NHSSP Nepal Health Sector Support Programme

STRENGTHENING THE DELIVERY OF POSTNATAL CARE

BACKGROUND

The estimated maternal mortality ratio in Nepal declined from 539 maternal deaths to 281 per 100,000 live births between 1993 and 2003,[i] and neonatal mortality has fallen from 49.9 to 33.0 per 1,000 live births.[iiiii] Despite this progress, Nepal still ranks poorly in global rankings for maternal and neonatal mortality (226th and 168th respectively)[ivv] and the recent Nepal Demographic and Household Survey (NDHS) 2011 preliminary report reveals that the downward trend for new-born mortality has actually stalled from 2006 to 2011. Furthermore, disparities between urban and rural settings and richer and poorer sectors of society remain.[vi]

High quality postnatal care (PNC) is crucial to both monitoring the health of the mother and baby and delivering important messages concerning family planning, child health and other key health areas. Despite substantial efforts toward community-based (CB) new-born care, opportunities have been missed to deliver adequate facility-based PNC during the high-risk 48 postpartum hours and to enable linkages across other components of the continuum of care, such as family planning.

THE GLOBAL CASE FOR PNC

The risk of postpartum maternal mortality is extremely high, often higher than for the intrapartum period. An analysis using data from the high-profile Matlab study (Bangladesh) found that the number of maternal deaths on the second day after birth was 52 times higher than the number of deaths occurring on the day of birth.[1vii] Furthermore, a paper analysing findings from many developing countries has shown that postpartum deaths account for 60% of all maternal deaths, compared to only 15.5% for intrapartum and 23.9% for antepartum.[viii] On the neonatal side, the average daily mortality rate for children under five is 30 times higher during the neonatal period than at any other time, and a quarter to half of all neonatal deaths occur in the first 24 hours.[ix] Morbidity during the postpartum period is also very common. A study from India showed that 43% of women suffered some form of morbidity during this time, while a Bangladeshi study reported rates of 92%.[x]

Evidence from developing countries worldwide suggests that a simple package of interventions, such as providing advice on postnatal danger signs, advice on self-care, and iron folate supplementation, as well as early detection and referral of postnatal maternal complications, are effective in reducing maternal mortality.[xi] Furthermore, the following interventions have been proven to significantly reduce neonatal mortality: resuscitation of new-born baby (6-42% reduction in mortality), promotion of breastfeeding (55-87%), prevention and management of hypothermia (18-42%) and kangaroo mother care (reduction in 75% in incidence of infections).[xii]

Postnatal care also provides a unique opportunity to connect women to other health interventions within the continuum of care and to promote healthy behaviours. Evidence from Latin America suggests that contraceptive uptake is higher when women receive immediate postpartum contraception,[xiii] and a

[1]This would also include some postpartum deaths according to the WHO definition.

randomised controlled study from Syria showed that exclusive breastfeeding was higher for women who received postnatal visits.[xiv] Such interventions, especially when delivered as a package of care linking maternal and new-born health, can be very cost effective. Postnatal care is twice as cost effective as intrapartum care, and 20 to 100 times cheaper than providing prevention of mother to child transmission of HIV (PMTCT).[xv]

THE CASE FOR PNC IN NEPAL

The high proportion of postpartum deaths (34% of maternal deaths[xvi]) and neonatal deaths (54% of under-five deaths[xvii]) clearly justifies Nepal's focus on improving PNC in addressing maternal and child mortality. The main causes of maternal postpartum deaths are eclampsia, haemorrhage and puerperal sepsis, which could all be avoided if women had access to timely emergency obstetric care. A key component of access includes women's awareness of the key danger signs and knowledge of where to access emergency obstetric care. However, only 33% of mothers and babies currently receive any postnatal check-up,[xviii] during which immediate medical attention or information on danger signs and referral pathways could be provided. Furthermore, this figure includes all women delivering at a health facility, whether or not they did in fact receive a postnatal care check-up, and also includes women who received PNC after the initial 48 hours, after which the mortality risk becomes lower.

Because only 28.1%[xix] of Nepali women deliver in a health facility, Nepal's strategy has so far focused on community-based PNC. The Community-Based New-born Care Programme (CB-NCP) has been successful[xx] in providing care for new-born babies in the community and initiating referrals when required. The mother-focused Birth Preparedness Package has not focused on postnatal care so much as on antenatal care, although there are plans to integrate postnatal checks into the ANC4+ scheme which would provide incentives for women who have institutional deliveries.

Given existing strong community-based efforts in new-born care, this OR sees a cost-effective opportunity to strengthen the facility-based component of PNC for both mothers and babies. Although a minority of women currently deliver in health facilities, facility-based deliveries are on an upward trend, increasing from 17.7% in 2006 to 28.1% in 2011, and will probably rise further as younger women are more likely to deliver at a health facility. Even if women do not return to the facility after discharge, providing a check-up as well as relevant information within 24 hours, before the women leave the health facility, could help prevent the 38.7%[2] of maternal deaths that currently occur within this crucial window.[xxi] Strengthening postpartum referral systems that link community-based postnatal care interventions to health facilities is also crucial, in order to enable women who delivered at home to access life-saving emergency obstetric care.

PNC could also help catalyse other much-needed improvements in outcomes. Currently, only 12% of mothers wait a month before resuming their normal workload;[xxii] only 35% of mothers practice early initiation of breastfeeding;[xxiii] and the contraceptive prevalence rate is only 44%.[xxiv] Linking PNC to other health-enhancing opportunities is highly consistent with Nepal's strategy of strengthening the Continuum of Care across different health interventions.

