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Review Article

**ROLES OF PHYSICIAN, NURSES AND SOCIAL WORKER IN
MANAGEMENT OF DIABETIC PATIENTS - REVIEW**

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Abstract:

The diabetic patient possesses a multitude of distinct educational requirements pertaining to dietary management, monitoring, and therapeutic interventions. Specialist nurses in numerous health care systems often fulfill these requirements, with the primary objective of enabling patients to independently control their diabetes. The current level of integration of social care activities into the treatment of patients with diabetes mellitus remains uncertain, despite the increasing national expenditure in such projects. Various healthcare professionals, such as doctors, nurses, and social workers, fulfill multiple responsibilities in the self-management of Type 2 Diabetes Mellitus (T2DM), which include providing organized education, continuous support, and advocating for the healthcare system. Thoroughly researching and enhancing the preparation and coordination for these responsibilities is of utmost importance.

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INTRODUCTION:

Type 2 diabetes mellitus (T2DM) has emerged as a significant contributor to the worldwide burden of disease. In 2014, around 422 million individuals were affected by the condition, which is a significant increase from the 108 million recorded in 1980. This is an almost fourfold rise during a span of thirty-four years. According to projections, the global prevalence of Type 2 Diabetes Mellitus (T2DM) is anticipated to rise by around 54% from the 2013 statistics, reaching over 592 million individuals by 2035. Furthermore, this number is likely to further grow to 642 million adults by 2040 [2,3]. Every part of the world is impacted, but low and medium income countries (LMIC), where more than 70% of cases of type 2 diabetes mellitus (T2DM) occur, experience greater suffering [4]. Approximately 12% of the total worldwide health spending is allocated specifically to Type 2 Diabetes Mellitus (T2DM) and its related complications. Most nations allocate between 5% and 20% of their national health budget to address this disease[3].

In order to make progress in addressing health disparities, some health professional groups in the United States have advocated for the systematic integration of social care into the delivery of healthcare [5]. The discussions have centered around two main objectives: broadening the scope of social risk screening and enhancing navigation assistance for patients in accessing appropriate social services [5]. The Centers for Medicare and Medicaid Services (CMS) and the National Commission on Quality Assurance are now evaluating performance indicators for social care screening and interventions in specific programs, in response to the increasing interest in social care. Simultaneously, many states are implementing measures to encourage social care programs. The body of research for both social risk screening and associated therapies is likewise growing fast [6].

The prevalence of Type 2 Diabetes Mellitus (T2DM) has experienced a substantial increase worldwide in recent decades. A rising trend in High Income Countries (HIC) is the utilization of community health workers (CHWs) to provide effective clinical outcomes in the delivery of T2DM self-management assistance [7].

DISCUSSION:

Poor management of diabetes leads to avoidable illness and death, worse quality of life, and higher healthcare expenses [8]. Individuals diagnosed with Type 2 Diabetes Mellitus (T2DM) should possess the

capacity to independently control and regulate their illness at an early stage, which may enhance their overall health results [6]. Most people with T2DM are more inclined to comply with medication usage rather than participating in additional diabetic self-management (DSM) activities [9]; yet, adhering to medication alone may not be enough to attain optimal health outcomes [5].

On a global scale, there is an increasing number of individuals who have one or more long-term illnesses (LTCs), which is leading to a greater need for sophisticated primary care services [8]. It is commonly suggested that when healthcare professionals (HCPs) with diverse perspectives, expertise, and abilities collaborate, it leads to better patient care and improves the overall work environment for HCPs [6]. Implementing new care models and changing the skill-mix of the workforce can potentially improve the efficiency and effectiveness of care [7]. Estimates from the United States indicate that over 50% of care for patients with long-term conditions (LTCs) and up to 80% of preventive care might be carried out by non-physician members of the general practice team [10]. Multi-professional collaboration (MPC) in health care refers to the coordinated efforts of interdependent experts to address the care needs of patients [11]. Although there is increasing acknowledgement of the significance of collaborative approaches required by policy reforms in Norway and elsewhere [12], healthcare institutions have challenges in defining and attaining novel kinds of collaborative practice [13]. The conceptualizations of MPC in healthcare are not well-defined [14]. There is a scarcity of empirical information to provide guidance for the process of practice transformation in establishing new standards of care, wherein knowledge, decisions, and accountability are shared [15]. A comprehensive analysis, investigating team-building interventions in non-acute healthcare settings, discovered limited data about the factors that influence professional interaction [16].

