An interdisciplinary clinic in rural Tanzania – observations on chiropractic care in a developing nation

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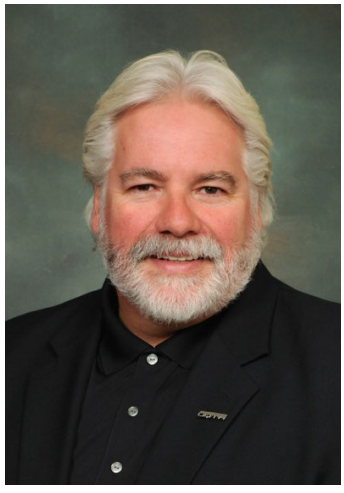

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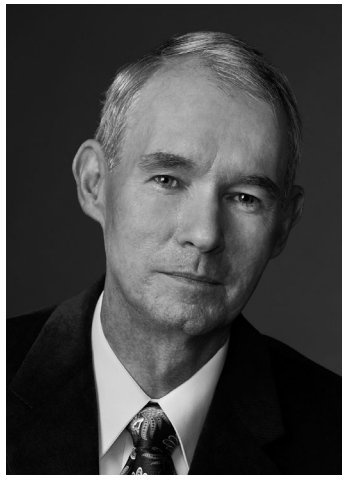

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It appears that a great many chiropractors and chiropractic institutions are involved in health care initiatives in developing countries. Developing nations present extraordinary opportunities to do good, but also

Il semble qu'un nombre important de chiropraticiens et d'institutions chiropratiques participent à des initiatives de soins médicaux dans des pays en développement. Ces pays offrent beaucoup d'occasions pour des actions

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Conflict of interest: B. Budgell is a director and president of the executive committee of Global Peace Network, the Canadian NGO which is part-owner of the Kanyama Village Dispensary.

carry risks, for practitioners and organizations, which may not be obvious prior to actual local engagement. This paper describes the guiding principles under which one international collaboration has evolved in rural Tanzania, a so-called 'low resource' setting where the majority of families subsist in extreme poverty. Several challenges to effective care are also identified.

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positives, mais comportent aussi pour les praticiens et les organisations des risques qui ne sont pas toujours évidents avant l'engagement sur le terrain. Cet article décrit les principes directeurs sur lesquels a évolué une initiative collaborative internationale en Tanzanie rurale, un environnement décrit comme faible en ressources, où la majorité des familles subsiste dans une extrême pauvreté. L'article cerne en outre plusieurs défis à relever pour offrir des soins efficaces.

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MOTS CLÉS : chiropratique, Tanzanie, développement international, aide

Introduction

While most chiropractors and virtually all accredited undergraduate chiropractic programs are located in wealthier nations, an increasing number of chiropractic practitioners and students seek clinical experiences in developing nations. For instance, at a recent meeting of the directors of clinics of North American chiropractic colleges, 10 of 17 clinic directors present reported that their students take part in humanitarian chiropractic missions in developing nations (Survey by Dr. Lemire at the ACC-RAC Clinic Directors Meeting, March 14, 2013, Washington, DC, USA). Out of the 10 colleges, 3 indicated that they did not support their students' endeavors in international humanitarian missions. Unfortunately, the opportunities available appear to cover a broad spectrum ranging from frankly entrepreneurial exercises which exploit vulnerable populations and naive students, to programs which seek to meet the standards of education and clinical care seen in the most highly regulated environments. This paper describes an evolving interdisciplinary outpatient clinic in rural Tanzania, the Kanyama Village Dispensary. The Kanyama Village Dispensary (seen in

Figure 1
The Kanyama Village Dispensary.

Figure 1), operates under a memorandum of association between Global Peace Network (GPN), a registered Canadian charity (www.globalpeacenetwork.ca), the Tanzania Home Economics Association (TAHEA), a Tanzanian community-based organization, and the Magu District Council, the level of government responsible for overseeing health care within the district in which the clinic is located. GPN, which founded the clinic, conducts programs in Tanzania and Nicaragua, and subscribes to the principle that international programs should be legal, ethical and effective. This paper describes how the Kanyama Village Dispensary models these values.

Legality

Historically, international non-governmental organizations (NGOs) in Tanzania have, in the words of one Canadian development officer, 'gone where the government was not and done what the government could not do (personal communication, 2012).' This approach may have been justified at a time when the government was largely absent from rural health care. However, governance in an independent Tanzania has evolved considerably and it is no longer possible, practical or responsible for NGOs to 'fly under the radar.' In Tanzania, regulations require the registration of health care facilities, setting requirements for physical facilities, such as floor space and segregation of rooms, and stipulating which types of services may be offered according to the facility classification. Health professionals are also regulated, although at the time of the establishment of the Kanyama Village Dispensary in 2013, there were no chiropractors registered to practice in Tanzania, nor had specific legislation been contemplated. Thus, the first chiropractor registered to practice in Tanzania, a Canadian Chiropractor, Dr. Andrew Wilson, DC, was registered under the legislation for practitioners of 'traditional medicine.' Four chiropractic practitioners have subsequently been registered under the same legislation, and a physiotherapist was permitted to practice without registration as no specific legislation governed physiotherapy at the time she was at the dispensary. Within this context, general liability insurance for the facility provides a measure of protection to patients and practitioners.

