

# THE GEOGRAPHICAL DISTRIBUTION OF GASTROINTESTINAL ENDOSCOPY SERVICES WITHIN GOVERNMENT AND FAITH BASED HOSPITALS IN GHANA

Awuku YA<sup>1</sup>, Kuenyefu R<sup>1</sup>, Oduro-Donkor D<sup>1</sup>, Awuku NA<sup>2</sup>, Sarkodie BD<sup>3</sup>

<sup>1</sup>Department of Medicine and Therapeutics, University of Cape Coast and Cape Coast Teaching Hospital;

<sup>2</sup>Department of Haematology, Cape Coast Teaching Hospital; <sup>3</sup>University Of Ghana School of Medicine and Dentistry

## Abstract

**Background:** Gastrointestinal (GI) endoscopy is generally a very safe and effective diagnostic and interventional modality in the current practice of medicine. To plan a comprehensive equitable gastrointestinal endoscopy service, the geographical distribution of this essential facility needs to be mapped.

**Methods:** This study was a cross sectional situational survey of gastrointestinal endoscopy services within government and faith based health facilities in Ghana. Information on the availability of GI endoscopy services as at December 2016 was obtained by interviewing doctors from the various regions in Ghana. Five (5) doctors working in different hospitals were interviewed per region.

**Results:** Gastrointestinal (GI) endoscopy service was available in 3 out of the 4 teaching hospitals and only one regional hospital (Sunyani) in Ghana. The upper east, Upper west and Volta regions have no GI endoscopy services within any government or faith based facility. The Christian Health Association of Ghana (CHAG) complemented government effort with GI endoscopy units at 4 district hospitals located in the Eastern, Central, Brong Ahafo and Volta regions.

**Conclusion:** The distribution of gastrointestinal endoscopy services within government and faith based facilities is uneven. There is an urgent need to establish these services equitably across Ghana.

**Key Words:** *Gastrointestinal endoscopy, government, faith based and Ghana.*

## Introduction

Gastrointestinal endoscopy is the video system aiding visualization of the lumina of the gastrointestinal tract (oesophagus, stomach, duodenum, jejunum, ileum and colon). It is generally a very safe and effective diagnostic and interventional modality in the current practice of medicine. The indications for GI endoscopy are varied and may be for diagnostic, therapeutic or surveillance purposes. It contributes significantly to a good outcome in many gastrointestinal (GI) diseases and is the backbone for national colorectal cancer screening programmes<sup>1,2</sup>.

Gastroenterology is one of the fast-growing specialties world wide with advancing technology for diagnostics and therapeutics. In Ghana gastrointestinal endoscopy started in the late 1970's and was later revived by a Japanese initiative (Japan International Cooperation Agency).

Through this initiative clinicians were sponsored for training in gastrointestinal endoscopy outside Ghana. These medical doctors returned to improve endoscopic diagnosis and care for clients with gastrointestinal diseases. Practitioners in Ghana have benefited from the experience of renowned trainers across the globe in both diagnostic and therapeutic endoscopy<sup>3</sup>.

Currently there is a formal training programme for gastroenterologist in Ghana under the Ghana College of Physicians and Surgeons and the West African College of Physicians. This training is aimed at bridging the gap for practitioners in the care for gastrointestinal diseases.

Ghana is bounded by Burkina Faso on the north, Togo on the east, Côte d'Ivoire on the west and the Gulf of Guinea on the south [figure1]. It has a surface area of 238,540 km<sup>2</sup>, 10 administrative regions, a gross domestic product of 37.54 billion US Dollars and a GDP per capita of 1696.64 US dollars in 2016<sup>4,5</sup>. Despite the importance of GI endoscopy to healthcare in Ghana, the distribution of this service within government and faith based facilities across the country is not known. To plan a comprehensive equitable gastrointestinal endoscopy services within Ghana, the geographical distribution of this essential facility needs to be mapped.

**Corresponding Author:** Dr. Yaw Asante Awuku  
Department of Medicine and Therapeutics,  
University of Cape Coast and Cape Coast Teaching  
Hospital  
**Email Address:** [ppawuku@gmail.com](mailto:ppawuku@gmail.com)  
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## Methods

This was a cross sectional situational survey of gastrointestinal endoscopy services within government and faith-based health facilities in Ghana. Data was obtained by interviewing doctors at the various regions in Ghana. Five (5) doctors working in different hospitals were interviewed per region. The availability of GI endoscopy services within these facilities as at December 2016 was mapped.

## Limitation

Data was obtained by interviewing doctors working in the various regions, as there is no

designated outfit responsible for registering gastrointestinal endoscopy units in Ghana. The study did not include GI endoscopy facilities in private practice.

