

# Multi-disciplinary stroke care in developing countries – lessons from the Wessex-Ghana Stroke Partnership

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## Introduction

Stroke disease in Ghana has been of increasing concern since the mid to late 20th century, in association with the increasing westernisation of diet and lifestyle [1]. Two thirds of world-wide mortality cases from stroke occur in sub-Saharan Africa [2], and in the Ghanaian capital city region of Accra, stroke is now attributed as the second largest cause of death [1]. The burden of stroke in sub-Saharan Africa is significant [3].

Experts recommend a three-prong approach to dealing with the burden of non-communicable disease (NCD): epidemiological surveillance; primary prevention (preventing disease in healthy populations); and secondary prevention (preventing complications and improving quality of life in affected communities) [4]. This paper outlines the development of a specialist stroke service in Accra, Ghana. This work therefore broadly relates to the secondary prevention aspect, achieved through the development of a dedicated and specialised stroke service. Whilst this project took place in Ghana, the learning could be applied to the development of a stroke service in any resource poor setting, such as South Sudan. Indeed, because the focus is on establishing the fundamentals of organised stroke care, the principles are also entirely relevant to more developed health care systems.

## The Project

Despite overwhelming evidence of the benefit of organised stroke care [5, 6], until recently, there were no specialist stroke services in Ghana.

In 2009, a multi-disciplinary team of health professionals working in stroke care across Wessex (UK) joined with the Korle Bu Teaching Hospital (KBTH), Accra (Ghana), to form an international health partnership. The aim was to share knowledge of stroke management.

The Wessex-Ghana Stroke Partnership (WGSP) has developed through multiple visits from the UK to Ghana,

as well as reciprocal visits from the Ghanaian team to the UK. A dedicated Stroke Unit was opened at KBTH in January 2014. Whilst stroke care can be improved without a specialist Unit, having a dedicated space to cohort patients has been an important enabler in the success of this partnership. In addition, the partnership has focussed on four main areas of development: clinical leaders; multidisciplinary care; core stroke knowledge and skill; and empowering patients and their families [7].

## Identify and develop clinical leaders

Recognising stroke as a clinical specialism, and developing an identified team of leaders from medicine, nursing and physiotherapy, was one of the first steps taken by the partnership. Investing in developing not just the clinical knowledge and skill within these individuals, but also their confidence as leaders and role models within the service, has been a key factor in the success of this project. The collective ability of this team to lead the service, whilst taking responsibility for their respective professional group, is a particular strength of the approach the WGSP has taken. These clinical leaders are now supported by deputies (succession planning), as well as nominated link individuals from occupational therapy, speech and language therapy, dietetics, pharmacy and psychology.

## Recognise and harness multi-disciplinary approaches to care.

Multi-disciplinary working is the cornerstone of effective stroke unit care, yet was underdeveloped within the KBTH service. At the beginning, there was a tendency for individuals to work within their own professional silo, and a lack of willingness to come together to collaborate in the delivery of care – at both service and individual levels. Breaking down these barriers has enabled care to be delivered more consistently and effectively. This development of Multi-Disciplinary Team (MDT) working builds directly on the growth of the clinical leads for stroke, but goes beyond simply having leaders

in place. It is about changing the culture of the Unit, so that the people working there have the confidence to share their knowledge and skill, to communicate more effectively and openly, to discuss and debate all aspects of the service, to challenge poor practice, and to reward good practice. A number of systems have been put in place to support this cultural shift, including the introduction of MDT meetings, the development and delivery of MDT programmes, and the use of a shared data set to monitor progress.

Empowering the Ghanaian health professionals to develop their own roles and practice has been fundamental, taking a 'coaching' rather than a 'teaching' route. Leadership training has been an integral part of this process.

### **Deliver the basics of clinical care consistently, and well.**

Research suggests that chronic disease knowledge is poor among health workers in developing countries [8]. Poor health worker knowledge has been implicated in poor communication, the development of complications and in healer-shopping [8, 9]. Certainly, stroke as a clinical speciality was a relatively new concept at KBTH. Therefore, the WGSP has focussed on the development of core clinical skills, which will be relevant to the majority of patients, and that can be delivered within existing resources.

