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Twenty-five years after its publication, innovative solutions to the three delays model are essential

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In southwest Ethiopia, we hypothesized that the Three Delays Model, describing three barriers to maternal health care that result in maternal mortality, is still relevant today.¹ During a presentation on April 22, 2019 by the primary author at Mizan-Tepi University Teaching Hospital (MTUTH) in Bench Maji Zone, which explored the context of low cesarean birth rates in Ethiopia, all attendees were asked questions about fistula and cesarean birth. A total of 12 attendees (1 Masters of Public Health professional, 1 nurse, 1 general surgeon, 9 general practitioners) participated. The exercise was deemed to be exempt from human subjects research by the Colorado Multiple Institutional Review Board.

Results of the informal survey are included in Table 1, which found that urogenital fistula was not common (seen “once per year”, 75%), but when it was observed, it was attributed to obstructed labor (92%). When fistula occurred in the setting of surgery, which is a situation that respondents felt was not common (42%), equal numbers of participants attributed the fistula to cesarean section (n=3) versus hysterectomy (n=3). The majority (58%) felt that women in the region do not have sufficient access to cesarean birth; however, they felt that the rate has increased at MTUTH in the past 5 years (92%).

Respondents were asked to develop a solution to the Three Delays, which they agreed (100%) was contributing to fistula and low cesarean birth rates (about 2%) in their region. Free text responses included: needing improved national infrastructure (roads and number of facilities); increasing the number of trained staff; improving equipment and medication

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AUTHOR CONTRIBUTIONS

MM arranged the talk at MTUTH and oversees the relationship between authors. TY, TL, EA, and BT aided with data collection, analysis, and interpretation. MSH designed the survey, delivered the lecture, facilitated data collection, and wrote the brief communication. All authors reviewed and edited the document.

CONFLICTS OF INTEREST

The authors have no conflicts of interest.

supply at all levels of the healthcare system; improving diagnostic modalities; and improving the decision-making of providers regarding cesarean birth. The theme of educating the community regarding facility-based birth, attendance at antenatal care, and empowerment of women to direct their own healthcare decisions and health-seeking behavior was also evident. Providing feedback to referral centers on the appropriateness of referrals, and implementing practical guidelines and protocols were also suggested.

According to our participants, low cesarean birth rates and resultant urogenital fistula in rural southwest Ethiopia are final adverse outcomes resulting from the root cause of an under-developed (national infrastructure), under-resourced, under-staffed, and under-trained healthcare system. The Three Delays Model in maternal healthcare, a conceptual framework produced 25 years ago, is still profoundly relevant in this area. We believe that there is a need for paradigm-shifting solutions to the Three Delays in order to move the delivery of emergency obstetric care forward, both in this region and the wider world.²

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TABLE 1

Results of informal survey collected during a presentation on urogenital fistula and cesarean birth in rural Ethiopia.

Question	Results (n=12),%
How often do you see a woman with urogenital fistula?	
Once per week	1 (8%)
Once per month	0 (0)
Once per year	9 (75)
Never	2 (17)
What do you consider the leading cause of urogenital fistula in your area?	
Obstructed labor	11 (92%)
Poor surgical technique	0 (0)
Missing	1 (8)
If fistula occurs after surgery, do you usually see it after	
Cesarean birth	3 (25%)
Hysterectomy	3 (25)
It does not occur after surgery	5 (42)
Missing	1 (8)
Do you feel that women have appropriate access to cesarean birth in this region?	
Yes	3 (25%)
No	7 (58)
I do not know	2 (17)
Over the past five years, I think our cesarean birth rate has	
Increased	11 (92%)
Decreased	0 (0)
Stayed about the same	0 (0)
Missing	1 (8)
Do you think the Three Delays Model is still relevant to your patients in this region?	
Yes	12 (100%)
No	0 (0)
I do not know	0 (0)