In Norway, the typical medical practice consists of 3.6 general practitioners (GPs) who collectively see to an average of 1,106 patients per GP [17]. Approximately 95% of general practices are owned by general practitioners (GPs) who have contractual agreements with the municipality. These practices are funded through capitation, fee-for-service, and patient co-payments. The transition from assigning tasks to individual care providers to adopting team-based care has occurred in numerous countries after the implementation of new payment systems, such as pay for performance, capitation, and direct subsidies for

hiring and training nurses [18]. In Norway, reimbursement for general practice is limited to care provided by physicians. Collaborating healthcare professionals (cHCPs), such as nurses, medical secretaries, and nutritionists, do not have the ability to bill for their services independently. Instead, they are engaged directly by practices. Therefore, Norwegian primary care is not commonly characterized by multi-professional team-based care, in contrast to certain other countries [19,20].

Diabetes mellitus is an intricate condition, and the treatment guidelines in Norway stress the need of patients and caregivers addressing many psychological, behavioral, and environmental aspects and how these interact with one other [21]. A meta-regression study revealed that extending professional responsibilities, implementing team-based approaches, and employing case management were the most effective strategies for reducing HbA1c levels in patients with type 2 diabetes mellitus [22]. Several Norwegian general practices have implemented a restructured approach to diabetes care, which emphasizes collaboration and involves the participation of nurses or medical secretaries. Nevertheless, there is limited knowledge regarding the encounter of MPC and the specific responsibilities and caregiving methods employed by different experts in such collaborative arrangements [20].

The 1985 report from the British Diabetic Association in the UK advised that each health district, catering to a population of 200,000 individuals, should have a minimum of two diabetes expert nurses. In 1991, the number was raised to four per 250,000 individuals. Historically, the current levels of practice have not consistently aligned with this proposal. A research conducted by the Audit Commission revealed that out of the nine sites examined, only two were found to adhere to these recommended criteria [21]. The Royal College of Nurses in the UK advises that specialist nurses should get a salary that is at least equivalent to that of a ward sister, with many in higher-ranking posts [22].

In the United States, diabetes self-management education is conducted by a diverse group of healthcare professionals, including nurses, dietitians, pharmacists, exercise experts, doctors, and social workers who have obtained certification as diabetes educators. Their responsibilities in the management of patients with diabetes will encompass only a subset of those of the expert nurse. Specifically, they are far less inclined to modify treatment plans or provide guidance on concurrent conditions. In addition, the diabetes

educator does not engage in the education of other healthcare providers or the coordination of patient care [23,24]. Nevertheless, certain nurse diabetes educators have also received training to fulfill the role of nurse case managers. Their function is analogous to that of the specialized nurse, as they have the ability to modify treatments based on a set of management algorithms [24].

CHWs reported providing education most frequently ($n = 44$) for self-management of T2DM. Community Health Workers (CHWs) are frequently employed as non-professional diabetes educators for patients with Type 2 Diabetes Mellitus (T2DM)[25]. The objective of education differed among the research, however, the most commonly reported goal was to enhance patients' understanding. Community Health Workers (CHWs) provided stress management, meal preparation and planning, physical activity guidance, problem-solving assistance, goal-setting support, and teaching on medication adherence. None of the chosen studies encompassed all the aforementioned objectives.

Community Health Workers (CHWs) provide education to patients with Type 2 Diabetes Mellitus (T2DM) either in group settings, individually, or both, as indicated by 9, 14, and 19 articles, respectively. Individual education was typically administered in the homes of patients, and group education took place in diverse places such as health facilities, churches, or other community venues. Education was predominantly delivered through traditional paper-based resources, while there were sporadic instances where electronic tools were utilized[26,27].

Advocacy is the third most frequently stated function undertaken by Community Health Workers (CHWs) in relation to self-management of Type 2 Diabetes Mellitus (T2DM). This position partially intersects with the function of 'instrumental assistance', as certain sources have mentioned that advocacy includes providing referral support and facilitating doctor's appointments. Advocacy in this context pertains to the involvement of Community Health Workers (CHWs) in facilitating effective communication between participants and their physicians and health facilities. The aim is to ensure that participants receive high-quality clinical services that adhere to established guidelines. It involves assisting patients in obtaining health supplies, such as glucose strips, medication, and orthopedic shoes, from healthcare facilities. Without assistance, acquiring these items may be time-consuming [28,29].