## Results

Only one regional hospital (Sunyani) in Ghana offers GI endoscopy service three out of the four teaching hospitals offer GI endoscopy services. The Upper East, Upper West and Volta regions have no GI endoscopy services within any government or faith-based facility. Results displayed in Figure1 and Tables 1 & 2.



**Fig 1.** Map of Ghana showing the 10 regions

**Table 1.** Regional distribution of gastrointestinal endoscopy services within government facilities in Ghana.

Region	Availability of GI Endoscopy service	Name(s) of facility	Availability of gastroenterologist/Trained endoscopist	Interventions available
Eastern	None	NA	None	NA
Volta	None	NA	None	NA
Greater Accra	Yes	1. KorleBu Teaching Hospital 2. 37 Military Hospital	Yes	Yes
Central	None	NA	Yes	NA
Western	None	NA	None	NA
Brong Ahafo	Yes	Sunyani regional hospital	Yes (Visiting surgeon)	None
Ashanti	Yes	Komfo Anokye Teaching Hospital	Yes	Yes
Upper east	None	NA	None	NA
Upper West	None	NA	None	NA
Northern	Yes	Tamale Teaching Hospital	Yes	Yes

NA- Not applicable

**Table 2.** Distribution of gastrointestinal endoscopy services within faith based facilities in Ghana.

Region	Availability of GI Endoscopy service	Name(s) of facility	Availability of gastroenterologist/Trained endoscopist	Interventions available
Eastern	YES	St. Dominic's Hospital, Akwatia	YES	YES
Volta	YES	Battor Catholic hospital	YES	NONE
Greater Accra	NONE	NA	NONE	NA
Central	YES	St. Francis Xavier Hospital, Assin Foso	Yes	YES
Western	NONE	NA	NONE	NA
Brong Ahafo	YES	Holy Family Hospital,	YES	None
Ashanti	NONE	NA	NONE	NA
Upper east	None	NA	None	NA
Upper West	None	NA	None	NA
Northern	NONE	NA	NONE	NA

NA-Not applicable

## Discussion

Our study highlighted the uneven distribution of GI endoscopy services within government and faith based facilities in Ghana. For the teaching hospitals across Ghana only the Cape Coast Teaching Hospital (CCTH) does not have GI endoscopy services although they have trained personnel with skills for both diagnostic and therapeutic endoscopy. CCTH serves as the referral hospital for the people of Western and Central regions therefore the absence of this facility will likely result in poor outcome of patients requiring emergency GI endoscopy. Of the 10 regional hospitals only Sunyani hospital offers a GI endoscopy service. Though regional hospitals are supposed to receive referrals from the district and sub-district areas, most of them lack GI

endoscopy services for managing emergency cases such as gastrointestinal bleeding.

The Christian Health Association of Ghana (CHAG) has set up many healthcare facilities across the country, which are complimentary to that of government. In our study it was realized that CHAG facilities have made available GI endoscopy services at four district hospitals in four regions namely Eastern, Central, Brong Ahafo and Volta. CHAG facilities provide services in nearly 50% of the regions not covered by government in terms of GI endoscopy access.

Patients from the six regions (Eastern, Western, Volta, Upper east, Upper west and Central) without GI endoscopy in any government facilities may get referred

elsewhere with attendant delays and difficulties with transportation.

Managing gastrointestinal diseases especially acute bleeding without GI endoscopy remains a challenge. We are unable to make use of current technology in the field of GI interventions to improve outcome at our facilities mainly because of unavailability and qualified professionals<sup>6,7</sup>. There is associated high mortality in acute gastrointestinal bleed<sup>8,9</sup> because of inadequate and skewed distribution of GI endoscopy services. Provision of GI endoscopy facilities should be done in all the gap areas identified. For the areas without trained personnel a special competency based training using the Walker and Peyton's approach can be done so such individuals can be credentialed to perform the endoscopic procedure with safety in mind<sup>10</sup>. Our study focused on government and faith based facilities as they contribute significantly to healthcare in Ghana especially in the rural setting. These institutions were targeted as it will be easy to effect changes in these institutions positively.

## Conclusion

The distribution of gastrointestinal endoscopy services within government and faith based facilities is uneven in Ghana. There is an urgent need to establish these services equitably across the country.

## Declaration of Originality

We declare that this is our own original work

## Competing Interest

Authors declare no competing interest.

## Authors Contribution

AYA design, data collection, write up and review of manuscript, NAA, RK, ODD, SBD contributed to data collection and write up of this manuscript.

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