Diabetes care of dependent older adults: an exploratory study of nurses' perspectives

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Summary

This study aimed to explore nurses' perspectives on diabetes care for dependent older adults in home health care and nursing homes in Switzerland.

Growing numbers of old and very old adults with diabetes need professional care. In home health care older adults are usually in their 70s and in nursing homes they are about 10 years older. Inadequate diabetes care in older people leads to higher complication rates. Little is known about the views held and problems encountered by nurses working in home health care and nursing homes. Empirical information is lacking concerning perceptions of nurses caring for this dependent group.

A descriptive qualitative study of nurses' perspectives on diabetes care was conducted with a purposive sample of 23 nurses caring for dependent older adults with diabetes in one region of Switzerland in 2008–2009. Semi-structured focus group interview data were analysed using thematic content analysis.

Qualitative data analysis of nurses' transcripts elicited four themes: (a) actual situation in diabetes care – concerns about complications, inter-professional dependency, communication and continuity; (b) nurses' experiences – apprehension about varied interest in diabetes, suitability of assessments, and current knowledge of disease and its influence on patient outcomes; (c) barriers to diabetes care – patient isolation, co-morbidities, lack of understanding; and (d) resources for diabetes care – patients' social support, maintaining regular physical activities, adapting care to individuals' needs.

It was concluded that level of communication, continuity of care and professional roles need clarification. Regular exposure to training through different methods would encourage professional and interpersonal skills and possibly will lead to better patient outcomes. Introducing consulting roles for advanced nurse practitioners specialised in diabetes care within home health care and nursing homes may advance diabetes care within these settings.

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Key words

diabetes care; nurses' perspectives; nursing; education; older adults; nursing home; home health care; qualitative research

Introduction

In Western societies most people who have type 2 diabetes are above the age of retirement. The most significant factor contributing to high prevalence rates is the ongoing increase in life expectancy.[1] In a selective urban sample, prevalence rates of type 2 diabetes increased with age from 2.5% to 17.2% in men 35–75 years old.[2] Similar tendencies are observed in most developed countries.[3] Old age is often defined as being over the age of 65 years and is linked to reaching retirement age. However, there are many retired people in good health and old age cannot be defined purely chronologically. It must be based on biological indicators, social functioning and activities of daily living. Metabolic alterations occurring in older adults with type 2 diabetes are distinct from those that arise in younger people.[4] Still, this group of old and very old adults are seldom considered individually and diabetes care is rarely adapted to their specific needs.

Diabetes in older adults is frequently associated with increased incidence of: functional impairments;[5] falls and fractures;[6] urinary incontinence;[7,8] depression;[9,10] impaired cognitive function and dementia;[11,12] malnutrition and sarcopenia.[13,14] People with diabetes have a three-fold elevated risk for admission to nursing homes.[15] Many older adults with type 2 diabetes are prescribed more than five different medications at the same time, with the potential risk of inappropriate intake and raised hospitalisation rates.[16] Therefore, care of older adults with diabetes cannot be restricted to the management of hyper- or hypoglycaemia alone.

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Diabetes care of the older population. Services provided by nurses can enhance the care that people with diabetes receive and improve outcomes.[17] In some European countries, nurses, particularly specialist nurses in advanced practice, play lead roles in the delivery of diabetes care.[18,19] In a unique practice model, the effect of introducing advanced nurse practitioners in long-term care was studied.[20] These practitioners had positive impacts on improving staff confidence, and hospital admissions were prevented in 39–43% of cases. Identifying care priorities and planning contributed to the success of this model. In a number of European regions including Switzerland, the role of nurses, especially advanced nursing practice, is evolving. In Swiss home health care or nursing homes most nurses completed a three-year vocational training leading to a diploma in nursing. In these settings, nurses rarely have access to an advanced nurse practitioner specialised in diabetes.

Diabetes education of older adults is an integral part of diabetes care and aims at preventing acute and chronic complications through encouraging autonomy and self-care within the capacities of the older individuals.[21,22] Cognitive changes and co-morbidities are common in older adults leading to misunderstandings about disease and treatments.[23–25] Most existing diabetes education programmes are not adapted to the specific learning needs of older adults. Hearing or vision problems and limited mobility are common barriers to accessing health care services or utilising instructions.[26,27] When nurses perform routine nursing care, such as blood glucose tests or insulin injections, incidental learning moments may occur. Therefore, educating older adults in home health care and nursing homes would be well within the scope of professional nursing practice.[28] Discussions are ongoing regarding how to develop the quality of care in long-term care. Therefore, it is essential to explore the perspectives of nurses delivering diabetes care to the dependent population of old and very old adults with diabetes.

