# Mapping the specialist medical workforce for Southern Sudan: Devising ways for capacity building

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## Introduction

The basic hospital package of care service (BHPCS)[1], commissioned by the Department of Curative Medicine in the Government of Southern Sudan (GOSS) and written by specialists of the St Mary's Hospital–Juba Teaching Hospital Link in January 2010, identified a severe lack of doctors at specialist level. It recommends that the minimum requirements of specialists at *each* of the three main hospitals in South Sudan over the next five years are: medicine **6**, surgery **3**, orthopaedics **2**, urology **1**, paediatrics **6**, obstetrics and gynaecology **6**, anaesthesia **4**, ophthalmology **4**, head and neck surgery **4**, emergency medicine **2**, radiology **2 - 4**, pathology **4**, oncology **2** and psychiatry **4**. These numbers (i.e.150-156) would enable sub-specialisation and provide the training needed to produce more specialists. This may take longer to achieve at Wau and Malakal due to insufficiently developed infrastructure.

It is estimated that there are approximately 500 Southern Sudanese doctors with basic medical degrees but without postgraduate training. Most of these doctors work either in private practice or undertake administrative posts with non-governmental organisations (NGOs) in South or North Sudan.

There is no structured postgraduate programme or continuing professional development (CPD) system, into which doctors may slot in order to pursue a programme of training in Southern Sudan. Until there is a structured system with enough trainers in place, South Sudan will struggle for years to offer specialist services to its people. Such services are currently available at great cost (e.g. approximately $25,000 per person) from neighbouring African countries, South Africa, Jordan, Egypt, the United Kingdom, and occasionally, the United States and India. This referral service is not available to emergencies as most people with acute illnesses die within the first twenty-four hours[2].

In the absence of concrete data on the numbers of trained doctors (those who have undergone postgraduate or accredited training in a speciality), we (MA & DL) set out to establish the numbers of trained doctors in various specialities in South Sudan, North Sudan, East and Central Africa, Australia, Canada, United States, United Kingdom, Ireland and Scandinavia.

The aim of this study is to identify those doctors who may be interested to act as trainers in a training programme for postgraduate doctors in medicine in South Sudan. It is vital that a critical mass of trainers is in place to start structured postgraduate training to ensure self-sufficiency in trained medical manpower.

## Methodology

We checked the names of South Sudanese doctors in the Sudan Medical Council Register, the General Medical Council Register in the United Kingdom, Sudanese Surgeons' Association Register, Sudanese Society of Physicians' Register and the Kenyan Medical Council Register. We also personally communicated with colleagues in countries where South Sudanese doctors work.

We recorded only postgraduate qualifications and the relevant speciality but excluded personal data for confidentiality. Where we communicated by telephone or email, we obtained verbal consent to use the information. It will not be possible to trace individual identities using the data we present in this paper.

## Results

We identified **80** trained specialists from South Sudan in different specialities. Figure 1 shows the distribution by speciality: surgery has the highest number **26,** followed by obstetrics and gynaecology **19**, general medicine **18**, paediatrics and child health **6**, radiology **3,** pathology **3,** psychiatry **3** and dermatology and anaesthesia **1** each. Of these **65** are currently active and **15** are retired or near retirement but in private practice.

