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Healthcare professionals' perceptions of diabetes-related practice in community-based multidisciplinary teams

Original Research

BY [Marysia Jarosch](#), [Dr Susan Slatyer](#), [Yvonne Elliott-Kemp](#), [Dr Jo Todd](#) and [Dr Laurie Grealish](#)



multidisciplinary

person-centred care

self-determination

self-management

type 2

Introduction

Aims

The shift in the focus of diabetes care from acute to community-based care means that a broad range of community-based health professionals is required to provide effective evidence-based care. A team-based, multidisciplinary approach is essential for effective person-centred care. This study investigates multidisciplinary health professionals' perceptions of 2 diabetes (T2D) practice in community settings.

Methods

A cross-sectional web-based survey of health professionals (HP), using the Perceptions of Diabetes Questionnaire© was conducted in one community-based health service in Australia.

Results

Eighty-three nurses and allied health professionals responded to the survey (37% response rate). The HPs valued the medical aspects of diabetes much more highly than the personal aspects. They had limited confidence in their ability to manage diabetes and improve outcomes, particularly in relation to people with diabetes (PWD) integrating recommendations into their self-care practices. Respondents appeared to confuse guidelines with health service policies or standards.

Conclusions

Respondents valued person-centred care but did not value the personal aspects of diabetes that are important to individuals living with the condition. Addressing this paradox is critical to the implementation of guidelines for the care of PWD into practice. Alignment of the value of person-centred care with practices that focus on the person is recommended as a key area of professional development.

Introduction

T2D is considered to be an epidemic, with an estimated 382 million adults (8.3%) globally living with diabetes, set to escalate to 592 million by 2040.¹ Internationally, community-based multidisciplinary health services are expanding to meet the rising numbers of people living with T2D.^{2, 3} Diabetes educators, nurses and other health professionals including podiatrists, social workers, dietitians and physiotherapists collaboratively support people with diabetes (PWD) to achieve personal goals associated with making lifestyle changes, managing medicines and preventing complications.^{3, 4, 5} The psychological aspects of living with T2D are substantial. In the Diabetes Attitudes Wishes and Needs 2 (DAWN2) study of 8,596 people with diabetes across 17 countries, 44.6% (ranging from 17.2 to 67.6% among different populations) of participants reported psychological distress.⁶ Psychological distress in PWD is significantly important, yet often overlooked in acute and primary care settings.⁷

Improved psychological well-being is associated with global satisfaction with diabetes treatment, quality of chronic illness care and support, and person-centred communication.⁸ Person-centred communication is part of person-centred care, where self-determination, decision-making, choice, and dignity are key elements.^{9, 10} Effective person-centred care is multidisciplinary team-based, coordinating strategies to optimise physical health and supportive services and involving the person's family and wider social network.¹⁰ However, the DAWN2 study reported that the availability of person-centred services was low, with little support for PWD to be actively involved in their own care.⁶ One of the significant challenges faced by PWD is the complexity of self-management within the context of co-morbid chronic conditions and medications, as well as the effects of ageing, such as deterioration in sensory and cognitive function.

Consistent with other countries, Australia has published guidelines to inform healthcare teams of the evidence-based management of people with T2D.^{11, 12} Recommendations for managing T2D in primary care settings include screening, person-centred team care, self-management education, lifestyle modification, glycaemic monitoring, cardiovascular and neuropathic risk control and optimising medicine choices.^{11, 12}

However, the translation of evidence-based guidelines into practice is not always straightforward.¹³ Barriers to diabetes care include access to health services, challenges in providing education, and practitioner expectations of immediate lifestyle change.⁵ Health care providers have reported tensions between their perceived responsibilities to provide evidence-based diabetes care recommendations and the need to respect individuals' rights to make their own health decisions.¹⁴ In one qualitative study of community-based provider perspectives, some clinicians preferred a personalised approach to care which incorporated individuals' preferences and goals, whilst others adopted more prescriptive disease management targeted to medically defined goals.¹⁵ In a survey of Japanese clinicians (n=275) who provide multidisciplinary diabetes care, differences in professionals' perceptions of multidisciplinary teamwork were considered a main barrier to teamwork.¹⁶

These findings suggest that health professionals (HPs) have an important role in engaging people with diabetes in a range of strategies to enhance psychological and physical wellbeing. However, one qualitative study of Australian health professionals (n=88) highlighted that professionals' perceptions of the challenges of living with a chronic disease, including diabetes, were often at odds with the perspectives of the individual living with the condition.¹⁷ While individuals with diabetes and their carers saw chronic illness and treatment through a lens of complexity and personal limitations, health professionals attributed individuals' reported difficulties to poor adherence and service fragmentation.¹⁷

As the number of people with T2D increases and care delivery expands within the community, the role of diabetes educators is well suited to partnering with the broader health care community to improve T2D management. Understanding HPs' perceptions of T2D practice can assist in implementing T2D guidelines across the broader health care community. This study aimed to identify community-based HPs' perceptions about T2D practice in one Australian jurisdiction.

Methodology

Overview

A descriptive study design was adopted using a cross-sectional online survey approach. The project was conducted as a single-centre study within one multi-campus health service in southeastern Queensland, Australia. Three organisational streams within the health service were targeted in order to access a variety of health professionals providing community-based services. The selected community-based rehabilitation, mental health and aged care teams predominantly care for an adult population with chronic health conditions including T2D.

