



Provincial Health  
Development Centre Sindh  
@ Jamshoro



Working Towards Millennium Development Goals  
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# Summary Report

Baseline Survey of Eight Key Family Practices in Sindh

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## Introduction

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Despite a significant decline in mortality of children less than five years of age from 12.5 million in 1990 to 8.1 million in 2009 globally; it looks very difficult to sustain this pace due to economic instability, deterioration of health systems and other factors. Moreover, this pace needs to accelerate in order to meet Millennium Development Goal of reducing child mortality. According to Pakistan Demographic and Health Survey (PDHS) 2006-7, it took fifteen years to reduce just 20% of under five mortality from 109/1000 live births in 1990-91 to 94/1000 live births in 2006. Acute Respiratory Infection, Diarrhea, Measles, Malaria and HIV and AIDS with malnutrition are major underlying causes. Of the estimated 130 million infants born each year worldwide, 4 million die in the first 28 days of life. An estimated 298 000 neonatal deaths occur annually in Pakistan which accounts for 7% of global neonatal deaths. Situation in Sindh has been bleaker. Analysis of PDHS surveys of 1990-91 and 2006-7 indicates that there has been only 5% reduction in under five mortality from 106 to 101/1000 live births.

Worldwide, neonatal deaths account for 40% of deaths of children of under five years of age. Neonatal Mortality is mostly affected by contextual factors which also influence maternal mortality such as care during pregnancy and delivery including maternal nutrition and health seeking behavior, socio-economic status, illiteracy, gender inequity and high fertility. Most of direct and indirect causes are preventable and require modification in the behavior and practices of the immediate care givers of babies regarding timely health seeking in case of an illness of neonate, exclusive breastfeeding, and appropriate follow up after the illness. Keeping this, we designed this study to assess these behaviours and practices pertaining to maternal and newborn care, in order to collect some evidence for suggesting specific areas for changing behaviours and practices of mother, family members and the community. We adapted the questionnaire which was designed by UNICEF/WHO, and used the tailor-made questionnaire for collecting data on 8 Key Family Practices regarding antenatal care, exclusive breastfeeding, immunization of mother and neonate, homecare for illness including continuous breastfeeding during illness, home treatment of infections, health care seeking, compliance for prescribed treatment, and hygienic and sanitation.

## Methodology

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We conducted a cross-sectional household survey in 5 districts, which were selected using criteria for representing different socio-cultural and geographical strata in the province of Sindh. These included: Malir, Hyderabad, Tando Allahyar, Naushahro Feroze and Jacobabad. Two teams of trained data collectors in each district interviewed mothers of neonates of 28 or lesser days using the structured questionnaire to collect the required data during November to December, 2010. This descriptive study involved a sample of 813 with equal distribution in 5 study districts resulting 160 data collection units in each district. The designed questionnaire was translated in Sindhi and Urdu languages and was pretested in Jamshoro district which helped improve and finalize the questionnaire before starting the data collection process. Data was collected by two teams in each district, and each team was comprised of 3 females and one male. Data collection teams received extensive training and collected data under the supervision of experienced public health professionals from PHDC to ensure the availability of good quality and valid data for drawing plausible inferences.

## Results

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The study represented 58% rural and 42% urban areas involving 813 mothers to participate in the study. The study revealed that about 50% responding mothers spoke Sindhi and 70% were 22 to 33 years old. About 61% study mothers and 36% of their husband were illiterate. Formal education and household income were significantly associated with health seeking behavior and hygienic practices. 96% mothers, who had formal schooling, had antenatal care as compared to 77%, who did not have any schooling. Similarly 86% mothers who had formal schooling reported to wash their hands with soap after assisting a child in defecation as compared to 71% who did not attend formal schooling. Reported home deliveries decreased with the increase in household income level. Only 17% household with monthly income of more than Rs. 7000 reported to have home deliveries as compared to 40% home deliveries with monthly household income of Rs. 7000 or less. Around 63% households of responding mothers earned Rs. 7000 or less in a month. In 96%, day time caregivers were either mothers or grandmothers.

