hindering the transfer of patients. During such transfers to higher levels of care following in-hospital emergencies, ambulances are extremely important. Half of hospitals in our study did not have serviceable ambulances. Facilities'

working hours were inconsistent with the provision of around-the-clock essential services, depriving and endangering the lives of many in need. High staff absenteeism in many health facilities brought to light other issues needing attention. Only a focused approach at local levels by proper supervision, motivating programs, and skilled management can solve these problems. Unquestionably, if implemented, measures will make a difference by saving women's lives.

In Pakistan, especially in rural areas where the majority of the population resides, women's mobility is restricted and most women are uncomfortable discussing issues of pregnancy, contraception, and reproductive tract infections with male doctors, resulting in high unmet need. Many endanger their lives by eventually approaching unskilled health workers.^{7,11-13}

However, the mere presence of a female care provider at a hospital is only one part of the equation; her presence is no guarantee that she or anyone else is capable of managing complicated deliveries or trained to recognize and treat complications of pregnancy. Nurses, midwives, auxiliary midwives, and other providers working in birthing centers may not have the skills and competencies to perform all the six signal functions that define a basic EmOC facility, even if it was part of their original training.³⁸ The appropriate solution is to increase skilled workers capable of managing EmOC problems.

In Pakistan as elsewhere, the vast majority of the country's doctors resides in and serves urbanized areas, and this is especially true of women doctors. Rural areas are underserved. The first step toward addressing the issue of women doctors in underserved rural areas is to recognize the underlying core issues: poor salary packages, inadequate service structure for women doctors willing to work in rural areas, and security issues. The government of Pakistan should offer better salary packages, improved and transparent service structures, and scholarship programs to facilitate further postgraduate studies to women doctors willing to work in rural areas. Another issue of national level policy is security for these women. Unless the security issue is resolved or proper measures are taken to manage it, it is unrealistic to expect women to serve in rural areas. But one thing is certain: increasing the availability of women doctors in these facilities will permit many lives to be saved by prompt and skilled care.

Equally essential is community education. Women's education and health must be emphasized through a long-term comprehensive approach. Antenatal, natal, and postnatal care can be stressed most effectively by sensitizing and involving important people around her (husband, mother-in-law) and highlighting the importance of her role as chief caretaker of her offspring. Otherwise, the decision to seek care at crucial times will

always be delayed and even service quality improvement in hospitals will be ineffective.

It is important to strengthen and improve existing first referral health care centers and ensure provision of accessible and affordable emergency obstetric care. Efforts to make them more accessible to women should also focus on streamlining the referral system to avoid overloading tertiary hospitals. The gender sensitive dimensions of demographic and social change need to be stressed further in all policies and development plans. The narrowing of gender disparities will increase women's wellbeing.