The involvement of Community Health Workers (CHWs) in Type 2 Diabetes Mellitus (T2DM) self-management is becoming more significant, especially in High-Income Countries (HIC), particularly the United States. After analyzing the results of our analysis, we have classified these functions under the triad of education, support, and advocacy (ESA). A systematic assessment of Community Health Worker (CHW) interventions also found that teaching, support, and advocacy are the primary functions performed by CHWs[30]. The National Community Health Advisor Study in the United States conducted a nationwide survey that identified seven fundamental responsibilities for Community Health Workers (CHWs). These include cultural mediation, informal counseling and social support, education, advocacy, assuring access to necessary services, capacity building, and direct service provision[31]. A separate study conducted in New York State surveyed Community Health Workers (CHWs) and employers, and highlighted five fundamental functions performed by CHWs: advocacy, education, community outreach, referral, and cultural bridge [31].

Effective management and oversight of Community Health Workers (CHWs) is essential in determining the outcome of their performance. Various coordination models have been identified, which either positioned Community Health Workers (CHWs) as external individuals or integrated them as part of the patient's regular treatment. Models that incorporate Community Health Worker (CHW) coordination within the health system and provide CHWs with regular access to patient care have been proven to be beneficial. It is observed that Community Health Workers (CHWs) frequently work on the outskirts and do not have direct coordination with the health system, which can provide challenges in fully engaging in patient management. Research indicates that T2DM self-management treatments yield better clinical results when a Community Health Worker (CHW) collaborates with and is supervised by a nurse from a health facility for program implementation[32].

Research conducted in the UK, Germany, and Denmark indicates that incorporating nurses into diabetes care is linked to enhanced diabetes management quality and substantial time savings for general practitioners, without any negative consequences [33]. Nevertheless, these studies fail to offer any understanding of the methods employed by nurses to enhance the quality of treatment when collaborating with general practitioners. Curiously, in our study, GPs stated that the main duty of cHCPs was to adhere to a standardized diabetic control. However,

nurses and medical secretaries' answers suggested that they also prioritized addressing patients' psychological and emotional needs. Nurses and medical secretaries reported employing a conversational, personable, and powerful style of communication with patients, whereas GPs described their clinical reasoning approach as consultative and informed by test results. Within this particular environment, it appeared that cHCPs served as a complementary addition to care provided by general practitioners (GPs). This discovery is consistent with prior study conducted in primary care, which indicates that patients perceive nurse-led consultations as being more casual and amicable compared to consultations led by general practitioners [34].

Patient-centered care (PCC) has the potential to enhance patients' understanding, overall well-being, and capacity to manage their condition, and it may also result in more suitable medical choices [35]. The nursing profession has been commonly described as the "organizational glue," a concept that is associated with traditional gender roles. Women in the healthcare field are advised to focus on attending to the needs of others, including addressing organizational issues, collaborating with colleagues, and managing practical arrangements for patients and their families. This approach aims to address any functional deficiencies in the workplace [36].

Combining a variety of professional backgrounds and care styles can enhance the overall comprehensiveness of care [37]. Nevertheless, the implementation of collaborative practice necessitates a change in the mindset of healthcare practitioners and the regulatory bodies that oversee the establishment of professional roles and obligations [38].

The general practitioners verified that their sessions were bustling, with limited chances for patients to inquire or get diabetes education. Prior research conducted in hospital settings has shown that the inclusion of certified diabetes educators, who are knowledgeable in case management principles, can result in enhanced patient care and decreased hospital readmissions [38]. A key objective of diabetes education programs is to empower patients to assume responsibility for their health. This is crucial because the expenses and problems linked to diabetes, such as end-stage renal disease, blindness, and amputations, can mostly be avoided and are connected to one's lifestyle [39].

CONCLUSION:

Effectively overseeing individuals with type 2 diabetes requires a significant amount of time. Primary care clinicians, who handle the majority of diabetic appointments, are sometimes constrained by time limitations. Prearranged appointments with diabetes care managers, including nurses, pharmacists, social workers, and other team members, help clinicians and are linked to enhanced glycemic control. An especially efficient approach is care management that involves nurses or pharmacists making adjustments to drugs without obtaining prior approval from a physician. It is imperative for care management programs to carefully address disparities in diabetes care and results. Primary care's extensive adoption of diabetes care management encounters various obstacles: insufficient, diversified, and skilled care manager workforce; restrictions that restrict the scope of practice for care managers; and funding models that do not promote care management. Comprehensive measures are required to tackle these obstacles. Specifically, there is a requirement for payment reform to encourage the expansion of diabetes care management. This entails incorporating fee-for-service codes that sufficiently compensate care managers for their efforts, implementing shared savings models that redirect savings towards primary care, and raising the proportion of healthcare expenditure allocated to primary care.

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