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Experience of using an interdisciplinary task force to develop a culturally sensitive multipronged tool to improve stroke outcomes in Nigeria

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ABSTRACT

The burden of stroke is on the rise in Nigeria. A multi-faceted strategy is essential for reducing this growing burden and includes promoting medication adherence, optimizing traditional biomarker risk targets (blood pressure, cholesterol) and encouraging beneficial lifestyle practices. Successful implementation of this strategy is challenged by inadequate patient health literacy, limited patient/medical system resources, and lack of a coordinated interdisciplinary treatment approach. Moreover, the few interventions developed to improve medical care in Nigeria have generally been aimed at physicians (primarily) and nurses (secondarily) with minimal input from other key health care providers, and limited contributions from patients, caregivers, and the community itself. The Tailored Hospital-based Risk Reduction to Impede Vascular Events after Stroke (THRIVES) study is assessing the efficacy of a culturally sensitive multidimensional intervention for controlling blood pressure in recent stroke survivors. A key component of the intervention development process was the constitution of a project task force comprising various healthcare providers and administrators. This paper describes the unique experience in Sub-Saharan Africa of utilizing of an interdisciplinary Task force to facilitate the development of the multipronged behavioral intervention aimed at enhancing stroke outcomes in a low-middle income country.

1. Introduction

The burden of non-communicable diseases (NCD) including cardiovascular risk factors is on the increase globally and higher in developing countries [1,2]. Stroke is the second leading cause of mortality worldwide [3]. From 1990 to 2010, the age-standardized incidence of stroke significantly decreased by 12% in high-income countries, and increased by 12% in low-income and middle-income countries [3]. In Africa, community-based studies revealed an age-standardized annual stroke incidence rate of up to 316 per 100,000 [4] and age-standardized prevalence rate of up to 981 per 100,000 [5].

Nigeria, the most populous black nation in the world is at present experiencing a strain on its economy and it stands the risk of further strain on its resources as a result of the increasing prevalence of stroke and other cardiovascular diseases due to epidemiological transition. In 1977, the report of a Stroke Registry in Ibadan, Nigeria calculated the incidence of stroke as 26/100,000 people [6]. More recently, an urban community in Lagos measured an overall crude prevalence rate of 1.14/1000 while the 30-day case fatality rate is estimated to be as high as 40% [7,8].

Due to the significant public health problem that stroke causes, prevention is key to the reduction of the disease impact in countries with poor resources. Thus, the need to improve stroke preventative care is therefore particularly pressing in Nigeria where resources are few and the burden of stroke is disproportionately heavy. Prevention strategies depend on risk factor modification [9]. This is the focus of the Tailored Hospital-based Risk Reduction to Impede Vascular Events after Stroke (THRIVES) project. The overall aim of THRIVES is to determine whether a culturally-sensitive multipronged post-discharge intervention can significantly reduce blood pressure, enhance achievement of guideline recommended targets for risk factor control, and lower recurrent vascular events in Nigeria.

One of the strategies employed in meeting the objectives was the involvement of a diverse membership Task force to provide professional guidance and review procedural issues both prior to and during the intervention implementation process. The involvement of a task force can be essential when a project involves complex issues, or in situations

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when feasibility solutions may necessitate change. Drawing upon a varied selection of individuals often serves to enhance a project's likelihood of success as task force members bring together different skills and ideas, advocate for the project, discourage rumors regarding the project and incorporate solutions into their recommendations in anticipation of implementation challenges [10]. Such is the case in the THRIVES study, in which the input of task force members shed light on the adaptability clinical value of various protocols and intervention procedures, and thereby promoted "greasing the wheels" for implementation [10].

2. Methodology

The THRIVES study design and Phase 1 protocol have been previously published [11].

2.1. Study setting

The THRIVES project is housed among four hospital sites in southwest Nigeria. The hospitals were categorized by ownership and type of clientele. University College Hospital Ibadan, a public facility owned by government, is the main referral center for the care of stroke patients. The Blossom Center for NeuroRehabilitation is a private non-governmental neuro-rehabilitation center located in Ibadan. Its clientele consists of those who seek private services perceived to be devoid of the bureaucratic procedure of public facilities and able to pay for such services. The Federal Medical Center Abeokuta, like the University College Hospital, is a government owned tertiary public health facility and referral center. Finally, the Sacred Heart Hospital also located in Abeokuta is a community-level mission hospital with a patient population characterized by low-income levels and poor health seeking behaviors.

