

Improving surgical quality in low and middle income countries: Why do some health facilities perform better than others? A

longitudinal, mixed methods study in Tanzania

PROGRAM IN GLOBAL SURGERY
AND SOCIAL CHANGE
Harvard Medical School

SUSTAINABLE

CHANGES IN

SURGICAL CULTURE

AND PRACTUCE

Figure 1. Framework and Theory of Change

EVOLUTION OF ORGANIZATIONAL LEARNING

IMMEDIATE

CHANGES IN

SURGICAL CULTURE

EVOLUTION OF ORGANIZATIONAL CULTURE

AND PRACTICE

Noor Zanial, MSc ; Pritha Chatterjee, MPH; Shehnaz Alidina, SD, MPH; David Barash, MD; Erin Barringer, MBA; Augustino Hellar, MD, MBA; Adelina Mazhiqi, MS; John G. Meara, MD, DMD, MBA; Rahma Mushi, MD; Victoria Smith, MA; Meaghan Sydlowski, MPH; Sakshie Alreja, BDS, MPH ; Ntuli Kapologwe, MD, MPH, MBA and Sarah Maongezi, MD, MPH

Introduction

- Access to quality surgical care remains a critical gap in LMICs.¹
- Surgical interventions with multiple components have heterogenous outcomes between and within facilities. Limited evidence exists on what drives their heterogeneity.^{2,3}
- Aim: To understand heterogeneity in the Safe Surgery 2020 experience we hypothesized that the intervention facilities that performed better than others will highlight the best practices in implementation of a surgical quality improvement intervention in LMICs.

Methods

Study Setting:

Lake Zone Region of Tanzania

Intervention:

3 phases – changing culture, building capacity, facilitating sustainability

Over 9 months

Study Design:

In-depth qualitative study of 10 intervention facilities

Facility performance measurement:

Higher_(n=3) and lower (n=3) performing facilities were identified.

Data Collection:

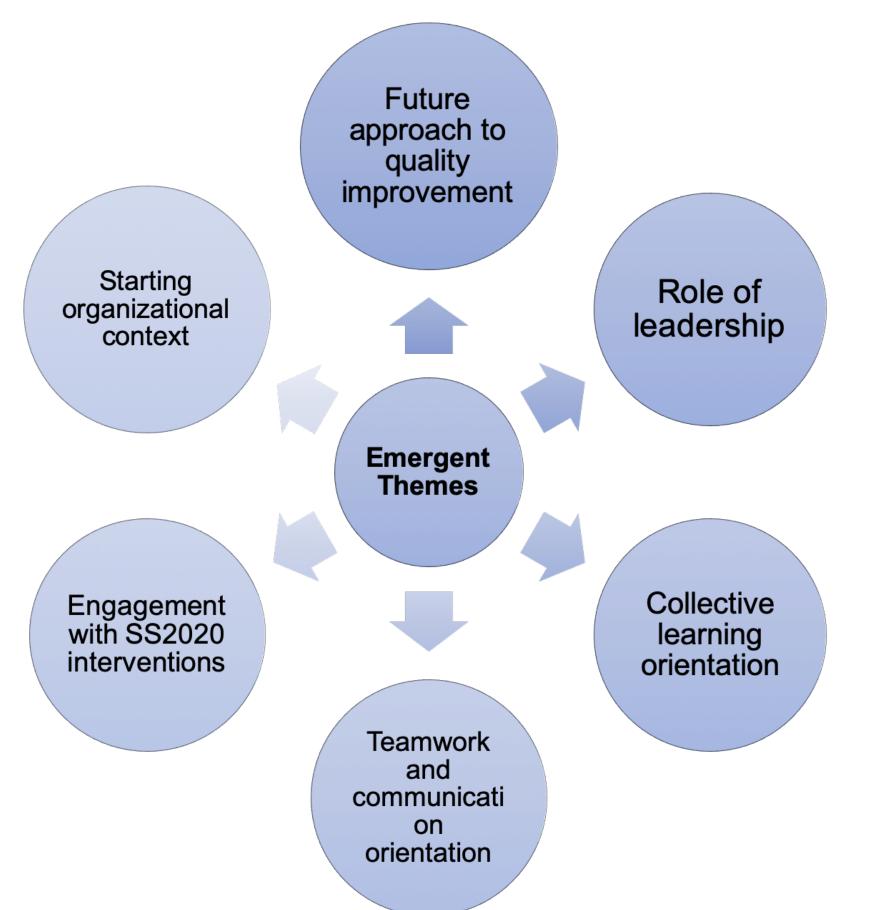
Interviews conducted at 3 time points with facility leader & 3 surgical team members (n=105).

Data Analysis:

Constant comparative method of qualitative analysis Inter-rater reliability: 0.85

Results

Six emergent themes highlight the differences between higher and lowering performing facilities:



Lower Performer

"Data is important but we can do it after surgery improvement. It is big, we need training on how it can be done because they just say you look for the template and apply it. But coordinating, and using the data is difficult." (Nurse, Facility 9)

Table 1. Improvement in (a) safety practices (b) teamwork and communication indicators

| | Average Adherence to Safety and Teamwork and Communication Indicators on the Composite Index | | Average Improvement in Percentage Points |
|-------------------|--|-------------------|--|
| | Pre-intervention | Post-intervention | |
| Higher performers | | | |
| Facility 1 | 19% | 95% | 76 |
| Facility 2 | 18% | 92% | 74 |
| Facility 3 | 13% | 73% | 60 |
| Lower performers | | | |
| Facility 8 | 8% | 39% | 31 |
| Facility 9 | 14% | 44% | 30 |
| Facility 10 | 15% | 34% | 19 |

Sample Quotes

Higher Performer

"In the past we didn't have time to discuss our data and never knew the importance of the data we collect. We thought we collected data to send to the government, nowadays we know this data belongs to us, they help us know where we are and where we want to go." (Surgical provider, Facility 3)

Discussion

ENGAGEMENT

INTERVENTION

- Surgical system strengthening efforts should focus on clinical interventions and organizational change².
- Tailor interventions to facility needs and context one size does not fit all.
- Have facilities build receptive implementation climates and give them time to implement and to observe actual change.

Conclusion

- Safe Surgery 2020 provided facilities with the opportunity to improve their surgical practice surgical culture.
- Higher performers demonstrated stronger teamwork, more developed collective learning, highly engaged leadership, and a greater willingness to improve surgical culture overall.

contact

Noor Zanial, MSc Program in Global Surgery and Social Change noorzanial@gmail.com +19097281837

References

1. Hogan DR, Stevens GA, Hosseinpoor AR, et al. *Monitoring universal health coverage within the Sustainable Development Goals: development and baseline data for an index of essential health services*. The Lancet Global Health. Dec. 19, 2017 doi: 10.1016/s2214-109x(17)30472-2

STARTING

RGANIZATIONA

CONTEXT

PHYSICAL

CULTURAL

LEARNING

- 2. Bradley E., Byam P., Alpern R., et al. A Systems Approach to Improving Rural Care in Ethiopia. PLOS ONE. April 25, 2012. https://doi.org/10.1371/journal.pone.0035042
- 3. Bradley EH, Curry LA, Ramanadhan S, et al. Research in action: using positive deviance to improve quality of health care. Implement Sci. May 12, 2009. doi: 10.1186/1748-5908-4-25