WOMEN'S AND CHILDREN'S HEALTH
KNOWLEDGE HUB

COMPASS

POLICY BRIEF JUNE 2011

Community-based care at childbirth – can it safely extend coverage in high mortality settings?

Case-studies in Papua New Guinea, Solomon Islands, Indonesia, Lao PDR

Chris Morgan*[1], Pilly Mapira[2], Chris Hagarty[1], Jenny Kerrison[3], Louise Sampson[4], Anna Bauze[1]

[1] Centre for International Health, Burnet Institute, Melbourne, Australia; [2] Papua New Guinea Country Office, Burnet Institute, Port Moresby, PNG; [3] Independent consultant; [4] Laos Country Office, Save the Children Australia, Vientiane, Lao PDR

Key Messages

- Community care for newborns is well-established, and should include treatment of newborn sepsis for best effect
- Community care for maternal survival is proven feasible, including prevention of post-partum haemorrhage
- Home visits can be provided by trained volunteers or community-based staff but are rarely scaled up in high-mortality settings
- Community care packages could reduce newborn and maternal deaths by 30%
- Community care should be introduced in concert with health system strengthening aiming for safe delivery, as a secondary support for mothers who continue to deliver at home
- The risks involved may be managed if introduction is done in a carefully measured fashion, perhaps though a district-wide health services delivery trial

Background

Several decades of experience reveal settings in the Pacific and south-east Asia where maternal mortality remains appallingly high, home births persist, and standard strategies for maternal and newborn survival show slow progress. New evidence (collated in a Compass Working Paper) on interventions and service delivery from South Asian countries facing similar obstacles, offers hope for such places. We studied potential changes in policy and practices needed to extend coverage of new maternal and newborn interventions to un-reached populations in four countries.

Study Methods

We analysed policy and practices relating to child-birth care, community-based services, and peripheral health cadres (formal and informal) in four sites characterised by high rates of maternal mortality and home birth and then compared this with published and grey literature.

Findings

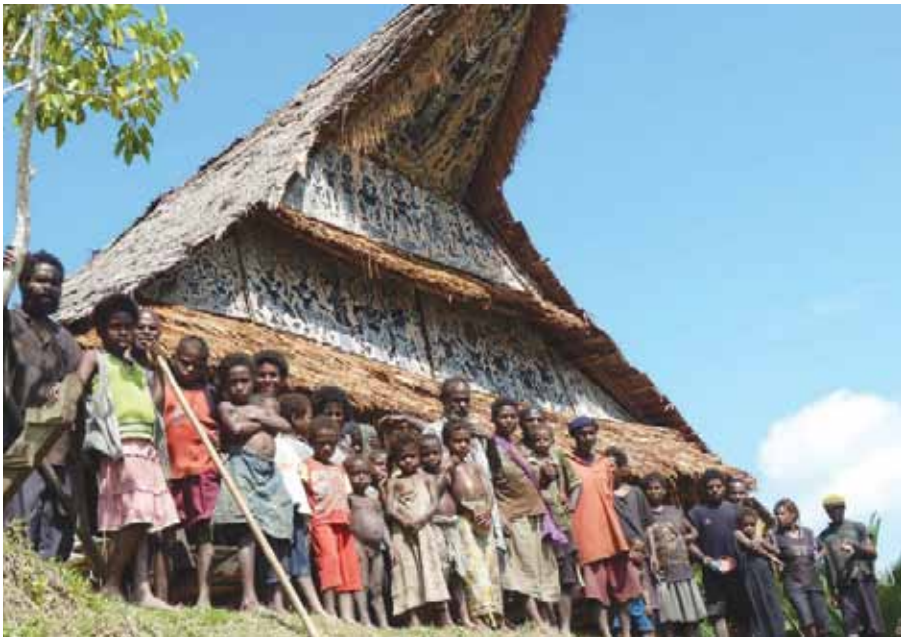
Applicable evidence varies in quality and is found in a mix of efficacy and effectiveness research methodologies. Some settings show potential for rapid scale-up of facility-based childbirth, but in the most adverse settings, it will take many years before that is available to for all women.

Interventions that could be delivered at community-level in these difficult places include:

- Established packages for postnatal **newborn care**;
- Community **mobilisation**, facilitated **referral**, distribution of **contraceptives**;
- **Oxytocics** from trained workers or self-administered by mothers;
- Distribution of **clean delivery kits** and provision of **antibiotics** by trained workers;
- **Pre-filled injection devices** for vaccination or oxytocics.

The analysis of the four sites, and the potential for greater application of these interventions, is tabled below.
Additional discussion on the international evidence for community care at childbirth is provided at the end of this paper.