Once the practitioner has received a letter of invitation from the District Executive Director to provide volunteer clinical services, he or she can apply for registration. The process of registration is undertaken by the District Council on behalf of the volunteers; in essence there is no cost to the volunteers for this process.

Within the Tanzanian health care system, a dispensary, such as the one described herein, is an outpatient facility designed to serve a catchment area of 6 to 10 thousand people. In most instances, it is the patient's first point of contact with the public health care system, although some communities also have so-called 'health outposts' staffed by local people who have been given some rudimentary training in first aid and triage.[1] The Kanyama Village Dispensary was designed to exceed the space requirements for a dispensary, with a view to evolving into a health center, the next highest classification of health care facility. As a registered facility, the Kanyama Village Dispensary normally has a staff of two nurses and two 'clinical assistants' provided by the District Medical Officer. A clinical assistant is a person who has completed a 2-year diploma program following high school, and may have undergone some further specialized training.[1] Clinical assistants are normally referred to as 'Doctor' and have much the same scope of practice as medical doctors in Canada. To put this into perspective, in Magu District there are 3 medical doctors (MDs) serving a population of approximately 300,000. As a registered facility, the Kanyama Village Dispensary is also entitled to an allotment of essential medicines distributed from a national supply centre. However, the distribution of medicines is problematic throughout Tanzania and after two years of operation the Kanyama Village Dispensary has still not received its allotment. Consequently, the District Medical Officer has redistributed some medications from the District hospital, and supplementary supplies are brought from Canada with visiting volunteers. No license is required to import donated medications and donated medications are dispensed by on-site medical staff.

In general, the volunteers at the Kanyama Village Dispensary attend to musculoskeletal complaints Monday to Friday in a dedicated on-site rehabilitation building. Clinic records for the year ending July 31, 2015 show that more than 70% of patients present with chronic low back pain and about 25% with neck pain. These statistics are congruent with the 2010 Global Burden of Disease Report, which revealed that among non-communicable diseases, diabetes and musculoskeletal disorders such as low back pain and neck pain increased the most between 1990 and 2010 in most regions of the world.[2]

In the process of diagnosing and treating musculoskeletal disorders, the chiropractors have to rule out tropical diseases such as malaria, amoebiasis and schistosomiasis, as well as common communicable diseases such as HIV and tuberculosis. Being registered as practitioners of 'traditional medicine', the chiropractors have no limitations on their scope of practice, and could legally recommend or provide drugs and treat patients with non-musculoskeletal conditions. However, the practice at the Kanyama Village Dispensary is to refer non-musculoskeletal complaints to the medical staff on site. Any drugs available in Tanzania can be purchased over-the-counter without a prescription. The practice at the Kanyama Village Dispensary is to refer patients to our medical staff for provision of drugs.

Ethical Considerations

The population served by the Kanyama Village Dispensary includes many people who live in extreme poverty – defined by the World Bank as living on less than $1.25 USD per day.[3] In theory, Tanzania has a national insurance program in which families may enroll for the equivalent of approximately $10 dollars per year. This exceeds the ability of most local families to pay. Children under the age of 5 and adults over 60 years are supposed to receive free health care. However, front line facilities (mostly dispensaries) often have insufficient medications or diagnostic supplies[4,5], so that patients are referred out to private pharmacies and labs. Since drugs and commercial laboratory services are beyond the means of most Tanzanians, the net effect of all of these factors is that many people in rural communities do not have access to registered health services at all.[6,7] Thus, all care provided by volunteers at the dispensary is offered free of charge. Additionally, no charge is rendered for the use of malaria rapid diagnostic kits or urinalysis multistix donated through GPN. Furthermore, with the understanding and cooperation of the District Medical Officer, the medical staff routinely waives charges for any service to patients who might have difficulty paying.

A minority of people in the catchment area of the dispensary have a primary school education and illiteracy is the norm. Few are sufficiently fluent in English to allow an unaided interview in English, and for many even the national language, Kiswahili, is not spoken well. Patient interviews are conducted through interpreters, including clinic medical staff. Record keeping for patients receiving treatment from volunteers meets the same standards as those required for practice in Canada. Hence, in addition to demographic data and health history, patients provide a history of their current complaint, leading to a recorded diagnosis and management plan. As is the practice throughout Magu District, written informed consent is not acquired since most patients are illiterate. Interestingly, the most current national guidelines for clinical practice do not make reference to informed consent.[8] Furthermore, most patients do not have a sufficient understanding of human biology, health and disease to weigh treatment options, which are relatively limited to start with. Most people in the community regard witch-craft as an important cause of disease or even the unifying cause of disease.[9] In this environment, patient-directed care and informed consent as implemented in more developed nations are meaningless, and so practitioners take on the somewhat conflicted roles of both clinician and patient advocate.

