Empowering diabetes self-management: A qualitative study on developing and evaluating health literacy tools for virtual consultations with certified diabetes educators

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This article presents a quality improvement study focused on developing a health literacy assessment tool for certified diabetes educators in Canada to use during virtual consultations with people diagnosed with type 2 diabetes. The study aims to improve healthcare professionals' understanding of their patients' health literacy levels in order to provide tailored education and support for diabetes self-management. It explores the prevalence and management of diabetes, the role of health literacy and education in diabetes management, and the significance of the study. The research questions address the effectiveness and practicality of existing health literacy tools in virtual consultations, the potential for improvement or development of a new tool, and the implications for patient-centred care in diabetes education. The article emphasises the importance of assessing health literacy in virtual consultations to ensure effective diabetes management and better outcomes for individuals living with the condition.

Diabetes is a prevalent chronic condition affecting a significant portion of the Canadian population (LeBlanc et al, 2019). Poorly controlled diabetes can lead to severe complications, necessitating effective diabetes management strategies (Chaudhury et al, 2017). For nurses, educators, certified diabetes educators (CDEs) and all healthcare providers, dedication to patient-centric care is an important aspect of working with individuals who have diabetes. Experience has underscored the importance of assessing people's needs before providing diabetes education during virtual consultations. Consequently, this study aimed to develop or adapt a health literacy assessment tool to help healthcare professionals (HCPs) better understand their patients' health literacy in the context of type 2 diabetes management.

Self-management is vital for individuals with diabetes, but requires proper education to be effective. Medications can improve blood glucose levels but proper self-care management is required to prevent complications, such as hypoglycaemia. Patient-specific education is crucial in the management of diabetes and leads to improved clinical outcomes. However, low health literacy levels pose a risk to effective self-management (Rafferty et al, 2021). Understanding people's health literacy is essential in order to tailor education to their needs (Adams, 2010). The lack of visual cues during virtual phone consultations makes it challenging for HCPs to assess people, leading to potential information loss and barriers to effective diabetes management (Glauser, 2020).

Purpose of the study

This research aimed to find and assess existing

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Article points

1. A study was conducted to develop a tool to assess during virtual consultations the health literacy of people with type 2 diabetes.
2. For healthcare professionals to provide effective diabetes education, it is essential that an understanding of an individual's health literacy is gained.
3. Through a quality improvement approach, participating certified diabetes educators helped to develop a new tool with the potential to help ensure effective self-management and improved outcomes.

Key words

- Certified diabetes educators
- Health literacy tools
- Type 2 diabetes

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diabetes health literacy tools for use in virtual consultations by telephone. The study sought to enhance HCPs' understanding and assessment of people's health literacy levels during virtual consultations, enabling educational materials and services to be customised. The study focused on type 2 diabetes within a community diabetes education programme in Canada. Using a qualitative approach and interpretive quality improvement (QI) approach, it utilised perspectives of CDEs (HCPs dedicated to excellence in diabetes education; The Canadian Diabetes Educator Certification Board, 2023) on the effectiveness and practicality of existing health literacy tools.

Methodology

The QI approach sought to enhance existing health literacy tools, or develop new ones, for virtual consultations with individuals by telephone. The Plan–Do–Study–Act (PDSA) model was used in order to provide a design that enables progressive outcomes (Hughes, 2008). Ethical considerations were addressed by obtaining approval from Athabasca University's Research Ethics Boards. In this qualitative study, the findings were analysed thematically.

Discussion and outcomes

The study consisted of five phases. In phase one, a comprehensive literature review was conducted in order to identify and assess all of the existing health literacy tools available for adults in the English language.

From this extensive pool, the focus moved to diabetes health literacy, resulting in the selection of six validated tools. These tools were in various formats, including surveys, open-ended questions and pronunciation assessments of diabetes-related terms. Following input from the supervisory committee, the selection was further narrowed to the three most suitable tools – the Diabetes Knowledge Test, the Diabetes Numeracy Test 5 and the Health Literacy Scale–Subjective Numeracy Scale.

To be deemed appropriate, these tools had to meet specific criteria. First, they had to comprehensively assess diabetes knowledge, including topics such as diagnostic testing and hypoglycaemia treatment. Secondly, they were required to cover essential points, such as blood glucose monitoring, understanding carbohydrates, and the impact of physical activity and medications on diabetes management. Lastly, they had to be practical for use in various clinical settings, including telehealth, without relying on visual aids or pictures for patient responses.

During phase two of the study, the main focus was for participants (CDEs from community diabetes programmes based in Canada) to evaluate existing diabetes health literacy tools and assess their suitability for use in a clinical setting. However, based on their feedback during an initial focus group, none of the existing tools were deemed acceptable for use in practice via phone. The consensus of the CDEs was that these existing tools were either too long or too complex, and were not useful in the practice setting to help them better understand the people in their care.

Consequently, during phase three, a new health literacy tool was created, specifically for use during virtual consultations with people diagnosed with diabetes. Based on the preferences of the CDEs and their feedback relating to diabetes management, it incorporated an understanding of diabetes terminology, blood glucose target ranges and nutrition. The new tool comprised objective and subjective questions, and was designed to be short and straightforward.

In phase four, the focus shifted to implementation in the practice setting. Following its creation, the CDEs incorporated it into their regular workflow during the initial consultations with their English-speaking people. The primary objective of this phase was to assess their patients' health literacy levels and enhance the CDEs' understanding of their clients' needs. It was then tested in practice with 20 clients diagnosed with type 1 diabetes, type 2 diabetes and prediabetes. After five and a half weeks, a qualitative survey was used to evaluate the CDEs' perception of the tool's effectiveness and its potential benefits in supporting their interactions with patients.

In phase five, a final focus group was organised to complement the qualitative survey and to gather additional data from the CDEs, providing deeper insights into the tool's usefulness. The discussions during this session contributed to the overall understanding of the tool's implementation and impact.

They revealed that the tool was helpful in the practice setting. They noted, however, that to be viable it should to be shortened, and modified versions needed to be developed for people living with prediabetes and type 2 diabetes who are not on insulin, those living with type 2 diabetes on insulin and those with type 1 diabetes.

To gain a fresh perspective, a CDE who was not involved in the creation and testing of the tool was also invited to evaluate it independently. This provided an unbiased assessment of its appropriateness and applicability in the clinical practice setting.

Virtual visits were chosen as the primary mode of communication during the study, owing to their accessibility and prevalence, especially during the COVID-19 pandemic. As phone visits were the most commonly used method of communication with individuals, the new health literacy tool was designed to be applicable during phone consultations.

Conclusion

Understanding the educational needs of people with diabetes was a crucial aspect of this research. The goal was to improve HCPs' understanding of the people they care for, as patient-centred care requires a deep appreciation of each individual's needs. To achieve this, a QI research design was employed, as this approach is process-based and practical for clinical settings.

Based on the recommendations of CDEs, the study successfully developed a diabetes health literacy tool to be tested during virtual consultations. The collaboration with CDEs, and the adoption of the tool in practice, demonstrated its potential for improving diabetes education and self-management. The authors recommend further modifications and testing to enhance the tool's effectiveness in clinical settings, and to explore its potential applicability to other chronic health conditions. ■

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