Perceptions and experiences of quality improvement teams and their advisors seeking to improve maternal and neonatal health services before and during COVID-19 in South Africa

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INTRODUCTION

Experts suggest that approximately 60% of maternal deaths and up to 50% of neonatal deaths can be averted[1]. Data modeling from 81 low-and-middle-income countries demonstrated that about 25% of neonatal deaths and stillbirths (2016 - 2020) were avoidable through improved quality pre-and postnatal care for mothers and neonates[2]. Globally, COVID-19 negatively impacted the uptake and provision of maternal and neonatal health (MNH), e.g., a 60% and 100% drop respectively in antenatal care (ANC) and family planning facility visits in Bangladesh[3]. In South Africa (SA), Pattinson and colleagues[4] report a 40% increase in maternal deaths, with a 3% and 10% increase in neonatal mortality and stillbirths, respectively. The uptake of reproductive health services decreased by 17%. Pillay et al[5] found a 3.7% increase in deliveries in public health facilities in SA during March to December 2020. Efforts to maintain and improve the quality of MNH services are critical to halt maternal - and neonatal mortality. We report on an MNH quality improvement (QI) programme, *Mphatlalatsane*, aiming to reduce maternal and neonatal mortality and stillbirth rates in 21 facilities (six primary healthcare clinics, six community health centres (CHCs), six district and three regional hospitals), across four districts in SA. The SA Department of Health leads this multi-partner programme implemented from 2018 - 2022.

AIM

To identify facility-level implementation processes and contexts, including COVID-19, that explain variation in the uptake of *Mphatlalatsane*, and their implications for scale-up.

METHOD

Data collection comprised: three rounds of interviews (May 2021-September 2022) with QI team leaders and members (healthcare workers in intervention facilities); regular debriefings with three QI advisors (technical experts supporting the teams); and a review of available programme documentation. All data were thematically analysed.

RESULTS

The Institute for Healthcare Improvement trained the teams to use the QI model of rapid Plan-Do-Study-Act (PDSA) cycles. Most facilities have a core team, the leader and three or four members, who hold the implementation process, depicted in Figures 1 and 2.

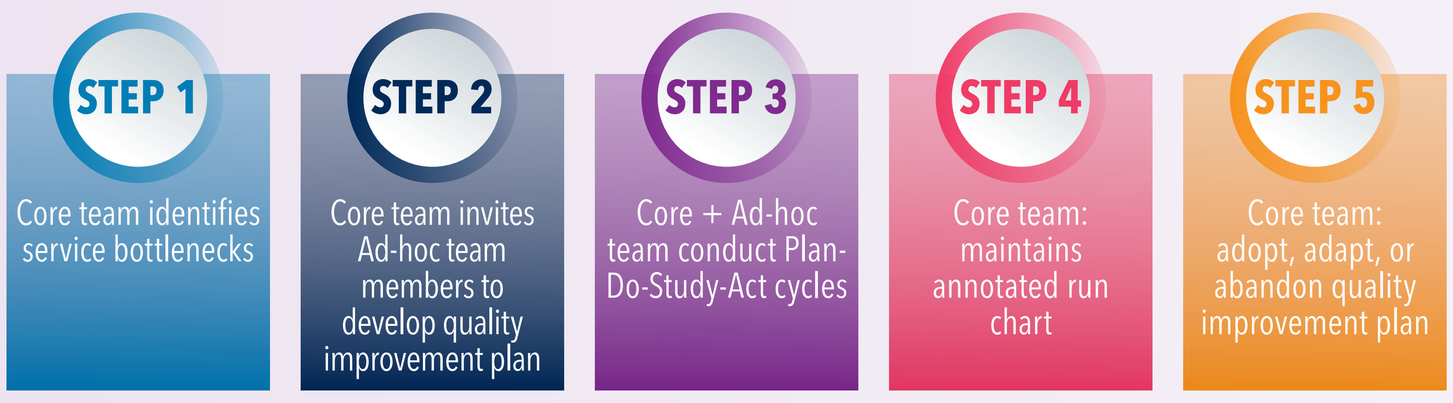

Figure 1. Core and Ad-hoc team functioning

Ad-hoc members are co-opted to implement a specific quality improvement plan (QIP). Uptake of the QI methodology ranged from teams with one adopted QIP and intermittent implementation thereof, to teams with several adopted QIPs, including some QIPs developed amidst COVID-19, and teams that routinely use QI to solve service delivery problems. Though there is better uptake in the clinics and CHCs, with their smaller patient volumes and less complex staffing and service arrangements, the one well-performing regional hospital defies concluding that facility size matters. What, then, explain variation in uptake? The following contextual factors, in order of importance, are shaping the uptake of the QI methodology.

(1) Lead time before COVID-19 In Districts 3 and 4 where the implementation traction was challenging, teams were functional for barely a month after their training when COVID-19 erupted. Teams in Districts 1 and 2 were operational six months before COVID-19 came. Whilst all teams suffered similar COVID-19 trauma and disruptions, a longer lead time before COVID-19 helped teams weather the pandemic better.

(2) X factor *"It* [QI training] *made sense to me. It's still making sense to me. I'm still using all those methods to solve little things in the facility."* (Leader 1, well-performing team). Some leaders enthusiastically embraced the methodology, either because of their values and / or sense of agency, which shaped their intrinsic motivation to use QI methods. The method resonated well with them, and because it makes sense to them, they put more effort into its implementation than leaders with less QI appetite. All the well-performing facilities have leaders who echo the view of Leader 1.