- How is the actual diabetes care in your institution?
- What are your experiences with the actual form of diabetes care?
- Tell me your experiences with a particularly difficult person with diabetes
- Tell me your experiences with a high functioning person with diabetes
- What aspects of diabetes care should be improved?

Table 1. Prompts used during focus group interviews

Aims

The purpose of the study was to explore nurses' perspectives on diabetes care in nursing homes and home health care services in the Canton of Fribourg, Switzerland, and to describe the existing level of diabetes care in these settings.

Methods

Design. Qualitative focus group interviews were carried out with nurses working in nursing homes and home health care services in 2008 and 2009.

Participants. Four head nurses, working within nursing homes or home health care, invited a sample of 23 nurses in their settings to participate in focus group interviews. The inclusion criteria were: nurses working in authorised nursing homes or home health care services, providing diabetes care and German or French speaking, willing to participate and giving informed consent. Three settings were in the German-speaking and one in the French-speaking area of the bilingual Canton of Fribourg. In our study, nurses in home health care were caring for older adults with mean age 78 years (±4.1). In nursing homes, the mean age of older adults was about 10 years older (87.8±5.7 years).

Data collection. Semi-structured focus group interviews lasting from 45 to 60 minutes were tape-recorded. Each interview began by the researcher (CH) stating her particular interest in diabetes care and then inviting the participants to talk about their experiences. The first question was very general, starting the discussion. Focus group interviews were conducted as described elsewhere.[29] The interview guide contained the open questions listed in Table 1.

Field notes were taken during and immediately after the focus groups to record additional information about moments of longer pauses, overlaps, interruptions, laughter or change of tone relating to the interactions between participants. All interviews were conducted by the same researcher (CH), who is fluent in German, French and English and works in the bilingual Canton of Fribourg in German and French. All focus group interviews were transcribed verbatim by a local bilingual student. Free translation from German and French to English aimed to preserve meaning.[30] The results were translated by CH and cross-checked by MS (German/English/French) and JH (German/English).

Ethical considerations. The ethics committee of the Canton of Fribourg approved the study. Informed consent from all participants was obtained in written form. All data were treated with confidentiality. Anonymity was secured by code numbering.

Data analysis and reliability: interview data. The qualitative data analysis employed thematic content analysis.[31] The process of coding and pattern identification was supported by using the qualitative data analysis software package ATLAS.ti v5.0. Each transcript was reviewed to identify individual meaning units by immersion into the data. A primary identification of recurrent themes was obtained by repeated listening to the recorded interviews and reading the transcripts. The content of field notes was compared to the transcripts. The units of analysis were sentences. The coding was carried out in an open way deriving the codes from the content of transcripts. Through open coding a list of repeating main codes was obtained. First-level coding was done until the meaning units fitted easily into the categorisation scheme. In the second-level coding, the meaning units were retrieved and grouped together within the same category. The 13 categories were integrated into four themes.

Credibility was assured by using multiple methods of data collection such as focus group interviews and field notes. Several researchers were part of the study and involved in the analysis and interpretation of the data. Different sources of the same information through numerous focus group interviews were used to validate the findings.

Results

Participants comprised 23 nurses in four focus groups with eight, four, six or five members respectively (one male; mean age 38 years, range 23–50 years). The average length of work experience was 12.9 years (range 1–30 years).

Participants described activities from daily work. It was notable that all nurses preferred talking about 'clients' instead of using the term 'patients'. Mostly, they stated care activities and work circumstances as identified in the theme: actual situation in diabetes care. They described their experiences with diabetes care in daily practice. They defined some barriers to successfully integrating diabetes care and recognised several specific resources to help the integration process of diabetes care into the older adult's life (Table 2). We provide an overview of key findings.