2.2. Selection of task force members

Task force members were actively sought by THRIVES research team members in Ibadan and Abeokuta sites using existing links with the communities. Criteria used in the selection included persons with a direct link to patients who have had a stroke, individuals who were culturally representative of the study communities, and persons involved in the management and care of patients with stroke. Other criteria considered for membership included: (a) knowledge and/or experience unique to the responsibility of the committee or task force to which they were being appointed; (b) availability for service and to complete potentially short-term time-sensitive tasks or decisions; (c) compliance with formal application requirements; and (d) willingness to participate in a collaborative manner and evidence of understanding community issues.

Proposed members initially received a letter indicating they had been nominated to join the THRIVES Task force team. The letter introduced the THRIVES study, outlined details of Task force membership, and the respective role that members would play in order to provide oversight functions. A total of 22 candidates (18 in Ibadan and 4 in Abeokuta) confirmed their interest and responded in the affirmative. The final determination of the THRIVES Task force committee consisted of physician investigators, stroke survivors, caregivers, statisticians, medical social workers, health educators, pharmacists, nurses, dieticians, physical therapists, record personnel, administrators, health economist, and policy makers represented by the Director Non-Communicable Disease of the State Ministry of Health, a telecommunication expert, religious leaders, media personnel, a community mobilizer and the President of the Nigerian Stroke Society.

2.3. Meeting schedule

The inaugural meeting of the THRIVES Task Force (TTF) was held in Ibadan on April 12, 2014. The objective of the meeting was for members to get to know each other, reiterate the role of participation, and set an agenda for upcoming activities. At this meeting, the principal investigator presented a brief overview of the THRIVES project and a snapshot of the findings from the qualitative phase of the study was presented by the qualitative experts on the team. Topics covered included the report card, group clinic, patient support groups, action plan, family management strategies, as well as barriers and facilitators that influence adherence in stroke victims and beliefs of the patients and community towards stroke. A decision was reached on meeting frequency, venue and time. Members adhered to the agreed-upon schedule and all meeting proceedings were documented with written notes and audio recording.

2.4. Terms of reference

The TTF was charged with oversight of project function, the review of three-pronged intervention strategies, the creation of recommendations concerning local adaptations in order to facilitate implementation at each site and the assessment of the extent of implementation. Specifically, the THRIVES study employs three intervention strategies: the patient report card, the short message service and the video on stroke. Adapting these interventions was key since the THRIVES study aims to provide acceptable, patient-inclusive, and culturally sensitive interventions with the input of all stakeholders involved.

3. Findings

3.1. Outcome of review of the patient report card

An extensive review of the patient report card (PRC) was carried out. The TTF members translated the PRC into the local language, Yoruba. Several members expressed concerns over the mode of administration of the PRC considering the low literacy level of most patients. Reference was made to the fact that most THRIVES indices are not written in simple terms. This fear was addressed through the assisted administration of the PRC as it was designed to be a prompt discussion between the stroke patient and physician with the goal of designing action plans to improve stroke patients' adherence to recommended risk factor control. The physiotherapist on the team recommended that there should be a 'constraints column' on the PRC for patients to discuss barriers limiting their adherence to recommended stroke risk factor control strategies; these constraints could comprise a preference for traditional drugs and supplements as well as reasons related to spirituality, economic freedom and health system lapses.

On diet index, the policy maker asserted that difficulties may be encountered by stroke patients and caregivers when interpreting and acting on: '*5 servings of fruits and vegetables*, *less than one third of daily intake attributable fat*, *2 servings of fish per week means*' (options 1, 3 & 4 of diet index on the PRC). It was suggested that this prescription be translated and transcribed into a statement that patients and caregivers could relate with on a cultural level.

A similar point was identified for the physical activity index. Given the poor health literacy levels, stroke patients may have difficulty relating with and interpreting what is meant by 'physical activity'. It was suggested that phrases such as taking a walk, walking to the car, bus could be used to explain the term.

One of the greatest observed challenges in patient care and management is poor record keeping. This was in relation to in whose hand the PRC would be kept. It was clarified that the PRC would reside in the stroke patients' case note with a copy handed to the stroke patient for recording his or her scores across each index during clinic visits. This is hoped would be a springboard for improved communication between the provider and the stroke patient as well as empowering the patient to demand for services. For ease of use, the TTF suggested a replication of patient's total score on the first page of the PRC, which would enable patients track their progress towards recommended risk factor control at a glance.