(3) Leadership *"It's like you are coming from another planet* [IHI training] *and dropped into another planet* [facility]." (Leader 2, less well-performing team). Leader 2 was enthusiastic when she returned from the training but struggled to get implementation momentum amongst the staff. Similarly, another leader (less well-performing team) complained that she had to do all the work herself. As depicted in Photo 1, QI is not a *"one-man thing"* (Team member, well-performing team), and requires not only an enthusiastic leader but also one who can harness teamwork.

"QI is not a one man thing." (Team member)

(4) Embedding QI work in standard care *"Isn't it what we are supposed to do?"* (Team leader 3) This was a recurring theme amongst participants from well-performing teams. They approach the QI methodology as enabling them to strengthen service delivery, and not as an add-on to their daily work. In contrast, *Mphatlalatsane* is burdensome to less well-performing teams, and they often cite work pressures as why they struggle to develop and implement QIPs.

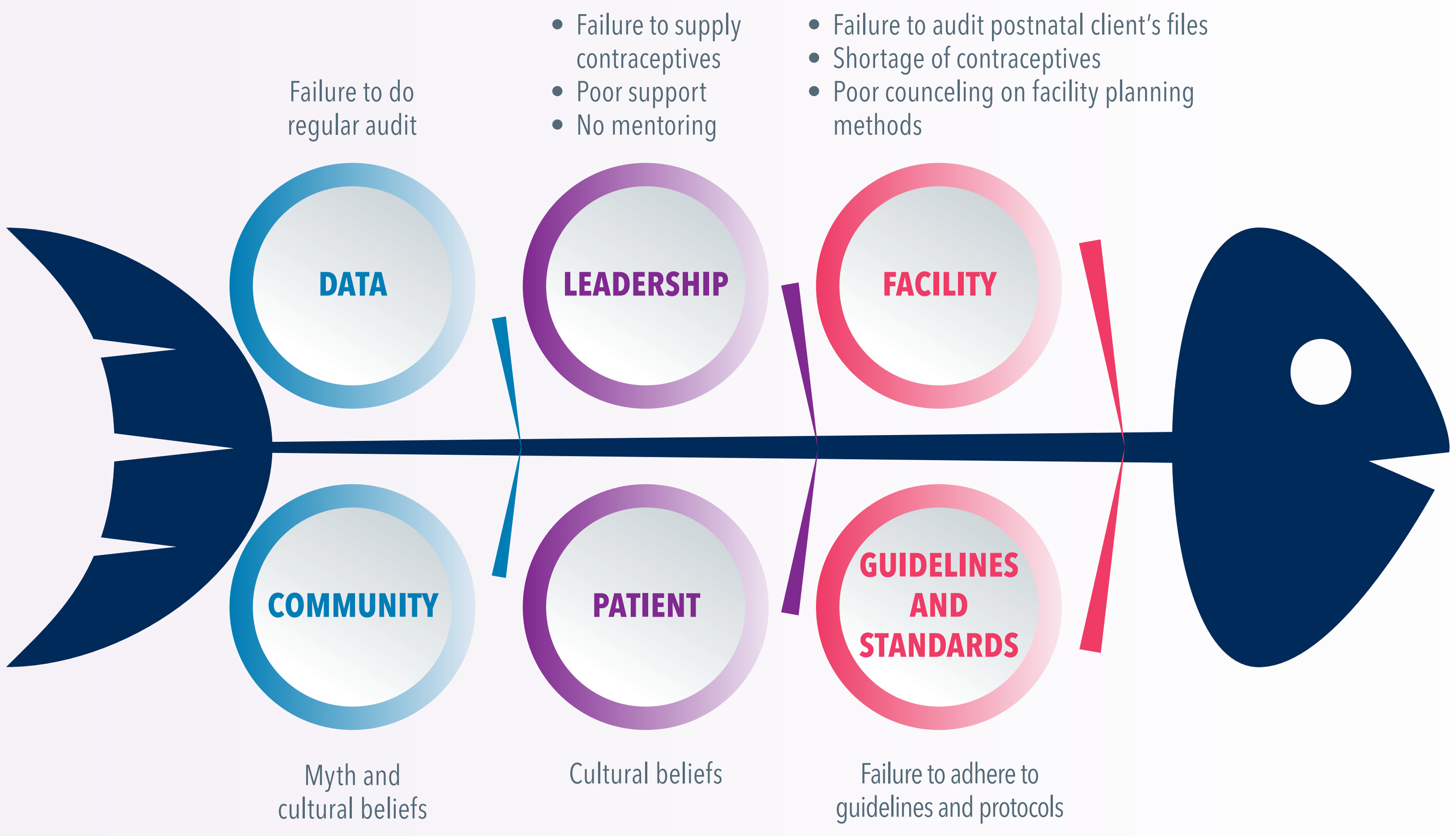

Figure 2. Step 2 - Core + Ad-hoc team's root cause analysis why post-partum family planning fails in their facility

CONCLUSIONS

Taking *Mphatlalatsane* to scale will require identifying team leaders who buy into QI methodology and have the skills to foster teamwork. The programme should be introduced as supporting staff to do what they are supposed to do, and not as external to standard care.

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