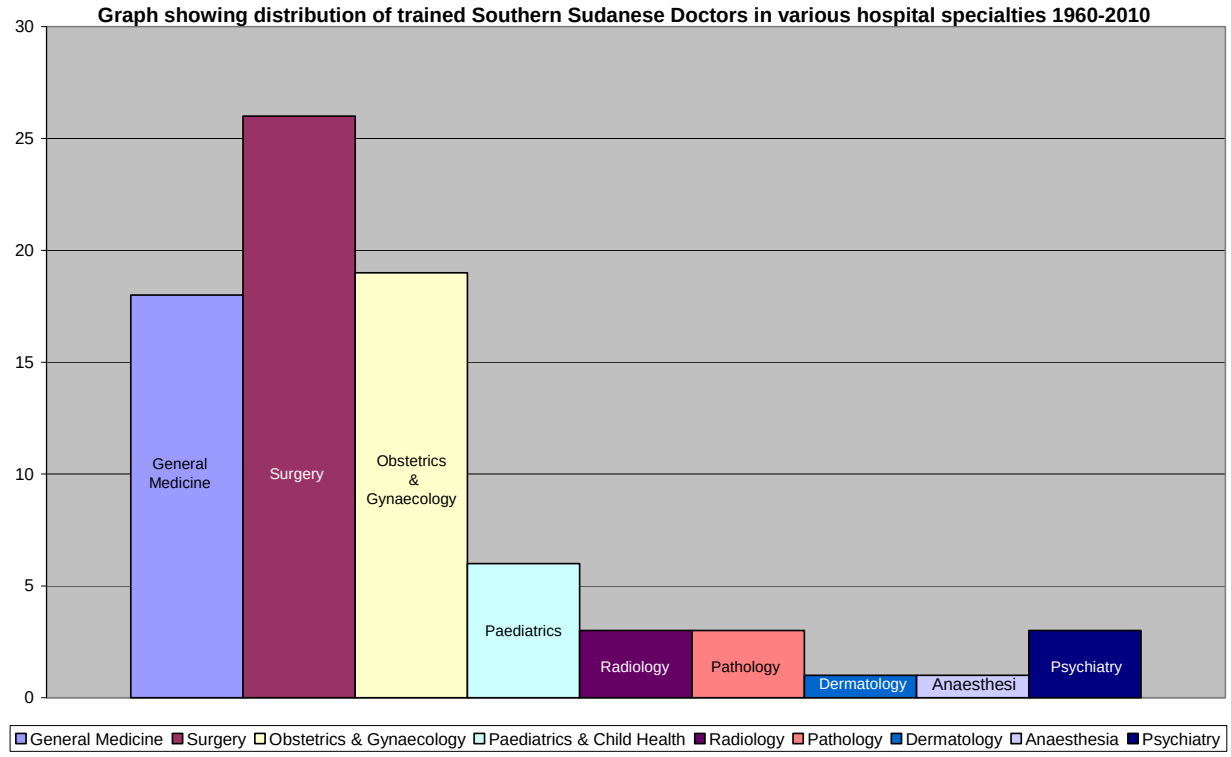


*Figure 1. Distribution of trained Southern Sudanese doctors by speciality*

Table 1 Location and status of southern Sudanese doctors by speciality

| Specialities | (1)Location and (2)Status | | | | |
|---|---|---|---|---|---|
| | South Sudan | North Sudan | Abroad | Retired/private practice | Total |
| General medicine | 8 | 1 | 9 | 0 | 18 |
| Surgery | 8 | 2 | 4 | 10 | 24(3) |
| Obstetrics/Gynaecology | 10 | 5 | 4 | 0 | 19 |
| Paediatrics | 4 | 0 | 1 | 1 | 6 |
| Radiology | 2 | 0 | 1 | 0 | 3 |
| Pathology | 1 | 0 | 2 | 0 | 3 |
| Dermatology | 1 | 0 | 0 | 0 | 1 |
| Anaesthesia | 0 | 0 | 1 | 0 | 1 |
| Psychiatry | 0 | 2 | 1 | 0 | 3 |
| Total | 34 | 10 | 23 | 11 | 783 |

(1)Where practitioner currently resident or practising, (2) already retired and/or in private practice [4 may be nearing retirement], (3) data missing for 2

The numbers (in a few cases approximate) of these specialists by location and status is given in Table 1 and in more detail below.

**General medicine 18:**

- In South Sudan 8
- In North Sudan 1
- Outside Sudan 9 (East/Southern Africa 3, UK/Ireland 5, USA/Canada ~1).

All are practising General Internal Medicine but 9 were sub-specialists (cardiologist 1, stroke physician/geriatrician 1, geriatrician 1, gastroentrologist 3 and chest physician 3).

We found no physicians practising as nephrologists, hepatologists, rheumatologists, neurologists, endocrinologists, oncologists, haematological medicine or intensive care physicians.

**Surgery 24 specialists** (no data for 2 more)**:**

- Orthopaedics 3 (retired in private practice 1, in Norway 1, in the Sudanese Army Medical Corps 1).
- ENT 2 (in South Sudan 1, in Khartoum 1).
- Ophthalmology 3 (in South Sudan 1, retired or nearing retirement 2).

Of the remaining 16 surgeons:

- In South Sudan 8 (at the University of Bahr El Ghazal 3, in the Sudan Peoples Liberation Army Medical Corps 2, elsewhere 3).
- In North Sudan 4
- Outside Sudan 4 (in UK 1, in East and Central Africa 3).

**Obstetrics and gynaecology 19:**

- In South Sudan 11 (JTH 5, SPLA Medical Corps 1, SPLM (Commissioner) 1, Yei (private) 1, Unity State 1, Wau Teaching Hospital 1, NGO (not a practising) 1).
- In North Sudan 5
- Outside Sudan 4 (in UK/Ireland 2, in East/Central/West Africa ~2).

**Paediatrics and child health 6:**

- In South Sudan 4 (in Juba 2, at the University of Bahr El Ghazal 2)
- Outside Sudan 1 (in France)
- Retired 1.

**Radiology 3:**

- In South Sudan 2
- Outside Sudan 1 (in UK).

All in private practice.

**Pathology 3:**

- In South Sudan 1 (at the University of Bahr El Ghazal)
- Outside Sudan (in Norway 1, in Canada 1).

**Dermatology 1:** In South Sudan

**Anaesthesia 1:** In USA

- There is 1 trainee at Makerere University Medical School undergoing postgraduate training.

**Psychiatry 3:**

- In Sudan 2
- Outside Sudan 1 (previously in Zimbabwe, relocated to Tanzania).

## Discussion

The method used for collecting these data was by no means exhaustive and it is possible that some trained doctors might have been inadvertently excluded from the count. For example the public health specialists and dentists have not been counted but should be included.

For a population of 10,000,000 people, the number of specialists from South Sudan working there is negligible and does not meet the WHO minimum standard of 20 doctors per 100,000 inhabitants[3]. However the WHO minimum standard does not differentiate between trained and untrained doctors. It is estimated that there are 500 South Sudanese doctors living within South Sudan with basic medical degrees but without appropriate postgraduate training.

We propose that the government of Southern Sudan introduce structured postgraduate training in hospitals in Wau, Malakal and Juba. This should give initial training in South Sudan with top-up experience in developed western countries prior to the doctors returning home to offer ongoing specialist services.

We also propose that, because there is severe shortage of trainers, specialist doctors of South Sudan origin working outside the country offer some of their time to train colleagues in South Sudan in order to kick start the training programme. The government of Southern Sudan needs to offer incentives to trained doctors to enable them to remain in the country. Schemes by the United Kingdom Department for International Development that supplement salaries of healthcare professionals in Malawi in order to encourage retention[4] needs to be looked at as soon as possible. NGOs should incorporate training into their contracts when employing medically qualified personnel to ensure that they continue professional development and increase the critical mass of trained doctors in Southern Sudan.

We suggest that a three-day conference be held of all the above specialists and the authorities in the GOSS Ministry of Health so that we can start to develop a framework for improving our national Healthcare Service.

## References


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**Note:** In the next issue of the Journal we hope to discuss the present situation regarding numbers of nurses in Southern Sudan.