(a) Actual situation in diabetes care	(n=243)	**(c) Barriers to diabetes care**	(n=61)
– Complications	(n=30)	– Individual patient barriers	(n=25)
– Care activities	(n=169)	– Co-morbidities	(n=36)
– Inter-professional dependency	(n=32)	**(d) Resources for diabetes care**	(n=146)
– Documentation	(n=12)	– Individual resources	(n=59)
(b) Nurses' experiences	(n=130)	– Interest in diabetes	(n=7)
– Adjustments of care	(n=44)	– Diabetes team	(n=80)
– Standard medical care	(n=71)	Number of codes (n) represents frequency of theme occurring in the data	
– Assessments	(n=8)		
– Additional competencies	(n=7)		

Table 2. Themes identified through thematic content analysis of nurses' verbal data

(a) Actual situation in diabetes care (n=243). The description of nurses' work circumstances is encompassed in this theme. It consists of the statements about four aspects: complications (n=30), care activities (n=169), inter-professional dependency (n=32), and documentation (n=12). Nurses described different patients with long-term complications and co-morbidities. These problems limited patients' self-care, and required supervision and closer follow up of patients or family carer. Nurses carried out basic and instrumental activities of daily living in support of the patients.

'We have clients with diabetes, depression and nephropathy making it even more difficult for us to achieve good [blood glucose] results. (…) We inject insulin on behalf of the clients until they have learned the skills and we [client and nurse] feel confident.'

Inter-professional dependency was discussed at length in all four focus groups. There was an element of dissatisfaction in responses about various care roles and relationships among different health care providers, especially physicians. Legally, physicians have the main responsibility for the diabetes management of patients. Some physicians decide about diabetes care without involving nurses or consulting the diabetes team. Good communication and clear documentation were sometimes lacking.

'We are dependent on the collaboration of physicians because we get our clients from them (…). Often physicians leave older people with diabetes at higher blood glucose levels (…).'

(b) Nurses' experiences (n=130). The statements about nurses' experiences with the diabetes care of older adults are described in this theme, consisting of four aspects: adjustments of care (n=44), standard medical care (n=71), assessments (n=8), and additional competencies (n=7). Nurses in the described settings adapted care to the older person's needs in the

individual's own environment. Usually, standard medical care and diabetes education were delivered at consultation offices or in hospitals. Medical home visits were only provided in emergency situations and rarely as preventive home visits. The outcome of diabetes education given to older people outside the normal living environment was perceived as overwhelming patients and of minimal effect. People reacted differently in home settings, in consultation offices or in hospitals. Hence, transferring assessments from one setting to another was demanding. Some individuals involved in diabetes care were not aware of the complexities and risk of complications. Diabetes care outcomes were dependent on individuals' skills, motivation and interest.

'Because we see the clients in their usual environment, we can tailor care to meet the individuals' capabilities and to encourage acceptance [of the disease] (…). It [outcome of diabetes care] is very variable and, in addition to the older person's possibilities, it [the expertise] depends on the physician, diabetes specialist nurse, hospital or other team member involved.'

(c) Barriers to diabetes care (n=61). Nurses perceived a range of barriers to the successful integration of diabetes care into the older adult's life. This theme consists of statements about two aspects: individual patient barriers (n=25), and co-morbidities (n=36). Many older patients with diabetes lived alone rather than in some form of multi-person household. Among these patients, polypharmacy was common, indicating high levels of disease burden. Some older people were not ready or capable to decide on their care or treatment, transferring decision making to the diabetes team. Occasionally, some patients' views of diabetes, preconceptions or fixed ideas were strongly influencing their behaviour. Sometimes older adults were reluctant to ask for help because they felt inadequate.

'Many of our clients live alone at home (…). It is frequent that clients receive different medications against high blood glucose, high blood pressure, high cholesterol and other disorders (…). Sometimes they feel ashamed and don't admit when they need help (…).'

(d) Resources for diabetes care (n=146). Nurses perceived several resources to support the successful integration process of diabetes care into the older adult's life. This theme encompasses the statements of three aspects: individual resources (n=59), interest in diabetes (n=7), and diabetes team (n=80). Individual disease comprehension was affected by motivation and interest in diabetes. Maintaining regular physical activities influenced outcomes of diabetes care. After training, family members took on responsibilities for particular tasks on behalf of older people. Successful diabetes care involved contributions from all diabetes team members. However, the expertise was not always accessible and the level of competencies was variable. Specific statements of disease integration processes were:

'The clients have accepted their disease and integrated the treatment into daily routine (…). We are confident that they call [us or other diabetes team member] if they need help (…).'

