



A mother takes care of her premature baby at Mulago Specialised Women and Neonatal Hospital last year. The multi-component intervention to improve maternal infection outcomes report looks to find ways to prevent the increased cost of care associated with severe infections. PHOTO/TONNY ABET

# 'Hand washing, antibiotics reduce maternal deaths'

The report's results showed the intervention reduced deaths and severe illness from infection among women giving birth by 32 percent.

BY TONNY ABET

**A** new report for an interventional study in 59 health facilities in Uganda and Malawi, shows a 32 percent reduction in infection-related maternal deaths and severe complications.

In the report, titled "The Multi-component Intervention to Improve Maternal Infection Outcomes," researchers aimed to address over 1,000 maternal deaths reported annually by health facilities in Uganda and also prevent the increased cost of care associated with severe infections.

Dr Catriona Waitt, the lead investigator from the University of Liverpool in the United Kingdom, and affiliated with Uganda's Infectious Diseases Institute, cited three intervention areas that powered the breakthrough achievement.

## Investigation areas

She said the first and cheapest intervention was plugging gaps in hand hygiene among medical workers to prevent the spread of infections to mothers during birth or medical procedures.

"Hand washing, hand hygiene at every moment. We laugh about this sometimes because it is such a simple thing," Dr Waitt said.

"You can wash your hands anywhere. You don't need fancy or expensive equipment. You just need to remember to do it where you have access to sinks, water and soap. Washing your hands at

every opportunity can stop infection," she added.

The second area was the appropriate use of antibiotics for preventing and treating common maternal infections, combined with proper preparation of the mother's skin before caesarean section and private parts before normal birth, using an antiseptic solutions.

"When a mother is about to give birth or heading to the operating room for a caesarean section, we need to clean the skin very carefully," Dr Waitt explained.

"Use proper antiseptic procedures and stick to the guidelines that have been there long before we came along."

The third intervention involved early detection and rapid response to sepsis through training staff to quickly recognise warning signs in mothers and immediately initiate emergency treatment protocols or refer cases when necessary.

"They (health workers) have nice, colourful charts that nurses and midwives can use to immediately detect if ever a woman is starting to become unwell, if her blood pressure is dropping or her pulse rate is increasing. These charts show the signs when something is going wrong," she said.

## SOME OF THE PARTICIPATING HOSPITALS

- Mukono General Hospital
- Arua Regional Referral Hospital (RRH)
- Jinja RRH
- Kawolo Hospital
- Adjumani Hospital
- Nebbi Hospital
- Bugiri Hospital
- Koboko Hospital
- Kamuli Hospital
- Yumbe HC4
- Moyo Hospital
- Iganga Hospital
- Mbale RRH
- Luwero Hospital
- Nakaseke Hospital
- Kiboga Hospital
- Masindi Hospital
- Kiryandongo Hospital
- Lira RRH
- Soroti RRH
- Gulu RRH
- Fortportal RRH
- Kyejonojo General Hospital
- Mubende RRH
- Kalisizo General Hospital
- Gombe General Hospital
- Tororo General Hospital
- Pallisa General Hospital
- Katakwi General Hospital

The report, published in the scientific journal, *The New England Journal of Medicine*, says the implementation strategies in this trial were developed to "promote behaviour change."

The key components included hospital leadership engagement, programme champions who were selected from existing facility staff, for multidisciplinary training with comprehensive training materials.

The researchers also provided implementation tools like FAST-M (fluids, antibiotics, source identification and control, assessment of the need for transfer to a higher level of care, and monitoring of the woman and baby).

Performance feedback was consistently provided through dashboards showing local implementation data and at quarterly site visits to reveal areas that need strengthening and to help the medical workers do better.

Dr Waitt said, "We're so excited that the results showed the intervention reduced the deaths and severe illness from infection by 32 percent, so by a third. This is massive," she said.

## The scope

The trial took place in 29 sites in Uganda and 30 in Malawi.

The report says a total of 431,394 women had live births during the trial, with 190,500 occurring in the baseline phase and 240,894 in the intervention phase.

In usual care (baseline phase), infection-related maternal death, infection-related near miss events, or severe infection-related illness registered were 2,208 (1.9 percent) out of 116,596 mothers handled.

While in the intervention phase, infection-related maternal death, infection-related near miss event, or severe infection-related illness registered 1,752 (1.4 percent) cases of the 124,298 mothers handled.

For Uganda, the usual care (control group) had 1,222 (2.7 percent) cases of undesirable events out of 45,981 mothers handled.

While there were 1,126 (1.8 percent) cases with undesirable events (deaths or severe illness due to infection) out of 60,935 mothers handled under the intervention arm.

## New audits for health workers

Dr Richard Mugahi, the commissioner for maternal and newborn health at the Ministry of Health, who was also a co-investigator, said the ministry will start auditing deaths of patients caused by sepsis, a deadly condition linked to hospital infections.

Sepsis is a life-threatening medical emergency caused by the body's extreme, dysfunctional response to an infection, which damages its own tissues and organs.

Scientists say the infections can be transferred from health workers to patients through poor hand hygiene, improper medical procedures, and the use of unsterile surgical tools.

"If a mother who came for delivery gets sepsis, we will audit the case. Where did the sepsis come from? Some advanced countries are already doing this," he said.

"If a mother who gets sepsis survives death, she is a near miss survivor because the likelihood of a fatal outcome is very high. We shall ensure all the required inputs, like sanitisers will be available. Also, ensuring the prevention of sepsis is viewed as an active process," he added.