Unlike some models, the program at Kanyama Village Dispensary does not charge a fee to volunteers. Volunteer practitioners are expected to make a commitment of 3 months, as it is felt that shorter stays disrupt rather than contribute to the program. To date, room and board, local transportation, and economy return airfare have been provided by GPN. In the most recent instance, this was assisted by a scholarship from the Student Canadian Chiropractic Association. Additionally, in July of 2015, the dispensary received two volunteer chiropractic students and a professor from the University of Québec at Trois-Rivières (UQTR). These volunteers paid their own expenses for their one-month stay, which was planned as a pilot exercise for placing future students at the dispensary and other health care facilities in Tanzania. The two visiting students were closely supervised by their professor and were required to maintain the same clinical standards of practice as they would have during a clinical supervised placement at the UQTR's Outpatient Student Clinic. The clinical placement in Tanzania was counted towards partial fulfillment of course requirements of their final year at UQTR.

Effectiveness

With local variability, musculoskeletal disorders now rival or exceed more high profile diseases such as malaria, tuberculosis and HIV/AIDS, as causes of days lost to disability and loss of productivity in East Africa.[2] In 1990,

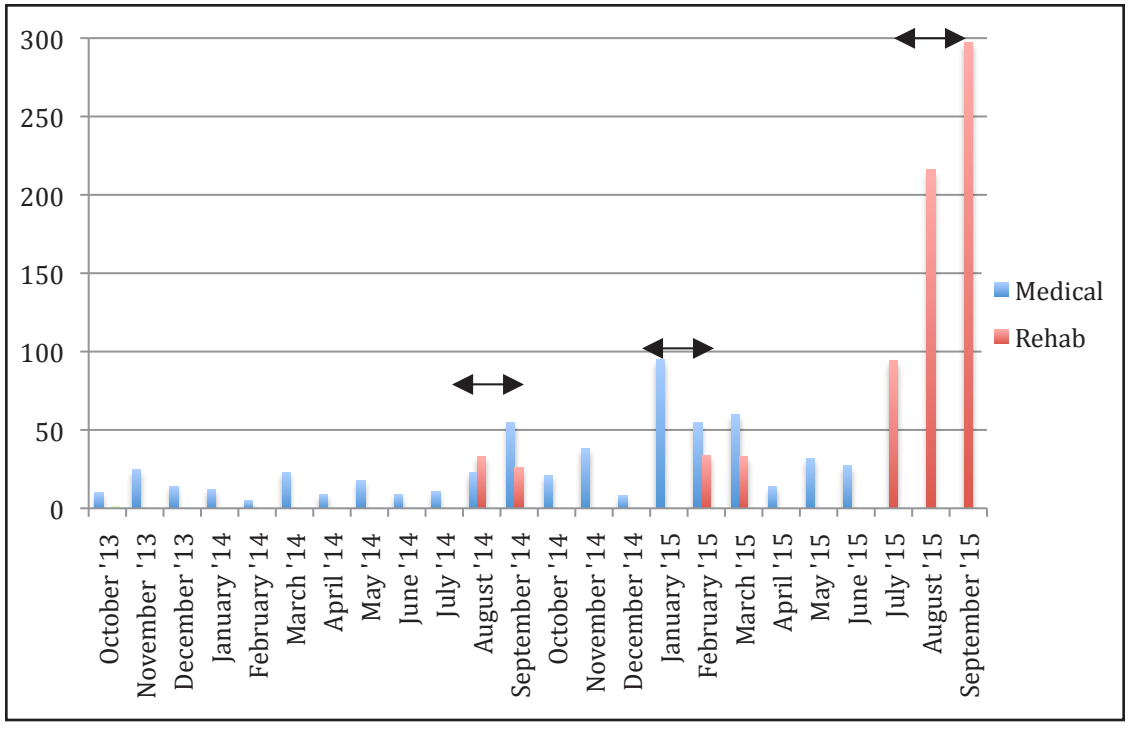

Figure 2.
Kanyama Village Dispensary Patient Visits. October 2013 – September 2015. Bi-directional arrows indicate times when Canadian volunteers have been on-site.

low back pain ranked number 12 out of the top 25 causes for disability and reached number seven in 2010.[2] Sadly, musculoskeletal specialists are almost absent from Tanzania and in 2014 the World Confederation of Physiotherapists listed only 40 physiotherapists for the approximately 40 million people in Tanzania.[10] Currently, volunteers at the Kanyama Village Dispensary appear to be the only registered chiropractors in the country. Public rehabilitation facilities are absent from Magu District. Hence, patients suffering musculoskeletal trauma or stroke, for example, have historically only received acute care before discharge.