Discussion

The nurses' perspectives provide insights into daily practice and experiences, and describe the actual situation in diabetes care as seen by nurses in home health care and nursing homes. Long-term complications and co-morbidities are common in these settings and limit self-care of patients. Nurses are supporting patients in their basic and instrumental activities of daily living in a client-centred approach. Client-centred care involves advocacy, empowerment, respecting the client's autonomy, voice, self-determination, and participation in decision making.[32] The empowerment role was not yet fully established in this sample and sometimes a more traditional nurses' approach in providing care for clients was noticed; instead of supporting clients in their self-management efforts, nurses carried out these care activities for the client.

Nurses described their experiences with individualising care to patients' needs, but structured assessments or protocols to adjust diabetes care were not mentioned. Misunderstandings about disease, treatments and poor health literacy are common in the older population and affect the outcomes of diabetes care.[23–25,27,33,34] Some nurses were not aware of the complexities and risk of complications leading to inadequate care. Preventive home visits were not maintained. Regular participation in continuing educational programmes for nurses would provide the means to enhance professional knowledge.

Reinforcement strategies to engage individual older adults in their own care leads to improved patient results. Effective involvement in the integration process of diabetes care into patients' lives may ease some barriers and lead to better disease acceptance by the patients. Motivation and interest in diabetes care affect individual disease comprehension. Among others, these resources support the successful integration of diabetes care into the older adult's life. Remaining active and upholding physical activities enhance chronic conditions. Nurses could promote these health activities. Diabetes education or other educational and preventive interventions of older adults or their carers may lead to

better health outcomes. Many opportunities for client-centred interventions to strengthen older adults' self-care skills and participation occur while performing routine nursing care.[35]

The prerequisites nurses need for client-centred care are assured competencies and interpersonal skills.[36] Interpersonal skills can be reinforced by continuing education. Competencies can be strengthened by role changes.

Nurses' limited professional autonomy and power associated with physician control over patients in home health care and nursing homes were reported. Partnering approaches are favourable, not only in client-centred care but also in inter-professional relationships. Barriers found at system, organisational and personal levels distract nurses from fully appreciating and enacting these approaches.

Awareness of different competencies in the treatment team builds individual and team confidence, leads to mutual acceptance and effective collaboration.[37] Some important factors in this process are solid knowledge, professional communication style and clear documentation of nursing contributions as these encourage changes towards a more partnering approach.

Nurses should regularly meet their own educational needs. Due to the shortage of nurses and the current pressures on the health care system, it is more and more difficult to obtain financial and time allocations for continuing education. Regular exposure to training through different approaches such as the internet or group training would enhance professional knowledge.

Access to the expertise of advanced nurse practitioners specialised in diabetes care could develop the level of care. The consultation of these clinical nurse specialists can provide state-of-the-art knowledge and support the practice of nurses in home health care and nursing homes with diabetes specific expertise, leading to enhanced quality of care.[20]

Role changes and professional developments may provide nurses with the challenges of exercising more autonomy within the health care context. Role development models may be helpful in this demanding and complex process.[38] Future studies need to include the complete diabetes team and also attempt comparisons in patient outcomes between the different Cantons in Switzerland or between the Swiss situation and other countries. Well designed and adequate recommendations on diabetes care of older adults as well as fostering trans-disciplinary team development and communication are needed. Nursing homes and home health care settings offer an excellent environment for achieving these aims.

Limitations. Interpretative research findings are not generalisable. Our findings do not decrease uncertainty about the daily practice of nurses in diabetes care. However, they do identify pitfalls and potential ways that nurses may consider in dealing with their own experiences of client-centred diabetes care and partnering with other health care professionals. The study focuses on the nurses' perspectives, and other health professionals' perceptions were not explored.

Conclusion

In this paper, we have explored nurses' perspectives on diabetes care of older adults. Continuity of care and communication are heterogeneous. High levels of attention must be given to frequency and professional communication. Good communication and improved continuity of care would enhance the effectiveness and efficiency of diabetes care. Role conflicts and poor communication necessitate clarification of professional roles. Regular exposure to education would encourage professional and interpersonal skills. Different training methods such as the internet or group training could be used to impart knowledge. Establishing consulting roles for advanced nurse practitioners within home health care may support diabetes care and reduce the likelihood of hospital or nursing home admission of patients. Similar positions in nursing homes may improve quality of care and decrease the probability of hospitalisation. Encouraging new training methods or consulting roles may contribute to better patient outcomes. Nurses must promote professional knowledge and practice regarding relationship-building, not only with patients but also with other health care professionals.

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Declaration of interests

There are no conflicts of interest declared.

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