



## **Specialist Surgeon Workforce Analysis 2020 – Study proposal**

31<sup>st</sup> May 2021

### Background:

In 2016 O'Flynn et al published the first study of the specialist surgeon workforce in COSECSA-member countries<sup>1</sup>. This publication took place under the remit of the RCSI/COSECSA Collaboration Programme (CP) which is a partnership between RCSI (Royal College of Surgeons in Ireland) and COSECSA (College of Surgeons of East, Central and Southern Africa) to train and retain more surgeons in sub-Saharan Africa<sup>2</sup>.

The O'Flynn study was undertaken in the context of the Lancet Commission on Global Surgery (2015) which identified six indicators to ensure universal access to safe, affordable surgery and anaesthesia care. In terms of specialist workforce, the Lancet Commission identified a ratio of 20 SAO (surgeon/obstetric/anaesthetist) providers per 100,000 people as the target to achieve by 2030. The Commission noted that an additional 143 million surgeries are required in developing countries, and that an additional 2.2 specialist SAO providers are needed worldwide.

O'Flynn's study showed that there were 1,690 practicing surgeons in the then 10 COSECSA-member countries, giving an overall ratio of 0.53 surgeons per 100,000. This dataset was also analysed by the surgeons' specialty, their current location, their gender, and their country of training.

### Study proposal:

Five years have passed since the data for the first study was collected. The RCSI/COSECSA Collaborative Programme approached GASOC to repeat the O'Flynn study, in a collaborative research partnership with COSECSA trainees.

In addition to the original project aim of validating qualified surgeons, we have extended this remit to include residents, non-specialist physicians and specialist non-physicians to gain a more accurate picture of the surgical workforce.

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<sup>1</sup> O'Flynn E, Andrew J, Hutch A, et al. The Specialist Surgeon Workforce in East, Central and Southern Africa: A Situation Analysis. *World J Surg.* 2016;40(11):2620-2627. doi:10.1007/s00268-016-3601-3

<sup>2</sup>For more information on the RCSI/COSECSA Collaboration Programme (CP) see <https://www.rcsi.com/surgery/global-surgery/our-work/cosecsa>



Four additional countries have joined COSECSA so there are now 14 countries whose surgical workforce we would like to include<sup>3</sup>:

**Botswana**; Burundi; Ethiopia; Kenya; Malawi; Mozambique; **Namibia**; Rwanda;  
**South Sudan**; **Sudan**; Tanzania; Uganda; Zambia; Zimbabwe

#### Timeline:

1<sup>st</sup> July 2020 – 30<sup>th</sup> September 2021. It is envisaged that the data collection will be substantially complete by August 31<sup>st</sup> 2021.

#### Intended study outputs:

1. A dataset of all practicing qualified surgeons, residents, non-specialist physicians and specialist non-physician providers in the 14 member countries with the following details
  - a) First name
  - b) Middle name (optional)
  - c) Last name
  - d) Email address
  - e) Year of birth
  - f) Gender
  - g) Nationality
  - h) Location of primary qualification
  - i) Postgraduate surgical qualifications + location of postgraduate surgical qualification (listing of dual qualifications)
  - j) Specialisation (if applicable)
  - k) Current location of practice (Country)
  - l) Name of Hospital / Primary workplace
  - m) Organisation (its location, the size of town/city, and its ownership whether public, private or mission)
  - n) Currently working in the public or private sector, or a mixture of both?
  - o) Part-time or rotation basis of working? Important to identify as this data will be recorded but excluded from the analysis (see below)
  
2. Survey population to understand workforce practices:
  - a) Average number of operating days per week?
  - b) Average number of cases per week?
  - c) Training experiences



Figure 1 COSECSA member countries, 2020

<sup>3</sup> Additional countries are highlighted in bold



#### d) Infrastructure

##### Methods/How to:

- a. Collate and cross-check data from the following sources
  - Downloaded list of practicing surgeons from COSECSA “Capsule” Database
  - University teaching hospitals graduate lists from each member country
  - National medical council records
  - National surgical society records
  - National Surgical, Obstetric and Anaesthesia Plans (NSOAPs)
  - COSECSA and COSECSA partner event and training course participant records
  - Direct requests for information to COSECSA Council members, hospitals, hospital groups and NGOs
  - Lists of contributors to surgical journals
  - Direct contact with hospitals and surgeons
  - LinkedIn
  - Social media data collection
  - Other sources (i.e. surgical journals in the region or sources specific to that country)
  - RCSI/COSECSA/GASOC/G4 Social media campaign

Note: The above list of data sources is not exhaustive.

- b. Verify each individual name as that of a practicing surgeon in consultation with a regional network of COSECSA Country Representatives, and/or by direct contact with the registered surgeon or other surgeons in their hospital and through use of published professional social media profiles. Only data verified from a minimum of two sources to be included in the final dataset for analysis
- c. Directly contact surgeon database via survey to confirm details of their surgical workload (i.e. number of operating days and number of cases per week). Responses to the survey will not be shared with the RCSI/COSECSA CP. All responses will be anonymised and only the analysis will be shared.

##### Inclusion criteria

- a) All qualified surgeons and residents (COSECSA and non-COSECSA trained), non-specialist physicians and specialist non-physicians currently practicing within the 14 COSECSA member countries

*Representing the following specialties: General surgery, Orthopaedic surgery, Paediatric Surgery, Urology, Plastic Surgery, ENT, Neurosurgery, Cardiothoracic Surgery and Oral and Maxillofacial surgery,*



### Exclusion criteria

- Qualified surgeons, residents, non-specialist physicians and specialist non-physicians working within the region in a part-time or rotational capacity will be excluded from the final dataset
- Qualified surgeons, residents, non-specialist physicians and specialist non-physicians within the surgical subspecialties of Obstetrics and Gynaecology and Ophthalmology

### Ethics clearance and data access:

- COSECSA IRB: Confirmed
- RCSI Ethics committee: Confirmed

### Data storage and ownership:

Data relating to this study will be stored securely (via REDcap). Data must be handled in compliance with any terms stipulated by individuals/organisations sharing the data. Once the end date has been reached, the dataset will be handed over fully to COSECSA and the RCSI/COSECSA Collaboration Programme. Team members will retain access to a copy of this data for a further 24 months.

### Study team

**Senior authors:** Professor Abebe Bekele, Chair, COSECSA Examinations and Credentials committee; Professor Eric Borgstein, Secretary General, COSECSA

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