[2] Timing of pregnancy related deaths: 32.5% (Intrapartum and up to 24 hours postpartum) and 6.2% (Early postpartum: 24 to 48 hours). P.114 in the Nepal Maternal Mortality and Morbidity study (see endnote xvi).

DESCRIPTION OF OPERATIONAL RESEARCH AND INTERVENTION

The aim of the intervention will be to ensure that all women and babies are provided with a timely, high quality check-up targeting the major postpartum risk factors, as well as comprehensive, standardised PNC information, covering all aspects of women and new-born health.

The OR will investigate how to design and apply a PNC job aid in such a way that its use by Skilled Birth Attendants (SBAs) is feasible, and that the information provided is clearly understandable for women. The job aid used in the intervention will be wholly informed by current materials as well as the guidance and expert advice of the relevant department in MoHP.

A baseline study conducted in December and January will deliver more detailed information on the extent, timing and quality of PNC services currently provided. Findings from the baseline will serve to inform the design of the Operations Research, which will be presented to the TAG for approval before implementation.

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[i] Hussein J, J. Bell, M. Darlang, N. Mesko, J. Amery, et al. 2011. *An Appraisal of the Maternal Mortality Decline in Nepal.* PLoS ONE 6(5): e19898. doi:10.1371/journal.pone.0019898.

[ii] Department of Health Services, New ERA, Macro International Inc. 1997. *Nepal Demographic and Health Survey 1996*. Calverton: Macro International Inc.

Ministry of Health and Population [Nepal], New ERA, Macro International Inc. 2007. *Nepal Demographic and Health Survey 2006.* Kathmandu: Ministry of Health and Population.

[iii] Ministry of Health [Nepal], New ERA, ORC Macro. 2002. *Nepal Demographic and Health Survey 2001*. Kathmandu: Ministry Health.

[iv] Hogan, MC, et al. 2010. *Maternal mortality for 181 countries, 1980—2008: a systematic analysis of progress towards Millennium Development Goal 5*. The Lancet, Volume 375, Issue 9726, Pages 1609 - 1623, 8 May 2010.

[v] UNICEF. 2009. *The State of the World's Children 2008.* Available from URL: http://www.unicef.org/sowc08/report/report.php

[vi] Ministry of Health and Population [Nepal], New ERA, Macro International Inc. 2007. *Nepal Demographic and Health Survey 2006.* Kathmandu: Ministry of Health and Population.

[vii] Hurt et al. 2008. *Duration and magnitude of mortality after pregnancy in rural Bangladesh*. International Journal of Epidemiology (37), pp. 397-404.

[viii] Li et al. 1996. *The postpartum period: the key to maternal mortality*. International Journal of Gynecology and Obstetrics (54), pp. 1-10.

[ix] Lawn et al. 2005. *4 million neonatal deaths: When? Where? Why?* The Lancet.

[xi] Campbell et al. 2006*. Strategies for reducing maternal mortality: getting on with what works*. The Lancet.

Graham et al. 2006. *Disease control priorities in developing countries*, 2nd ed. New York: OUP.

[xii] Breastfeeding and community-based management of pneumonia were shown to be effective in large programme conditions; there is evidence of efficacy for the other interventions, but lack of data on effectiveness in real world contexts.

[xiii] Quiterio et al. 2007. *Dominican Republic: diagnostic study of postpartum, post-abortion and PMTCT contraceptive services*. FRONTIERS final report. Washington, DC: Population Council.

Rivero-Fuentes et al. 2007*. Haiti: situational analysis of the use of contraception in postpartum, post-abortion and PMTCT contraceptive services*. FRONTIERS final report. Washington, DC: Population Council.

[xiv] Bashour et al. 2008. *Effect of postnatal home visits on maternal/infant outcomes in Syria: a randomised controlled trial*. Public Health Nursing, Volume 25 (2) pp. 115-125.

[xv] Darmstadt et al. 2005. *Evidence-based, cost-effective interventions: how many new-born babies can we save?* The Lancet, 365: pp. 977-88.

[xvi] Pradhan et al. 2010. *Nepal Maternal Mortality and Morbidity Study 2008/2009*. Family Health Division, Department of Health Services, Ministry of Health and Population, Government of Nepal, Kathmandu, Nepal. p. 114 (proportion of all maternal deaths occurring after the first 24 hours postpartum).

[xvii] Ministry of Health and Population [Nepal], New ERA, Macro International Inc. 2007. *Nepal Demographic and Health Survey 2006.* Kathmandu: Ministry of Health and Population.

[xviii] ibid. (NDHS 2006)

[xix] Preliminary findings Macro International. 2011. Ministry of Health and Population [Nepal], New ERA, Macro International Inc. *Nepal Demographic and Health Survey.* Kathmandu: Ministry of Health and Population

[xx]MoHP. 2010. Nepal Health Sector Programme – Implementation Plan II, 2010-2015.

[xxi]Pradhan et al. 2010. *Nepal Maternal Mortality and Morbidity Study 2008/2009*, Family Health Division, Department of Health Services, Ministry of Health and Population, Government of Nepal, Kathmandu, Nepal, p. 114.

[xxii] Gurung et al. 2007. *Pelvic organ prolapse in rural Nepalese women of reproductive age groups: what makes it so common?* Nepal Journal of Obstetrics and Gynaecology, 2(2): 35-41.

[xxiii] Ministry of Health and Population [Nepal], New ERA, Macro International Inc. 2007. *Nepal Demographic and Health Survey 2006.* Kathmandu: Ministry of Health and Population.

[xxiv] ibid. (NDHS 2006).