

Maternal danger signs, why care?

Peter B. Gichangi^{1,2}

¹ Technical University of Mombasa, Mombasa, Kenya.

² Department of Public Health and Primary Care, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium.

Maternal and neonatal adverse outcomes remain a global problem. Fortunately, they can be prevented through individual, community, and health care providers' actions (1,2). Knowledge of maternal danger signs during pregnancy is critical in the pathway for the prevention of maternal and neonatal morbidity and mortality since it can influence the timely seeking of healthcare, thereby addressing the first delay (3,4), improving birth preparedness/complication readiness (5) and

antenatal care attendance (1), and use of delivery services (6).

Different studies have used various terminologies to define maternal danger signs, including prolonged labor, vaginal bleeding, fever, convulsions/fits, breech position, swollen limbs, faintness, breathlessness, tiredness, headache, dizziness, and baby not moving. Maternal danger signs during pregnancy, intrapartum and postpartum are listed in the box.

Danger signs during pregnancy (7)

- Vaginal bleeding
- Convulsions/fits
- Severe headaches with blurred vision
- Fever and too weak to get out of bed
- Severe abdominal pain
- Fast or difficult breathing
- Fever
- Abdominal pain
- Feels ill
- Swelling of fingers, face, and legs

Intrapartum danger signs (8)

- Severe vaginal bleeding
- Convulsions
- Severe headache
- Blurred vision
- Severe abdominal pain
- High fever
- Loss of consciousness

- Labor lasting longer than 12 hours
- Accelerated/reduced fetal movement
- Swelling of fingers, face, and legs

Postnatal danger signs (7)

- Increased vaginal bleeding
- Fits
- Fast or difficult breathing
- Fever and too weak to get out of bed
- Severe headaches with blurred vision
- Calf pain, redness, or swelling
- Shortness of breath or chest pain
- Swollen, red, or tender breasts or nipples
- Problems urinating or leaking
- Increased pain or infection in the perineum
- Infection in the area of the wound (redness, swelling, pain, or pus in wound site)
- Smelly vaginal discharge
- Severe depression or suicidal behavior (ideas, plan, or attempt)

Knowledge of maternal danger signs is classified as non-existent if no danger signs are spontaneously mentioned, poor if less than three, and good if more than three are mentioned (4,9). The prevalence of maternal danger signs knowledge ranges from 25% (10) to 84.6% in Rwanda (5). Smeele et al.'s (5) study among pregnant women in a hospital in Rwanda found that 84.6%, 77.4%, and 82.3% of the women could mention at least one key danger sign during pregnancy, labor, and postpartum, respectively. However, only 6.6% could mention three or more key danger signs during all three periods (5). Tamang et al.'s (11) study in Bhutan among women attending antenatal care (ANC) found that 79.4% of the women had heard about danger signs. Nyongesa et al.'s (10) study among women identified from households who had a birth 12 months prior reported a prevalence of

25%. In contrast, Orwa et al.'s (4) study, including women from the community who had a delivery in the past two years, found that 60% did not know any danger sign during pregnancy, childbirth, or postpartum. Velle et al.'s (12) study, including women attending antenatal care in Papua New Guinea, found a prevalence of 60.2% recall of at least one danger sign. Different populations included in studies and definitions yield different prevalence, thus needing caution when interpreting data on danger signs.

The third Sustainable Development Goal (SDG) aims to reduce preventable maternal deaths to <70 per 100,000 live births and reduce neonatal mortality rates to 12 per 1000 live births (13). Interventions via health workers (6,12), effects of information, education, and communication (14), among others, to address

knowledge of maternal danger signs will go a long way in contributing to the achievement of SDG 3 through improved birth preparedness (4), taking appropriate action during emergencies (11). This will require more women to know three or more danger signs which has been shown to improve maternal and neonatal outcomes (4, 9). Interventions are also required to translate recall of danger signs to appropriate actions when women are faced with emergencies (11). Dangura's (7) study of women in the community found that only 45.5% could mention at least two danger signs during childbirth and 29.1% during the postpartum period. In Kenya, only 21%, 13.9%, and 13.7% could mention more than three danger signs during pregnancy, childbirth, and postpartum, respectively (4).

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