

Continuous care across life stages and from home to hospital is crucial for health - for complete physical, mental and social well-being. In the context of reproductive, maternal, newborn and child health (RMNCH) this takes on a greater significance because a child's health is closely linked to the mother's, from conception through to birth and beyond. Progress towards the Millennium Development Goals (MDGs) 4 and 5 is therefore intricately linked. Evidence shows that an effective continuum of care, which includes intervention packages from pre-pregnancy through to childhood up to age 5, is thus essential to the well-being of this and the next generation, across all developing countries.



“The ‘Continuum of Care’ for maternal, newborn and child health includes integrated service delivery for mothers and children from pre-pregnancy to delivery, the immediate postnatal period, and childhood. Such care is provided by families and communities, [and] through outpatient services, clinics and other health facilities.”

The World Health Report 2005 - Make every mother and child count.

## What works?

A review of 191 studies analyzed the effects of various services delivered as intervention packages along the continuum of care.<sup>1</sup> It found particularly strong links between maternal and newborn health outcomes. Poor implementation, inadequate linking between services in the package, or omission of some key interventions made the care ineffective. Interventions included care from pre-pregnancy to childhood and were delivered in various ways, such as outreach services, clinical care, and family and community-level care. Outreach packages had good coverage but missed out key interventions, such as preventing mother-to-child transmission (PMTCT) which could have been combined with a package for pregnancy care.<sup>2</sup> A review of evaluated HIV/AIDS interventions in 90 countries focused on what worked for women and girls, and found that prevention was key.<sup>3</sup> Effective provision of barrier methods of contraception and PMTCT could prevent a substantial number of HIV cases.

Nearly two-thirds of newborn and child deaths could be avoided if essential care was provided along the continuum. The role of the mother is crucial in this regard. One recent study in Bangladesh, for example, found that the death of a mother greatly reduces the chances of the child’s survival, especially for those aged between two and five months.<sup>4</sup>

A further study looked at the impact of 16 interventions for newborns, delivered as packages along the continuum. It found that between 0.59 to 1.08 million lives could be saved each year in South Asia, and between 0.46 to 0.8 million in sub-Saharan Africa, with improved coverage and if interventions were delivered effectively throughout the continuum of care (see Knowledge Summary 4).<sup>5,6</sup> Good nutrition and preventive health care for mothers and children can reduce deaths by 25% among newborns to three year olds.<sup>7</sup>

In addition to well-integrated clinical and outreach services, family and community-level care provide women and children with the knowledge and choices required for their health. A community-based experiment in rural Nepal showed that community links with the local health system were strengthened when women had improved knowledge of their care and greater involvement. This also encouraged other improvements within the health system. In a context where home births were the norm and mortality rates were high, this is felt to have helped to reduce newborn deaths greatly.<sup>8</sup> Community-based interventions, such as community case management of pneumonia in children, can thus strengthen the continuum of care and improve health outcomes.

Figure 1

The RMNCH continuum of care



Women, from their teenage years onwards, need educational, nutritional and psychological support before they conceive. Family planning services help women plan their pregnancies and avoid unsafe abortions. Good nourishment and regular antenatal care throughout pregnancy help ensure a healthy mother and baby. At childbirth, and soon after, skilled care for mother and baby is crucial, because the risk of death and serious complications are greatest at that time. The health of mothers and babies has to be monitored and cared for up to six weeks after childbirth to detect problems. An early start to breastfeeding is very important, and babies should be breastfed exclusively during the first six months. Adequate nutrition, immunization and other health care are essential from birth and throughout childhood. A healthy start ensures a healthy future.

Many mothers, newborns and children die or develop serious problems due to the poor linking between different levels of care. Families and communities

can help women by supporting home-based care and programs that encourage women to seek and demand appropriate care. Outreach and outpatient services – such as family planning services, routine antenatal and postnatal checks or immunization – are essential and can be provided by mid-level health workers. Clinical care has to be available 24 hours a day and seven days a week. It should be provided by trained health-care workers, include basic and emergency care, and link the primary and tertiary levels of the health system.

## Where do we stand now?

The latest report from *Countdown to 2015*, shows that, despite some progress in expanding and improving RMNCH services over the past ten years, there are still significant gaps.<sup>9</sup> There have been some gains in coverage of routine interventions such as immunization, and newer interventions such as PMTCT for HIV. However, much remains to be done in the most crucial area – childbirth.