Papua New Guinea MMR 733 (DHS 2006), or 250 (110-560, UN modelled estimates 2010)	Rural majority with remote communities with high mortality, very high home-birth rates, and run-down PHC facilities, but government commitment to their rehabilitation. Approximately 50% of care is by non-state (church) providers. NGO community health volunteers distribute antibiotics or antimalarials, and often attend births but with minimal support.	Expanded community-based child-birth care through a mix of paid community staff and re-trained existing village health volunteers, in synergy with rural health system and referral strengthening. Community-based family-planning services can be strengthened
Solomon Islands MMR 220 (UNICEF 2004) or 100 (44-240, UN modelled estimates 2010)	Most rural communities with access to government PHC and home-birth rates of <15%, small role for community health volunteers in child-birth. Some isolated remote communities with more difficult access and higher mortality.	Strengthening of government PHC system, with better utilisation of new technologies, and community mobilisation for referral strengthening
Lao PDR MMR 405 (NPHC 2005) or 580 (320-1000, UN modelled estimates 2010)	Rural majority with remote locations with <10% antenatal care and >95% home-birth rates. Some active traditional birth attendants and health volunteers, with strong government controls on their activity. Examples of excellence include comprehensive PHC by a NGO-government partnership, and community-based provision of contraception	Expanded community-based child-birth care by re-trained community volunteers – if integrated in government system and linked to good PHC programs where they exist. Rural health strengthening, including community midwife training. Community-based family-planning services can be expanded from current pilots
Indonesia – East Nusa Tenggara (NTT) Province MMR 306 (provincial, MOH 2007) or 240 (140-380, UN estimates 2010)	Poorer province with high home birth rate (77%). National context of government community midwife programs and PHC structures, affected by decentralisation. Several examples of large scale community-based health programs, including mobilisation for obstetric emergency identification and referral. One large trial of self-administered misoprostol in a different province.	Individualised responses with district health offices offer potential for expansion of community care. Needs to integrate volunteer cadres in education roles with peripheral government health system. Active bilateral donors already working with government for rural health system strengthening.



Riverside communities may only have water access,
East Sepik Province, PNG / Chris Morgan

Mother and Newborn, Kambot Village,
East Sepik Province, PNG / Chris Morgan

Models of community mobilisation and service delivery by professional or trained lay health workers have been well demonstrated for community-based newborn care and home visits for newborn care are now recommended, commencing as soon as possible after birth[1]. Community care for mothers at childbirth is less well researched, but a number of controlled trials and systematic reviews[2] show clear evidence of impact on perinatal and maternal mortality, if community care such as distribution of clean birth kits or the provision of misoprostol that can be self-administered by mothers (although oxytocin is preferable if a health worker can inject it) for the prevention or treament of post-partum haemorrhage. Antibiotics for newborns in the home clearly reduce deaths, and potentially can for postpartum infection in mothers.

Most trials show no adverse effect on parallel efforts to increase facilty-based childbirth. Various models of mortality reduction suggest that both newborn and maternal deaths could be reduced by 30% with good coverage by community care. These interventions are not without risk, reinforcing the need for careful supervision and monitoring, however in high-mortality settings, the benefits are likely to outweigh the risks. The evidence base is summarised in a Compass working paper[3].

Considerations for policy-makers and health managers

Community care has powerful potential to prevent or treat the direct causes of maternal/newborn death. All sites studied need health system strengthening but **at least two sites may benefit from additional expansion of community-based child-birth and perinatal care** (see Table).

Success is more likely if community-based care:

- Is within an established comprehensive primary health care program;
- Synchronises community care with local health system improvements;
- Leverages post-natal care off community-based birth-dose vaccination.

In some high-mortality settings it may be possible to support safer child-birth and perinatal **care in the home**, as an interim measure, without compromising parallel efforts to increase facility-based child-birth. **Implementation research methods** can help trial new models of service delivery, providing immediate benefit across a whole district, as well as better detection of early impact and/or unforeseen adverse outcomes.

A tailored approach to high-mortality sites can provide an alternative where standard approaches fail to provide universal coverage. Maternal and newborn deaths in intractable settings may be reduced by significant amounts, of the order of 30%, through a “two-track” approach that maximises coverage with new community-based interventions synchronised with other health system strengthening. Of the sites we studied, the need for expansion of community-based perinatal care seems most urgent in rural Papua New Guinea and Laos.

WOMEN'S AND CHILDREN'S HEALTH KNOWLEDGE HUB

POLICY BRIEF

More information: Chris Morgan, cmorgan@burnet.edu.au, or www.wchknowledgehub.com.au

References

[1] Gogia S., Sachdev H. Home visits by community health workers to prevent neonatal deaths in developing countries: a systematic review. Bull World Health Organ 2010; 88: 658–666B

[2] Lassi Z., Haider B., and Bhutta Z. Community-Based Intervention Packages for Preventing Maternal Morbidity and Mortality and Improving Neonatal Outcomes, International Initiative for Impact Evaluation, Synthetic Review 005, 2010

[3] Morgan C. Community-based care at childbirth, Compass Working Paper March 2010 (updated in 2011).

A strategic partnerships initiative funded by the Australian Agency for International Development