SURG AFRICA

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EFFECTIVE AND SAFE SURGICAL TASK-SHIFTING: SUSTAINABLE NON-SPECIALIST TRAINING PROGRAMME IN MALAWI

Gerald Mwapasa on behalf of the SURG-Africa consortium

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RCSI ROYAL COLLEGE OF SURGEONS IN IRELAND COLÁISTE RÍOGA NA MÁINLEÁ IN ÉIRINN

East, Central and Southern Africa Health Community
Fostering Regional Cooperation for Better Health

COSECSA College of Surgeons of East, Central and Southern Africa

The Surgical Society of Zambia

College of Medicine Malawi

Tanzania Surgical Association

Radboudumc university medical center

University of Oxford

Background

- 84% of population in SSA lives in rural areas, where district level hospitals are the main providers of healthcare services.

- District level surgery is provided by non-specialists: mainly non-physician clinicians (NPCs)

COST-Africa 2011-2016 (Clinical Officer Surgical Training – Africa)

- AIM:
- To demonstrate the effectiveness, cost-effectiveness, safety and feasibility of a model of training & supervision of non-physician clinicians (CO/ML), so as to make safe surgery available at district level hospitals in Malawi and Zambia.

Training clinical officers in Malawi

- New BSc in Surgery accredited through University of Malawi
- Blended training
  - 12-months central training of 17 Clinical Officers (COs)
    at the College of Medicine in Blantyre
  - 24-months of in-service training at district hospitals
    (2 COs at each of 8 intervention hospitals)
    receiving 2-weekly visits by surgeon trainers from Blantyre and Lilongwe
- Effects of the training were evaluated through a randomised controlled trial (RCT) in 16 district hospitals (8 intervention + 8 control)
- 2 further cohorts of BSc students since enrolled, funded locally

COST-Africa findings in Malawi

Table 2. Change in crude numbers of index procedures done in intervention and control groups by year

	Change	
	Intervention	Control
2013–2014	572 to 750 (+31)	802 to 686 (–14)
2014–2015	750 to 993 (+32)	686 to 766 (+12)
Overall (2013–2015)	572 to 993 (+74)	802 to 766 (–4)

Values in parentheses are percentages.

Gajewski at al. British Journal of Surgery, 2019

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Table 6. Wound infection rates after hernia operation by cadre

	Wound infection	
	No	Yes
CA-CO	511 (97·7)	12 (2·3)
MD	33 (92)	3 (8)

Values in parentheses are percentages. Data are based on 559 hernia operations across all intervention hospitals. CA-CO, COST-Africa clinical officer; MD, medical doctor. *P* = 0·065 (Fisher's exact test).

Gajewski at al. British Journal of Surgery, 2019

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Overall there was no significant difference in the good outcome of hernia repair surgery (defined here as no severe symptoms and up to three mild symptoms) between CHs and DHs ($p = 0.260$) (Table 2).

Table 2
Elective and emergency hernia repair cases in central and district hospitals

Hospital type	Good outcome	No good outcome
District ($n = 50$)	37 (74%)	13 (26%)
Central ($n = 48$)	40 (83.3%)	8 (16.6%)

$p = 0.260$

Gajewski at al. World Journal of Surgery, 2018

Conclusions

- Intervention hospitals increased the numbers of major surgery between 2013 2015
- COST Africa successfully trained the students to complete selected Major Procedures
- QoL outcomes after hernia repairs are comparably good at central and district hospitals

Thank you

Acknowledgments

- District hospital surgical teams who participated in this study in Malawi.

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