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TRACE: A New Way to Measure Quality of Maternal Health Care

To evaluate the quality of maternal clinical care, Immpact, a global research initiative, developed an innovative method, called TRACE, to "trace adverse and favourable events in pregnancy care." It is based on the confidential enquiry technique, whereby expert panels of health care professionals assess the quality of health care provided to clients in an adverse event, such as a maternal death.

This approach goes beyond the traditional confidential enquiry technique in several ways. First, quality of care is assessed in cases of both death and near misses (cases of life-threatening complications during pregnancy, delivery, or postpartum). Second, it identifies instances of good as well as substandard care, as opposed to assessing only substandard care as traditional enquiry panels do. Finally, the TRACE tool can be used to assess quality of care provided in community-based programmes where no medical records or case notes are kept, such as in the village midwife programme in Indonesia. This method provides a qualitative explanation of why a maternal death or near miss occurs, and can supplement quantitative assessments. The approach can be used to generate recommendations for clinical practice in developing countries.[1]

Findings

Ghana

The delivery-fee-exemption policy promoted earlier arrival of pregnant women at hospitals.

In a review of 20 cases of maternal death in district hospitals in the Volta and Central regions of Ghana, TRACE assessed clinical care before and after the delivery-fee-exemption policy was in place. The policy may have led to more women attending hospital earlier and in less serious condition than before the policy was instituted. However, the quality of clinical care provided, though not different from what existed before the policy was introduced, was poor. Findings revealed many adverse instances of substandard care, especially in emergencies—some caesarean deliveries appeared to be conducted in haste, with poor patient stabilisation and for doubtful indications; inappropriate and ineffective drugs were sometimes administered; and efforts to resuscitate fell short. Professional health care appeared to be substandard, and was particularly poor when provided by physicians, both before and after the policy change.

Emergency obstetric care facilities in Ghana were adequate.

TRACE also identified good access and referral systems and good facilities for comprehensive emergency obstetric care. Drugs, equipment, and basic clinical procedures, such as blood transfusions and laboratory testing, were available. Midwives and nurses were available to patients who were admitted.

Indonesia

Coverage is vital to the village midwife programme and could be improved.

In Indonesia, TRACE was adapted at the village level to review emergency obstetric care. Because medical records and case notes were not available, information was collected via interviews with women, health care providers, and community members. TRACE revealed key shortcomings of the programme: When complications occurred, officially assigned village midwives were not usually the first choice of women and families for delivery care. Availability was an issue. In some locations midwives were responsible for up to five villages. And acceptability posed another hurdle. Many village midwives were perceived as too young, expensive, or unfriendly. In these situations, emergency care was given by other midwives, available by chance or circumstance, or by traditional birth attendants.

> "There is a village midwife in this village but the patient did not ask her for help as she perceived her as too young. Help was requested from a more senior midwife who lived further away."
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> *— From a TRACE panel assessment of a near miss from haemorrhage*

Village midwives play an important role, but need training to manage emergencies.

Village midwives made good diagnoses and appropriate referrals, but their clinical management of emergencies was substandard, and hindered by inadequate knowledge and skills. Village midwives delivering in homes were constrained by limitations of the physical environment, including poor light, overcrowding, and difficulties transporting necessary drugs and supplies. They were also pressured by families to follow traditional approaches to childbirth. When the family was present, the village midwives suffered from a lack of autonomy in decision-making.

The health system also contributes to delays in treatment.

TRACE findings revealed that the health insurance system, targeted at the poorest households, is not well understood. Families were not aware of the benefits of health insurance that would allow costs of care to be waived or significantly reduced. In addition, when women arrived at hospitals, blood supplies for transfusions were in short supply or deficient, and blood had to be brought from elsewhere. The referral system was also confusing and introduced delays in accessing care.

Communities can help.

Although communities without funding or transport schemes were not prepared to handle emergencies, they actively mobilised resources when emergencies occurred.

Recommendations

- In Ghana, clinical delivery care in facilities is of poor quality, and the professionalism and competencies of health providers, especially doctors in charge of maternity care in hospitals, need review and improvement.
- In Ghana, the programmes for health service quality assurance need to be reviewed and enhanced to adequately equip health providers in hospitals to effectively manage delivery complications.
- In Indonesia, village midwives should work in partnership with more established providers, both formal and informal, in villages. They should be responsible for fewer villages and be encouraged to live in, or live centrally to, their village(s) of responsibility.
- In Indonesia, training should focus on improving the knowledge, skills, and competency to manage obstetric emergencies, as well as effective communication with patients, families, and communities.
- In Indonesia, community support mechanisms should be established and/or supported by the village midwife to improve community preparedness for obstetric emergencies.

Reference

[1] Julia Hussein, “Improving the Use of Confidential Enquiries into Maternal Deaths in Developing Countries,” *Bulletin of the World Health Organization* 85, no. 1 (2007): 68-9.