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Content, participants and outcomes of three diabetes care programmes in three low and middle income countries

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ABSTRACT

Aims: To improve access and quality of diabetes care for people in low-income countries, it is important to understand which elements of diabetes care are effective. This paper analyses three diabetes care programmes in the DR Congo, Cambodia and the Philippines.
Methods: Three programmes offering diabetes care and self-management were selected. Programme information was collected through document review and interviews. Data about participants' characteristics, health outcomes, care utilisation, expenditures, care perception and self-management were extracted from a study database. Comparative univariate analyses were performed.
Results: Kin-réseau (DR Congo) is an urban primary care network with 8000 patients. MoPoTsyo (Cambodia) is a community-based peer educator network, covering 7000 patients. FiLDCare (Philippines) is a programme in which 1000 patients receive care in a health facility and self-management support from a community health worker. Content of care of the programmes is comparable, the focus on self-management largest in MoPoTsyo. On average, Kin-réseau patients have a higher age, longer diabetes history and more overweight. MoPoTsyo includes most female, most illiterate and most lean patients. Health outcomes (HbA1C level, systolic blood pressure, diabetes foot lesions) were most favourable for MoPoTsyo patients. Diabetes-related health care expenditure was highest for FiLDCare patients.

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Conclusions: This study shows it possible to maintain a diabetes programme with minimal external resources, offering care and self-management support. It also illustrates that health outcomes of persons with diabetes are determined by their bio-psycho-social characteristics and behaviour, which are each subject to the content of care and the approach to chronic illness and self-management of the programme, in turn influenced by the larger context.

1. Introduction

The problems with access to and quality of care for patients suffering from diabetes mellitus in low- and middle-income countries (LMIC) are widely recognised [1]. While the number of persons with diabetes in need for care increases, inadequate supply of diagnostics and medicines, lack of staff, poor quality of care and high out-of-pocket payment hamper the delivery of continuous care for people with lifelong conditions [2–4]. Improvements in access mostly relate to decentralisation of care to the primary care level [5–8] or in special outpatient clinics [9]. Task-shifting to Community Health Workers (CHWs) or expert patients is less frequent [10,11]. Many studies show the effectiveness of a specific programme, but there is still insufficient understanding of what makes them effective in terms of promoting self-management and reaching good health outcomes. Few comparisons between programmes, their differences in content and quality of care, their context and their results have been made so far. This paper aims to narrow this knowledge gap, by an analysis of commonalities and differences between three diabetes care programmes in three LMIC.

We presume that health outcomes of persons with diabetes are determined by their bio-psycho-social characteristics and by their behaviour, which are subject to the content of care and the approach to chronic illness and self-management of the programme in which they participate, which is in turn influenced by the socio-economic and structural context. We focus our analysis on these assumptions, guided by the following questions: (1) what is the programme content and approach? (2) what are patient characteristics and outcomes? and (3) what could explain differences between programmes?

2. Methods

This study compares diabetes care programmes in 3 countries: DR Congo, Cambodia, and the Philippines. The selection process started at a workshop on chronic care in LMIC in 2009 in Belgium, where these programmes were identified for their offering care, self-management education and support to diabetic patients, and their willingness to participate in the TEXT4DSM study (ISRCTN 86247213) [12,13]. A theoretical framework was developed to understand relationships between care, self-management and health outcomes (Fig. 1).

The first programme is a 40-year-old network in Kinshasa, DR Congo (estimated diabetes prevalence 6.1% [15]). It presently comprises 80 primary care centres, locally known as the '*réseau*' (Kin-réseau), which deliver diabetes care as part of their basic package. Its origins were laid out by a missionary doctor, who trained health centres staff in to decentralise care [18]. Kin-réseau has not been formalised into an organisation, but the two Christian organisations responsible for most facilities have employed a diabetes coordinator. External funding for specific activities contributed to the impact of the network. Currently, circa 8000 people come for regular follow-up.

The second programme consists of networks of community-based Peer Educators (PEs) in Cambodia (diabetes prevalence 3.0% [15]), supported by an organisation called MoPoTsyo Patient Information Centre (MoPoTsyo). It became operational in 2005 in Phnom Penh, with two patients with diabetes who – after having received a short training about diabetes – searched in the community for other patients to establish a peer group for exchange of information. The training of patients as PE facilitated expansion to, presently, 12 districts, more than 130 PEs and 7000 patients with diabetes. PEs spend on average 1.5 day per week on their duties, receiving small financial incentives per activity. MoPoTsyo has developed a system to support, supervise and monitor PEs and to improve access to local medical services, through support for the local hospital outpatient consultations, a revolving drug fund and laboratory examinations. In 2012, MoPoTsyo had 36 salaried staff members, 1/3 being patients with diabetes. 40% of the total cost is covered by patient fees. Starting 2013, the MOH aims to integrate the PE networks in the public health care system [22,23] (MOH2013).

The third programme is the 'First Line Diabetes Care Project" (FiLDCare) in the Philippines (diabetes prevalence 6.9% [15]). Patients receive primary care and self-management education in a health facility; self-management support is community-based, provided by CHWs. It started in 2009

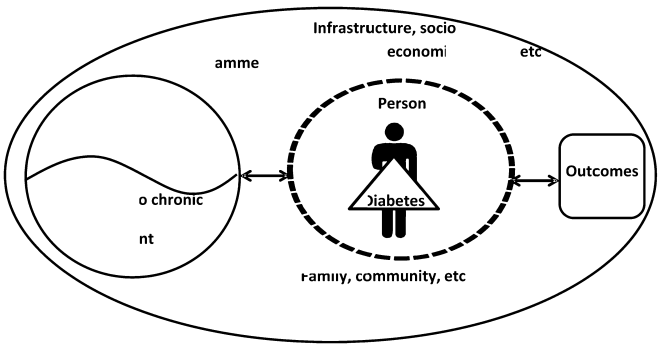

Fig. 1 – Theoretical framework to understand relations between care, self-management and health outcomes.