The UK and Ghanaian teams have focussed on finding local solutions to local clinical problems. Whilst we may draw on evidence from the UK and other Western countries, careful consideration is given to what is and is not relevant within the Ghanaian context. Simply replicating UK practice in Ghana would not be appropriate.

A number of core skills were identified collaboratively, as those that would have the greatest impact for patient care/outcomes, and would be achievable within current resources. A strong emphasis has been placed upon embedding relatively few key skills, to ensure sustainability. The initial four skills, and an outline of what they covered, is given below:

- Swallow and nutrition

*Bedside water swallow assessment, monitoring for signs of dysphagia, modification of diet and fluids using locally available ingredients, use of nasogastric tubes.*

- Positioning and manual handling

*Positioning and repositioning in bed, transferring from bed to chair, handling the hemiplegic limb(s).*

- Communicating with an aphasic / dysphasic patient

*Bedside assessment of receptive and expressive dysphasia,*

*adapting communication to support someone with aphasia to communicate (total communication strategies).*

- Continence

*Basic assessment of incontinence (identifying type), use of catheters, strategies for promoting continence.*

Later, four additional areas for skill development were added, these were:

- Mood

*Incidence and causes of low mood following stroke, identifying low mood, strategies for managing low mood.*

- Functional Independence

*Ways of promoting independence, through rehabilitation +/- compensation.*

- Secondary Prevention

*Understanding risk factors for stroke and secondary prevention strategies (pharmaceutical, lifestyle); educating patients and their families.*

- Planning for discharge from hospital, and family education.

*Identifying challenges for management at home, supporting patient and family to prepare for home through advocacy, training and support.*

For each of the skills, teaching materials were developed, and a train-the-trainer model was used to ensure that training was disseminated in an ongoing way. To ensure clinical skills were translated into practice, a practical competency framework was also developed. The Ghanaian stroke leads, and their deputies, have responsibility of ensuring that those working on the Unit are able to demonstrate application of skills relevant to their role, in the clinical setting. Competencies have been completed across all of the professions working on the Unit.

### **Empowering patients and their families**

Evidence suggests that individuals living with chronic diseases in Ghana, and other African countries, may have poor knowledge of their condition(s) and how to manage them [9-11]. There is also a tendency for people to be passive recipients of care within the Ghanaian health system. Yet hospital admission can be short, and a lack of community health or social care services means that families will be the main providers of care and support following discharge from hospital.

Educating patients and their families is therefore vital, if secondary complications are to be reduced, and rehabilitation is to be maximised. The WGSP has focussed on supporting patients and their families to understand their condition, as well as providing practical

skills (for example, in relation to feeding, communication and manual handling). This is complemented by written information. All members of the Ghanaian MDT have the ability to educate patients and their families on elements of stroke care, including those that may be outside of their traditional professional remit, for example, secondary prevention. This allows for the message to be reinforced, and the opportunities for educating patients and families to be capitalised.

### Conclusions

Stroke care is multifaceted and complex, and therefore any approach to developing specialised stroke care must take the various facets into account. The identification of core skills, and building on these in a stepwise manner, is important to minimise the theory-practice gap – i.e. ensuring that new skills are embedded within clinical care. An important part in this, which would be relevant to any specialism, is the development of more tacit skills, such as leadership and MDT working. These aspects have been a fundamental part of the WGSP, and contribute to the sustainability of the development work that has taken place.

Whilst the prevalence of stroke and other NCD's is largely unknown in South Sudan [12], the World Health Organisation estimates that the probability of dying between ages 30 and 70 years from the four main NCDs is 20%. Like any low income setting, there is likely to be an unmet need with regard to un-identified and un-treated stroke risk factors, and a hidden burden of stroke disease within communities. The WGSP has demonstrated that specialist services can be developed without additional resource. We are beginning to see the impact this has on outcomes to patients and their families. The findings from this work could potentially be replicated in other low and middle income settings, including South Sudan, where a basic health infrastructure is in place.

Further information and resources are available via [www.wgstroke.org](http://www.wgstroke.org).

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