Evaluating the uptake and effect of Surgical Safety Checklist implementation in a rural hospital, Neno District, Malawi

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Introduction

- WHO introduced Surgical Safety Checklists (SSC) in 2008 [1] which enhances collaboration and patient safety before, during, and after surgical procedures [1]
- SSC uptake has been high, up to 75% in high-income countries, the uptake is as low as 20% in many LMICs [2]
- A lack of resources can hinder the adoption and effective use of surgical checklists in the LMICs [3] with no research in rural areas in Malawi including Neno District

Methodology

- Retrospective chart review utilizing Microsoft Excel data collection tool based on the already collected variables in the surgical register
- Imported data from the Excel database to R Software and utilized RStudio to clean and analyze the data

Results

The pattern of surgical procedures:

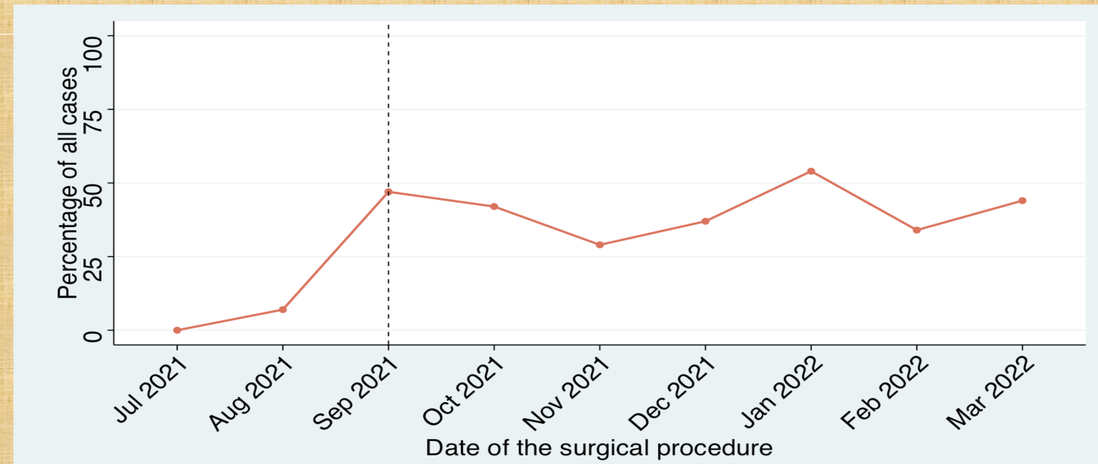
1. The median age was 23 years old (IQR: 19-29 years). The majority (n=94%, n=439) of procedures were performed on female patients.
2. Eighteen percent (n=82) of the procedures had one or more complications reported with 3 reported deaths.

Predictors of Surgical Safety Checklist use in Neno District

The odds of using SSC were 7.60 times higher in emergency surgeries compared to elective surgeries (Odds ratio [OR]: 7.60, 95% confidence interval [CI]: 2.68 – 31.9; p < 0.001).

Results

Figure 1. Uptake of SSC in Neno District between July 2021 and March 2022



Uptake of Surgical Safety Checklist

1. Of the 468 surgeries performed in nine months, 38% (n=176) used SSC.
2. There was an association between the use of SSC and complications (p = 0.028) but none for increased survival (p=0.053)

Table 1. Surgical Safety Checklist uptake

Variable	No	Yes	P-value
Type of surgery			<0.001
Elective	34	3	
Emergency	258	173	
Employer			<0.001
PIH	167	105	
MOH	78	62	
Cadre		176	<0.001
CO	268	0	
MD	24		
Procedure			<0.001
Cs	254	176	
Other	38	0	
Time			<0.001
Day	182	86	
Night	71	89	
Complications			0.028
Yes	239	133	
No	42	40	
Survival			0.053
Alive	292	173	
Dead	0	3	

Conclusion & Future Research

1. Our study demonstrated that implementation of the WHO SSC is possible in a rural district.
2. There is an urgent need to make the SSC available all the time and further user-friendly by training the whole team involved in theatre on its importance and implementation.
3. A qualitative study would help to understand the reasons for non use of the SSC by some health care providers.

Acknowledgements

The authors would like to thank all of the study participants and all members who contributed to this study. This work was conducted with support from the Partners in Health's Impact Grant with financial support from the Wagner Foundation

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