### a. Key Family Practice 1: Antenatal, Natal and Neonatal Care

Around 79% mothers reported that they had consulted a Skilled Birth Attendant (SBA)<sup>1</sup> for Antenatal Care (ANC) during their last pregnancy, of which, 66% mothers visited a private health facility and 31% consulted a government health facility. Only 5% mothers consulted a Traditional Birth Attendant (TBA) for ANC. Around 37% mothers from urban areas and 24% from rural areas paid 4 or more ANC visits. About 73% mothers had to travel less than 5 kilometers to visit a health facility for ANC. Laboratory results during ANC revealed that 12% had positive test for Hepatitis B and 10% for hepatitis C. Around 59% mothers reported to have anemia during last pregnancy, of which, 84% mothers reported to have used an iron supplement. About 18% mothers knew that 4 ANC visits should be performed while 29% had no knowledge in this regard. About 78% mothers had 2 or more doses of TT vaccination but only 33% could show the vaccination card. Only 21% mothers knew that 2 doses of TT should be given during a pregnancy. Among those who claimed to know danger signs in pregnancy, only 44% mentioned vaginal bleeding as one of the danger signs. About 53% mothers reported to experience a danger sign during last pregnancy. Of those 40% who informed that they had some kind of complication/s during the puerperium period, 50% mothers did not seek any treatment.

Around 69% deliveries took place in a health facility which included 48% in a private facility and 21% in a government facility. Around 31% deliveries were conducted at home, mostly in rural areas. About 89% mothers reported that a new blade was used to cut the umbilical cord. About 16% mothers reported to have a C-Section. Regarding the decision about the place of delivery, the main decision maker was husband (43%) while 24% responding mothers took this decision themselves. Husbands provided various types of care during last pregnancy including care of children, household tasks and allocation of money for delivery, and 98% mothers were satisfied about the level of care provided. Mothers reported to observe some food restrictions during pregnancy, mostly (53%) by health care providers, but various dietary and nutritional advices were given by them including to eat additional meal, and the use of supplementary iron, dairy products and protein rich food. About 77% reported that placenta was buried.

### b. Key Family Practice 2: Exclusive Breast Feeding

About 77% mothers reported to provide various types of pre-lacteal food to their neonates before initiating the breast milk including honey (43%), while 23% did not give anything. About 96% mothers were breastfeeding their neonates at the time of interview. Around 43% mothers used a bottle with a nipple to feed a liquid to their neonates. About 62% mothers exclusively breastfed their neonates, of

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<sup>1</sup> Doctor/Nurse/Lady Health Visitor/Midwife

which, 30% reported to give some milk substitute in addition to breastfeeding following the advice of care providers including 22% doctors. About 26 % mothers reported to start breast feeding immediately (within half an hour of delivery), 43% started bit late but on the same day while 31% started breastfeeding next day.

### **c. Key Family Practice 3: Vaccination of Neonate**

Around 46% neonates were reported to be appropriately immunized for age but only 30% of responding mothers could produce immunization card. Immunization for types of vaccine included: 22% with Hepatitis B, 95% with BCG and 90% with OPV. For further validation, mothers were asked specific questions, and 80% mothers confirmed about BCG injection, 20% for Hepatitis B, and 78% for Polio drops.

### **d. Key Family Practice 4: Continuous Breast Feeding and more fluid during neonatal illness**

About 13% mothers reported that their neonates had diarrhea, of which, 97% mothers continued breastfeeding, About 27% neonates additionally received infant formula or other milk, 11% ORS and 26% received other fluid and water along with breast milk. Around 43% mothers reported that their neonates had an illness of which, 47% reported that neonates had decreased breast milk intake during illness.

### **e. Key Family Practice 5: Appropriate home treatment during neonatal illness including infections**

Mothers reported that 222 neonates (27%) had an episode of fever of which 126 (57%) received different types of medicine at home, mostly Panadol drops (80%) or Paracetamol syrup (14%). About 51% mothers reported that neonates had decreased intake of milk during febrile illness and 32% mothers gave some kind of fluid in addition to breast milk. About 101 neonates (13%) had diarrhea of which, 64 (63%) gave: water alone (11%), other milk or infant formula (64%), ORS (17%) and other locally defined fluid including whey, mint leaf water etc (8%).

### **f. Key Family Practice 6: Recognition of need of treating sick neonate by an appropriate health care provider outside home**

About 42% neonates reportedly had some kind of illness after birth including fever, vomiting, diarrhea, cough, runny nose and difficulty in breathing. Of those, 59% sought any treatment outside home. Regarding the health seeking behavior, about 66% of mothers mentioned that they would take their ill neonate outside the home for treatment only when the condition worsened. Of those who took the neonate outside the home for treatment, 78% used a private health care facility whereas only 14% used government health facility. About 34% mother took the decision alone to take their neonates outside home for treatment. About 78% had to travel within 5 kilometer radius to reach a health care facility. About 47% told that there was no advantage of taking the neonate to a government health facility. Responding mothers mentioned a list of conditions which would provoke them to take the neonate outside home for treatment including: if condition gets worsened, diarrhea, severe vomiting, difficult breathing, convulsions and fast breathing. About 76% mothers mentioned that Rs. 1000 or less was incurred on treatment. Around 60% mothers were fully satisfied by the treatment received.