### Box 2 – Tracking progress in context: Afghanistan and Malawi

Progress on women's and children's health has been uneven across diverse country contexts. Current levels of coverage show that Afghanistan needs greater inputs across the continuum of care. But great potential for what can be achieved even in difficult circumstances is shown by measles immunization. In Malawi,

on the other hand, although on track to achieve MDG 4, maternal mortality continues to be high. Each country is influenced by a different set of contextual factors, which require analysis to inform country-specific strategies.

Source: *Countdown to 2015 decade report (2000–10): taking stock of maternal, newborn, and child survival*, (PDF) [www.Countdown2015mnch.org/documents/2010report/CountdownReportAndProfiles.pdf](http://www.Countdown2015mnch.org/documents/2010report/CountdownReportAndProfiles.pdf)

Figure 2a - Afghanistan

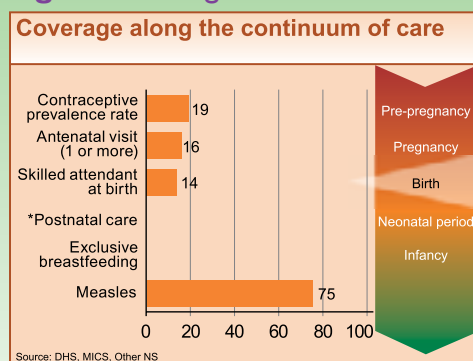
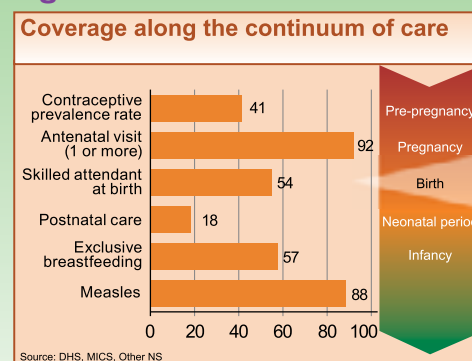


Figure 2b - Malawi



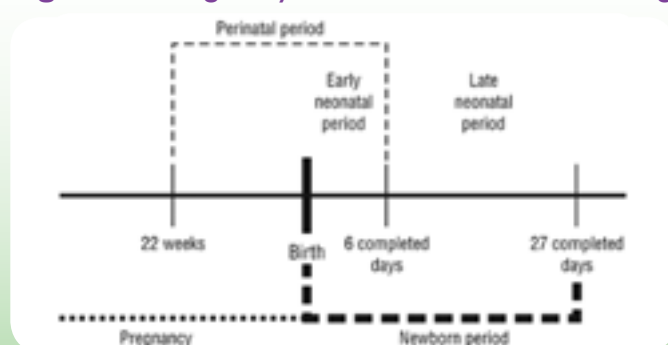
## Gaps in the pre-pregnancy to childhood continuum

- Adolescence and pre-pregnancy:** Complications during pregnancy and childbirth are the leading cause of death in young women (15 to 19 years) in developing countries.<sup>10</sup> Unmet need for family planning remains high in this age group and in others. Nearly a third of *Countdown* countries in fact showed an increase or no change in unmet need between 2000 and 2008. Lack of family planning is reflected, in part, in the continuing burden of unsafe abortion, which accounts for an estimated 13% of all maternal deaths.<sup>11</sup>
- During pregnancy:** Skilled health care during pregnancy is important; for example, to treat high blood pressure, provide tetanus immunization and test for HIV and syphilis. At least four such contacts are recommended, at which high-quality and effective care is provided. The average coverage of these four visits was 50% across 51 *Countdown* countries since 2000.
- At childbirth:** Nearly 42% of the maternal deaths, a third of the stillbirths<sup>12</sup> and 23% of newborn deaths happen during childbirth. Safe delivery practices, access to skilled attendants and emergency obstetric and neonatal care, and early initiation of breastfeeding can help prevent these deaths. Two-thirds of *Countdown* countries had coverage levels of less than 5% for the proportion of births by caesarean section, indicative of poor availability of emergency obstetric and newborn care.