REFERENCES

1. Fathalla MF. Human rights aspects of safe motherhood. Best Practice Res 2006;20:409–19.
2. Freedman LP. Using human rights in maternal mortality programs: from analysis to strategy. Int J Gynecol Obstet 2001;75:51–60.
3. Desai J. The cost of emergency obstetric care: concepts and issues. Int J Gynecol Obstet 2003;81:74–82.
4. Fathalla MF. Guest editorial: Women have a right to safe motherhood, Plan Parenthood Challenges 1998;1:1–2.
5. Cook RJ, Dickens BM, Fathalla MF. Reproductive Health and Human Rights—Integrating Medicine, Ethics, and Law. London: Oxford University 2003; p.393–401.
6. Cook R, Galli Bevilacqua BM. Invoking human rights to reduce maternal deaths. Lancet 2004;363:73.
7. Kielmann AA, Siddiqi S, Mwadime RKN. District health planning manual. Tool kit for health managers. Ministry of Health, Pakistan. Multidonor Support Unit. Islamabad. 2002.
8. Cleland J, Kamal N, Sloggett A. Links between fertility regulation and the schooling of and autonomy of women in Bangladesh. New Delhi, India: Sage Publications, 1996;p. 205–17.
9. Mumtaz K, Salway S. I never go anywhere": Extricating the links between women's mobility and uptake of reproductive health services in Pakistan. Social Sci Med 2005;60:1751–65.
10. Piet-Pelon NJ, Rob U, Khan ME. Men in Bangladesh, India and Pakistan. Reproductive Health Issues. Dhaka: Karshaf Publishers, 2000; p 26.
11. Green A, Rana M, Ross D, Thunhurst C. Health planning in Pakistan: a case study. Int J Health Plann Manage 1997;12(3):187–205.
12. Winkvist A, Akhtar HZ. Images of health and health care options among low income women in Punjab, Pakistan. Soc Sci Med 1997;45:1483–91.
13. Khan A. Mobility of women and access to health and family planning services in Pakistan. Reprod Health Matters 1999;7(4):39–48.
14. Pakistan Economic Survey 2003-04, Government of Pakistan, Finance Division, Economic Advisers Wing, Islamabad. 2004.
15. National Institute of Population Studies. NIPS. Population Growth and its Implications. Islamabad. 2005.
16. Siddiqi S, Haq IU, Ghaffar A, Akhtar T, Mahaini R. Pakistan's maternal and child health policy: analysis, lessons and way forward. Health Policy 2004;69:117–30.
17. Tinker AG. Improving women's health in Pakistan. Human Development Network. HNP Series. Washington, DC: The World Bank. 1998.
18. Court C. WHO claims maternal mortality has been underestimated. BMJ 1996;312(7028):398.
19. UNFPA. State of the World Population 2004, 2004.
20. Ali SS, Kaukab F, Ali A. Health management information system in Punjab. Mother Child Health, 2000;38(1):32–6.
21. Population Council. The gap between reproductive intentions and behavior: a study of Punjabi men and women. Population Council, Islamabad. 1997.
22. Sultan M, Cleland J, Ali MM. Assessment of a new approach to family planning services in rural Pakistan. Am J Public Health. 2002; 92(7):1168–72.
23. Rosen JE, Shanti RC. Pakistan Population program: the challenges ahead. Country Study Services No.3. Washington, D.C.: Population Action International. 1997.
24. Ministry of Health, Pakistan. Progress on agenda for health sector reforms. Islamabad. 2004.
25. Population Council. Adolescents and youth in Pakistan 2001-02: A nationally representative survey. Islamabad: Population Council. 2003.
26. Ministry of Population Welfare/ Population Council. Pakistan Contraceptive Prevalence Survey, 1994-95. Basic Findings. 1995.
27. Davies J, Agha S. 10 years of contraceptive social marketing in Pakistan: an assessment of management, outputs, effects, costs and cost efficiency 1987-96. PSI Research Division Working Paper No.7. Washington D.C. Population Services International, Research Division. 1997.
28. Pakistan Integrated Household Survey, 2001/2002. Islamabad. Federal Bureau of Statistics. 2002.
29. UNFPA. State of the World Population 2005, 2005.
30. Siddiqui RI, Rizvi T, Jafarey S. Situation analysis of emergency obstetric care in four districts of Sindh. J Col Physicians Surg Pak 1999;9(4):187–9.
31. Thaddeus S, Maine D. Too far to walk: maternal mortality in context. Soc Sci Med 1994; 38:1091–110.
32. Midhet F, Becker S, Berendes HW. Contextual determinants of maternal mortality in rural Pakistan. Soc Sci Med 1998;46:1587–98.
33. MSU. Preparedness for emergency obstetrical care in Azad Jammu and Kashmir. Islamabad. Multi Donor Support Unit, Social Action Programme. 2000.
34. Bhutta Zulfiqar A. Maternal and child health in Pakistan. Challenges and opportunities. Karachi Oxford University Press; 2004.
35. Ali M, Hotta M, Kuroiwa C, Ushijima H. Emergency obstetric care in Pakistan: Potential for reduced maternal mortality through basic EmOC facilities, services and access. Int J Gynecol Obstet 2005;91:105–12.
36. Maine D, Wardlaw TM, Ward VM, McCarthy J, Birnbaum A, Akalin MZ, et al. Guidelines for monitoring the availability and use of obstetric services. New York: UNICEF/WHO/UNFPA; 1997.
37. NIPS. Pakistan population data sheet 2001.National Institute of Population Studies. Islamabad, Pakistan. 2002.
38. Paxton A, Bailey P, Lobis S, Fry D. Global patterns in availability of emergency obstetric care. Int J Gynecol Obstet 2006;93:300–7.

Address for Correspondence:

Dr. Moazzam Ali, Department of Health Policy and Planning, Institute of International Health, Graduate School of Medicine, The University of Tokyo, 7-3-1 Hongo, Bunkyo-Ku, Tokyo 113-0033, Japan. Fax: + 81-3-5841-3637
Email: denube5@yahoo.com