### **g. Key Family Practice 7: Follow up of treatment and referral for neonatal illness**

Of 42% mothers who mentioned that their neonates had an illness, about 58% mothers took their sick neonates to a health care facility on the same day. The rest who took 'late decisions' (from the second day onward) explained that the delay occurred due to lack of money (41%) or their husband was not available to make the decision (15%). Most mothers (more than 95%) gave prescribed medicine to sick

neonates. Of those who took the neonate to a health care facility, 8% took the neonate to a second hospital. Overall, 52% mother complied with the advice to return for a follow up visit. 43% mothers were extremely satisfied by the treatment at secondary health care facility. A total of 16 neonates were referred by primary contact to another facility of which, only 4 (25%) contacted the referred health facility while other did not due to non-availability of money and lack of authority to take such decision.

#### **h. Key Family Practice 8: Personal hygiene and household sanitation**

About 94% mothers reported that water was always available. The main source of water for 62% of the population was a hand pump, particularly in rural areas. Similarly, the majority of the study population in rural areas did not have modern flush system for safe disposal of feces. Around 52% mothers reported rinsing off neonatal feces while 20% threw it away. Most of the responding mothers mentioned that they used soap for hand washing after using the toilet (81%) and after attending a child who had defecated (76%). Data collectors observed that houses they visited were generally clean. 72%, had water containers covered (88%), soap was present in bathroom/toilet and a dust bin was present in the house (42%). Only 25% mothers reported to use dustbin for collecting garbage while rest would throw it in the street.

#### **i. Other relevant findings**

Around 57% mothers reported that a Lady Health Worker (LHW) had visited their household, of which, 93% were satisfied by the care they provided. Around 88% mothers appreciated that health messages communicated to them by LHWs were easy to understand.

## **Discussion**

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This study has revealed important findings which have significant implication for MDG targets 4 and 5, and the health policy of the country. Despite huge amount of investment on population control programmes, a highly fertile population with 40% households having more than 10 family members is alarming and higher than national figures. Similarly, low literacy among women in spite of heavy investment in education sector is a serious concern, particularly its relationship with health seeking behavior/health outcomes as manifested in this study. Mothers who had formally attended a school had: less number of pregnancies; more Antenatal Care (ANC) visits; increased hand washing practice with soap after defecating a child; higher probability of the presence of soap in toilet/bathroom; less reported anemia; availability of immunization card of neonate and mother; and better knowledge regarding danger signs.

Reported proportion of ANC visits by a Skilled Birth Attendant is higher than indicated in the reported national and sub-national surveys, which nevertheless, is encouraging with regards to MDG target of 100% deliveries by SBA by 2015. The utilization of government health facilities has been very low despite massive investment through several foreign funded MNCH focused projects during last couple of decades. A high proportion of positive test for Hepatitis B (12%) and C (10%) during pregnancy has been reported which is very high as compared to available data through small-scale surveys, though national level figures for Hepatitis B and C are not available. Prevalence of anemia among study women has also been reported very high but the findings are consistent with other studies in Pakistan. Moreover, high number of anemia cases (68%) reportedly received parental iron infusions and blood transfusion to treat anemia, and thus increased the vulnerability of developing side effects and infection. Reported cost incurred on ANC has been very high keeping economic conditions of the study population. However, physical accessibility to health facility was reported to be adequate due to proximity of health facilities for study population and availability of public and personal transportation, particularly in urban areas. Many mothers in rural

areas reported to use bull-carts for reaching to a health facility for ANC, indication inequitable access of health services to the rural population.

Despite a gap in knowledge regarding adequate number of ANC visits during pregnancy and number of TT doses, 78% mothers reported to receiving adequate doses of TT during their last pregnancy. Around 81% had knowledge about danger signs in pregnancy and 91% knew where to go for treatment in case any danger signs develop. Moreover, of 53% mothers who reported to experience a danger sign, 26% did not seek any help which is alarming. Similarly, 40% mothers reported to have one or more complications during their last pregnancy but only 50% sought health care.

This study reported 69% deliveries by Skilled Birth attendants (SBAs), which is the highest figure ever reported in Pakistan. However, information bias due to over reporting, rapid urbanization, and increased awareness regarding the importance of safe deliveries could be the reasons for this positive picture. Another significant finding is a high proportion of reported cesarean sections (16%), surpassing the acceptable range of 5-15% recommended by the WHO. Other local studies have portrayed the similar picture which is really alarming due to its cost and morbidity/mortality implications. A high proportion (89%) of mothers reported to have their cord cut by a new blade indicating safe delivery practices. This study revealed an important finding regarding changing trends for female autonomy, and indicated that 24% mothers independently took the decision for selecting place of delivery. A quarter of neonates were given first bath immediately after birth which increases the risk of developing hypothermia, a life threatening condition for a newborn. Studies in various countries have suggested a strong link between bathing of newborns in the first hour after delivery and increased prevalence of hypothermia.