- After childbirth:** Bleeding and infections after childbirth account for a high proportion of maternal deaths, and about 3 million babies die in the first week of their life.<sup>13</sup> However, there is very little data about the coverage of services in the postnatal period. Only 45% of *Countdown* countries had any information on postnatal care for women, and only 1% had information on postnatal care for newborns.
- During infancy and childhood:** While coverage of immunization has improved, that of exclusive breastfeeding lags behind. Almost a third of the 52 *Countdown* countries have improved exclusive breastfeeding rates by 20% or more since 2000.

### Some terms explained

Figure 3 - Pregnancy, childbirth and newborn stages



Source: Narayanan, I., et al (2004) *The Components of Essential Newborn Care, BASICS II*: Virginia [www.basics.org/documents/pdf/components\\_of\\_ENC\\_paper.pdf](http://www.basics.org/documents/pdf/components_of_ENC_paper.pdf)

The average coverage of exclusive breastfeeding across countries, however, is still only 34%.

- **Serious childhood illnesses:** Childhood illnesses such as pneumonia, diarrhea and malaria require immediate attention and access to 24-hour health services. There has been some progress, for example in treating malaria, but more needs to be done.

## Gaps in the home-to-hospital continuum

**S**aving lives depends not only on high coverage but also on the quality of care delivered throughout the continuum.

### *Health worker shortages severely weaken the continuum of care*

To deliver essential health services, a minimum of 23 midwives, nurses and doctors are needed per 10,000 people. Only 29% of Countdown countries now meet this requirement. Efforts to train, recruit and retain health-care workers in priority areas are crucial (see Knowledge Summary 6) across primary, secondary and tertiary levels of care.

### *Quality issues and supply shortages make care ineffective*

Quality of care (see Knowledge Summary 7) is adversely affected, not only by health worker shortages, but also by poor infrastructure and inadequate supplies of medicines, medical products and equipment. Locally

produced commodities and stronger distribution systems are key interventions to overcome these bottlenecks (see Knowledge Summary 5).

### *Gender inequities, poverty and lack of education affect women's health*

Coverage rates are lowest among women and children from the poorest families, who face the greatest health risks (see Knowledge Summary 9). People's demand for care can be adversely affected by factors such as: the cost of health care borne through out-of-pocket payments; local beliefs; and knowledge and misperceptions about the health system. To improve health outcomes, educational attainment must be increased,<sup>14</sup> community-level strategies promoted, and changes in care-seeking behavior encouraged.

## Conclusion

**T**he Global Strategy for Women's and Children's Health emphasizes the importance of using effective interventions to strengthen the continuum of care. However, the task of overcoming the high burden of maternal and newborn deaths is hindered by inequitable coverage of services along the continuum (see Knowledge Summary 1). We know which RMNCH interventions are important (see Knowledge Summary 4). A number of established and new ways to help scale-up services, improve service delivery and encourage health care uptake amongst women and children are available. Governments, donors, business communities and global initiatives must now work together to ensure that MDGs 4 and 5 are realized.

## Useful resources

- Countdown to 2015 Decade Report (2000-2010): Taking stock of maternal, newborn and child survival [www.Countdown2015mnch.org/documents/2010report/CountdownReportAndProfiles.pdf](http://www.Countdown2015mnch.org/documents/2010report/CountdownReportAndProfiles.pdf)
- Opportunities for Africa's newborns: Practical data, policy and programmatic support for newborn care in Africa [www.who.int/pmnch/media/publications/africannewborns/en/index.html](http://www.who.int/pmnch/media/publications/africannewborns/en/index.html)
- WHO (2005) The World Health Report 2005 - Make every mother and child count [www.who.int/whr/2005/en/index.html](http://www.who.int/whr/2005/en/index.html)
- Baby-Friendly Hospital Initiative [www.who.int/nutrition/publications/infantfeeding/9789241594950/en/index.html](http://www.who.int/nutrition/publications/infantfeeding/9789241594950/en/index.html)
- WHO recommended interventions for improving Maternal and Newborn Health [http://whqlibdoc.who.int/hq/2007/WHO\\_MPS\\_07.05\\_eng.pdf](http://whqlibdoc.who.int/hq/2007/WHO_MPS_07.05_eng.pdf)

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