Figure 2 maps patient visits to the clinic since it was first staffed by Magu District health workers in 2013. Initial patient numbers were very low, largely due to the virtual absence of medicines and diagnostic tests. This situation is not uncharacteristic of Tanzania in general.[1]

When Canadian volunteers have been on site (bi-directional arrows in Figure 2) from July to September 2014, January to March 2015, and most recently at the beginning of July 2015, a rapid increase in the number of patients seeking musculoskeletal care can be observed. Interestingly, there were also coincident and sharp increases in patients seeking medical care for non-musculoskeletal complaints (data not yet available for medical care from July to September, 2015). The increase in 'medical' patients may be attributed to referrals from the rehabilitation staff to the medical staff, and also possibly due to the increased attractiveness of visiting practitioners to local patients, due to both perceived and real expertise.

Challenges

The model of the not-for-profit, remote, interdisciplinary clinic faces a number of important interwoven challenges. The intermittent provision of rehabilitation services, as implemented to date, conflicts with the concept of rehabilitation, which often requires continuous care over weeks or months. On the other hand, it is challenging to recruit and fund volunteers, particularly considering the distance of the clinic from Canada, and even its remote-

ness in Tanzania. A mechanism which is being explored to overcome these difficulties is to have the clinic, and related facilities in the referral chain, function as external clinics for accredited educational programs in Canada and elsewhere. Ultimately, however, sustainability and scalability can only come from the provision of adequately trained local practitioners.

Lessons Learned

While we have no statistics to refer to, the common knowledge among development workers in Tanzania is that the average project fails, often quickly and quite spectacularly. The Kanyama Village Dispensary has weathered its own crises and its relative longevity appears to be due partly to local partnerships and local intelligence. More specifically, the input of the Magu District Council and the Tanzania Home Economics Association has been invaluable in navigating the several layers of bureaucracy which can either facilitate or defeat philanthropic initiatives. It has also been important to temper North America enthusiasm and to learn patience. Things almost invariably take longer than anticipated to achieve, but often for very good reasons. For example, our Tanzanian colleagues normally contract malaria at least once each year, which means that work often falls behind schedule. During the rainy seasons, transportation becomes quite problematic and unpredictable, and at any time of the year electrical and communications systems often fail. In circumstances which might be quite frustrating, we remind ourselves that if things worked as well as they do in North America, there would be no need for us in Tanzania. We are also encouraged by seeing improvements in the well-being of our community with each passing year – in other words, we observe that philanthropy, by and large, works.

References:

1. Kwesigabo G, Mwangu M, Kakoko D, Warriner I, Mkony C, Killewo J, et al. Tanzania's health system and workforce crisis. J Publ Health Pol. 2012;33(s1):S35-S44.
2. Murray C, Voss T, Lozano R, Naghavi M, Flaxman A, Michaud C, et al. Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: a systematic analysis of the Global Burden of Disease Study 2010. Lancet. 2012;380(9859):2197-2223.
3. Bank TW. Extreme poverty rates continue to fall: The World Bank; 2015 [cited 2015 August 27, 2015].
4. Kayombo E, Uiso F, Mahunnah L. Experience on healthcare utilization in seven administrative regions of Tanzanian. J Ethnobiol Ethnomed. 2012;8(5).
5. Gilson L, Magomi M, Mkangaa E. The structural quality of Tanzanian primary health facilities. Bull World Health Organization. 1995;73(1):105-114.
6. Borghi J, Maluka S, Kuwawenaruwa A, Makawia S, Tantau J, Mtei G, et al. Promoting universal financial protection: a case study of new management of community health insurance in Tanzania. Health Rese Poli and Syst. 2013;11(21).
7. Muela S, Mushi A, Ribera J. The paradox of the cost and affordability of traditional and government health services in Tanzania. Health Pol Plan. 2000;15(3):296-302.
8. Tanzania Gov. Standard Treatment Guidelines and National Essential Medicines List. In: Ministry of Health and Social Welfare, editor. 4 ed. Dar es Salaam: Ministry of Health and Social Welfare; 2013.
9. Chipwaza B, Mugasa J, Mayumana I, Amuri M, Makungu C, Gwakisa P. Community knowledge and attitudes and health workers' practices regarding non-malaria febrile illnesses in eastern Tanzania. PLOS Neglect Trop Dis. 2014;8(5):e2896.
10. World Confederation for Physical Therapy. Association of physiotherapists in Tanzania: World Confederation for Physical Therapy; 2015 [cited 2015 September 17, 2015].