The study portrayed that husbands of study mothers provided social, physical and psychological support during their last pregnancy in order to relieve them from stress and anxiety and to ensure smooth progression of pregnancy. Husbands performed household tasks and allocated additional money for care. Restriction of food such as meat, egg, vegetables; fish etc reported in this study might be an important attributing factor for developing anemia and malnutrition during pregnancy.

A high proportion of mothers (62%) reported practicing exclusive breastfeeding, and majority of mothers reported to continue breast milk during diarrhea, a proved healthy practice to prevent complications of diarrhea including dehydration. Of 46% mothers who verbally mentioned that their neonates were appropriately immunized for TB, Polio and Hepatitis B, only 30% mothers could produce immunization card for validating the immunization status. No local literature was found for comparison. Regarding the health seeking behavior during neonatal illness, only 59% mothers reported to have sought treatment, mostly (66%) when the condition got worsened.

The utilization of government health facilities has been low among the study population. Of those 14% who opted for a government health facility, visited the facility due to free availability of medicine. This indicates that community is conscious about better quality services even at the expense of extra financial burden on the entire family. This has severe implications for increasing poverty in the country as a huge amount of money is spent out of pocket on managing doctors' and hospital fee. About a quarter of responding mothers reported that neonatal illnesses cost Rs. 1000 or more indicating a high financial burden on already deprived communities. Nonetheless, 93% of responding mothers were fully satisfied by the treatment their neonates had received.

Assessment of hygiene and sanitation practices revealed that despite wide spread availability of water and toilet facilities, caregivers still throw feces of neonates outside home. Majority of study respondents reported to throw household garbage in the street/yard. The study found wide variability in the availability of toilet facilities between study districts, and urban and rural areas indicating inequity and geographical disparity. Practice of hand washing with soap after using a

toilet or attending a child for defecation has been reported as adequate while only few reported washing hands with soap before and after eating and cooking, which might have increased the risk of transmitting infection to newborn, as evident by existing literature.

## Conclusions and Recommendations

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The study was conducted in a reasonably sampled population in 5 districts of Sindh, and provided evidence on current knowledge, attitude and practices of mothers and other caregivers regarding maternal and newborn care. The study findings have important policy implications for achieving targets for MDG 4 and 5. This study provides a road map to focus and modify current practices of mothers and caregivers of neonates regarding nutrition, breast feeding, health care seeking and the hygiene and sanitation. Following are some important conclusions and recommendations.

- a. Female autonomy reported in this study in terms of decision making to seek health care outside home needs to be enforced through appropriately devised advocacy and awareness raising programme through print and electronic media, theatre, lane meetings, and health education sessions, and also through strategies for improving women literacy rate.
- b. Out-reach services need further strengthening to ensure accessibility of good quality MNCH services. Provincial and regional health departments should focus on increasing the coverage by Lady Health Workers and Community Midwives.
- c. Provincial and regional health departments should develop advocacy material to re-enforce positive and healthy practices reported by the study population including continuous breastfeeding during neonatal diarrhea and febrile illness, exclusive breastfeeding, and hand washing with soap, particularly after defecating a child.
- d. A significant finding of this study is the increasing trend of deliveries by Skilled Birth Attendants (SBAs). The concept of safe delivery by SBA needs further enforcing through print and electronic media.
- e. Health seeking behavior for complications during pregnancy has been significantly inadequate despite high level of knowledge in this regard. Health care providers including LHWs, Nurses, LHVs, Midwives, Doctors and other paramedics should educate their clients regarding the Importance of danger signs and complications during pregnancy and its preventive and emergency measures, and provincial/regional health department should focus on strengthening Emergency Obstetric and Neonatal Care (EmONC), development of an effective referral system, and placing of trained and qualified staff in referral health facilities
- f. Besides good practices, the study has also identified few undesirable practices by the health care providers which might increase the risk of more negative consequences. These include high rate of c-sections, high rate of using iron infusion to treat anemia, and chest compression or holding the baby upside down and tapping the back in case baby does not cry after birth. Provincial/regional health departments should develop/adopt protocols and guidelines and devise mechanisms for continuous monitoring to ensure appropriate and healthy practices.

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