Medical Xpress

Malawi trial saves newborn lives

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A five-year programme that mobilised communities to improve the quality of care for mothers and newborns reduced newborn mortality by 30 percent and saved at least 1,000 newborn lives in rural Malawi.

The study, carried out in three rural districts in Malawi with a combined population of more than two million, was designed to test whether a combined effort to increase both community awareness and strategies for perinatal care and to improve the quality of healthcare would be more effective than either one alone.

The study showed that the combination worked best.

"The result supports intuition, but it was important to demonstrate it scientifically," says Pierre Barker, M.D., a Senior Vice President of the US-based Institute for Healthcare Improvement and the lead partner in the programme.

Results of the trial are published in International Health and in the Health Foundation's "Improving maternal and newborn health in Malawi" report to Malawi health officials.

The programme is funded by The Health Foundation, working with a consortium of partners from both the UK and the US. These partners provided technical support for both community and quality improvement work.

The Health Foundation supported the programme for a five-year period

to obtain meaningful results. After discussions with the Malawi Ministry of Health, the Foundation agreed to focus the work in three poor rural districts to align with the Road Map for the accelerated reduction of maternal and neonatal morbidity and mortality in Malawi.

A local non-governmental organisation was created and its staff trained to carry out the trial. The new organisation, known as MaiKhanda, which means "mother-baby" in local Chichewa, identified problem areas and worked out solutions to improve maternal and newborn care at both community and health facility level with the support of the consortium partners. This process became known as the "MaiKhanda approach."

Several studies in Asia have shown how community efforts can reduce neonatal deaths, and these served as models. Even rarer, however, are rigorous studies on the impact of quality improvement on healthcare in low-income countries.

A way to help poor countries meet UN MDG 4

Malawi has one of the highest maternal and newborn mortality rates in the world. The study's findings could show Malawi and other low-income countries, many in sub-Saharan Africa, how to reduce newborn mortality and meet the United Nation's Millennium Development Goal on child mortality (MDG 4).

"Since we know that many African nations are at risk for not meeting the MDGs on maternal and child health, we have to rethink what is being done and help them develop programmes that work," explains Stephen Thornton, Chief Executive of the Health Foundation and a key architect of the programme.

The MaiKhanda approach - the combinations of two interventions working simultaneously - showed a 22 percent reduction in neonatal

mortality. In the last 15 months of the study period, when the programme was fully operating, a 30 percent reduction in newborn mortality was reported.

Other findings include a 16 percent reduction in perinatal (the period immediately before and after birth) mortality in areas that received only the community-based intervention, and a 30 percent reduction in late neonatal mortality in areas where interventions were made to improve quality of care in clinics and hospitals.

Evaluating the project proved challenging. Volunteers collected birth and mortality data from 1,900 villages. In total, about 320,000 people, about 10 percent of the population in the three districts, were included in the study to determine the effectiveness of the combined approach.

"Our evaluation adds valuable evidence to the debate over whether it is better to intervene in the facility or in the community," says Tim Colbourn, an epidemiologist at University College London and lead author of the International Health article. "The results show it is better to focus on both and not abandon one in favour of the other."

The programme had no measureable impact on maternal mortality. One reason may be that Malawi health policy changed during the trial to require women to deliver in a health facility, not at home with a traditional birth attendant.

When the trial started, around 55 percent of women delivered their babies in the community. Since then the number of women delivering in a facility that provides obstetric care has increased dramatically, placing a major additional burden on already-stretched clinic staff.

"Our best guess is that these facilities reached a tipping point and became overwhelmed," says Dr. Barker. "Now only 25 percent of

mothers deliver in the community."

Working on both supply and demand

The project tackled both the demand for services and the supply of quality care. On the demand side, women were encouraged to make decisions that would help ensure regular check ups during pregnancy and speedy access to the clinics and hospitals around the time of birth, while on the supply side the project worked to provide women and newborns with quality care once they got to a health facility.

MaiKhanda's unique combined approach was able to tackle all of the "three delays" that result in high rates of maternal and newborn deaths in many poor nations: delay in seeking care; delay in reaching a medical facility; and delay in receiving excellent care once at the health facility.

Nine hospitals and 29 health centers that provide basic emergency obstetric care were included in the quality improvement programmes of MaiKhanda.

By teaching health staff and administrators how to improve the quality of data they were collecting and feeding back reports quickly to clinics, front line health staff could, for the first time, track their own performance and identify problem areas.

Local women's groups play key role

As part of the trial, more than 700 women's groups, each with 20-30 members, were formed with MaiKhanda support. "These groups met monthly, guided by a trained volunteer, to discuss health issues and problems encountered during pregnancy and childbirth," says Ros Davies, Chief Executive of Women and Children First, a UK

organisation that provided support for the community part of the trial.

"The women in the groups identify problems themselves and come up with ideas for how to solve them," reports Martin Msukwa, Executive Director of MaiKhanda. "We found that needs and solutions varied."

With guidance from MaiKhanda, the groups identified a variety of solutions, including:

- Improving nutrition, learning how to start and maintain vegetable gardens.
- Securing transportation to hospitals and clinics, some groups partnered with a Dutch group to acquire bicycle ambulances.
- Setting up health education programmes.
- Counselling for people living with HIV.

Some mid-programme changes

Changes were made midway to strengthen MaiKhanda.

In the hospitals, health workers were trained to address the three leading causes of neonatal death: asphyxia, sepsis (infection) and prematurity.

Because staff did not know how to deal with asphyxia, weekly asphyxia training drills were introduced, infection prevention protocols were established, and to keep premature babies warm, new mothers were trained in kangaroo mother care – holding their infants skin-to-skin.

At the community level, 365 safe motherhood committees or "task forces" were created. Each task force was comprised of about 10 elected members, five female and five male, each representing a village in the area. Task force members worked closely with a Ministry of Health community worker to identify pregnant women, especially those at high

risk, and encourage them to seek prenatal check-ups and go to a health facility for delivery, then for a postnatal check after seven days.

"The task forces bridge the gap between the community and the facilities," says Dr. Barker. "This is an exciting innovation. We haven't seen anything like this before – communities are now able to support pregnant mothers and support safer practices to prevent maternal and newborn deaths."

A number of challenges

This project faced many obstacles, among them were:

- When the programme started, no qualified and experienced local group existed to work with the consortium partners. The new group, MaiKhanda, had to be built and staffed from scratch and its members trained for community mobilisation, quality improvement and evaluation.
- Because of cultural taboos about sex and pregnancy, the programme had trouble reaching the young women who might benefit most, especially those who were newly pregnant or had never had a child.
- Quality improvement efforts were hampered by staff shortages and high turnover rates at health facilities.
- Staff worked in under resourced health facilities where essential drugs and other provisions were usually in short supply.

Planning for the future

Though the formal trial has ended, The Health Foundation is funding the programme for three more years to help MaiKhanda "embed" the approach into the Malawi health system, and to strengthen the

partnership that has been developed with Malawi's Ministry of Health.

Over the next three years, MaiKhanda intends to establish itself firmly as a leading advocate for maternal and neonatal health in Malawi and to work closely with the officials and staff at the Ministry of Health as it scales up the programme.

"We have learned a lot over the last five years," says Mr. Msukwa. "Now we have to focus on what worked, improving things that didn't work, and sharing what we have learned so others don't make the same mistakes. We are in a good place, and if we do well, the sky's the limit."

Provided by Hoffman & Hoffman Worldwide

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