Ethical considerations

Approval was granted from the Gold Coast Hospital and Health Service Human Research Ethics Committee (15/QGC/114). Participating in the survey was voluntary and consent to participate was implied by the participants' submission of the completed questionnaire.

Participants

Convenience sampling was used to recruit a diverse range of HPs from community-based settings, where multidisciplinary team care is provided to people with chronic health conditions, including T2D. The professional disciplines included nurses, pharmacists, dietitians, occupational therapists, podiatrists, physiotherapists, exercise physiologists, speech therapists, allied health assistants, social workers and psychologists. All non-nursing disciplines are referred to as 'allied health' in this study. The target population comprised nursing (n=110) and allied health (n=115) participants. All full-time, part-time, temporary, casual and permanent staff meeting the inclusion criteria were invited to participate. Diabetes educators were excluded on the grounds that their expertise in the field may have skewed the results.

Data collection

The Perceptions of Diabetes Questionnaire: PODQ©18 was used (permission obtained from McDowell, pers.com. 6/10/2014) to measure HPs' perceptions of T2D practice. Minor amendments to some terminology in the PODQ© were required to enhance its transferability to the Australian study context. A list of amendments is provided in Table 1. In the survey, clinical guidelines were defined as 'any of the systematically developed statements to assist practitioner and patient decisions about appropriate health care for people with T2D'. The Australian Commission on Safety and Quality in Health Care policy definition for person-centred care was used: 'care that addresses each individual respectfully, being responsive to patient preferences and values...' ¹⁹ While some of the language used in the PODQ© is not consistent with the Diabetes Australia Position Statement ²⁰ on language, terms such as 'adhere' were left unchanged in the interest of instrument reliability and validity.

Table 1: Modifications to survey terminology

Original PODQ© term	Modified term
Driving and the Department of Transport	Driving and the DVLA
Blood samples taken	Blood samples e.g. HbA1c, Lipids, EFTs
Diabetes UK	Diabetes Australia
Retinal Screening Team	Retinal Screening Optometrist
Practice Diabetes Register	Removed*

[Edit](#)

*Not available in this jurisdiction

The questionnaire comprises demographic information plus four sections with a total of 25 items pertaining to:

1. Perceptions about diabetes
2. Attitudes to T2D
3. Use of clinical guidelines

Five-point Likert scales were used for the knowledge and attitudinal components, measuring responses to a series of statements. In this study, the statements required scales with dichotomous endpoints such as 'very little support/ high support', 'strongly agree/ strongly disagree', 'not a benefit/very much a benefit', and 'not a barrier/very much a barrier'. Number three was a neutral response option. There were options for open-ended responses to some items but these are not addressed in this paper. The original questionnaire is available in McDowell and colleagues' publication.²¹ The questionnaire was formatted and delivered via the online platform SurveyMonkey Inc.²² Team leaders distributed a generic invitation email containing the survey web-link to staff, using their contact lists. Potential participants' contact details were not provided to the researcher in order to protect their confidentiality. Completed surveys contained no identifying information and were accessible only to the lead researcher. Three weeks after the initial deployment, team leaders sent a further generic email to remind staff of the survey closing date. The planned four-week survey period was extended by one week.

Data analysis

Data were descriptively analysed using the SurveyMonkey descriptive statistic functions to generate frequencies (numbers and percentages) for the whole group of respondents. The data were exported into an Excel spreadsheet and SPSS Statistics 22.3 was used to assess differences in frequency across response categories. Not all respondents answered all questions. This was managed by calculating percentages using responses for each item rather than for the total number of participants.

Attitudinal responses were condensed to compare the percentage of responses at one end of the scale (points 1 and 2) against the percentage at points at the other end (points 4 and 5) to evaluate whether the respondents' views were more positive or negative. The neutral responses were not counted in the analysis. The data analysis was similar to that used in the previous study.²¹ The chi-square test for goodness of fit was applied for analysis of the single categorical variables (health professionals' responses) to test associations between responses to different questions. The results were also analysed by professional group (nurses vs. allied health) but given the small numbers, the results were not statistically valid and therefore are not reported here.

Results

Of the 225 HPs invited to complete the web-based questionnaire, 83 (37%) completed the survey. Of these, 71 provided demographic information, with 25 responding as nurses and 46 as a variety of other health professions. Respondents were predominantly female (83%) and had more than five years experience (86%). Table 2 provides an overview of the participants' characteristics.

Table 2: Demographic characteristics (n=71)

Characteristics	Nurses (n=25)	Other health professionals (n=46)
	n (%)	n (%)
Gender		
Male	2 (8)	10 (22)
Female	23 (92)	36 (78)
Years of experience		
5 yrs or less	2 (8)	8 (17)
6-10 yrs	7 (28)	12 (26)
More than 10 yrs	16 (64)	26 (57)
Postgraduate qualifications		
Yes	14 (56)	21 (46)

No	11 (44)	25 (54)
Diabetes-specific education*		
None	1 (4)	3 (6)
Workshops	20 (80)	20 (43)
Online learning	15 (62)	23 (53)
University course	0 (0)	8 (17)
Other diabetes education	6 (24)	14 (30)

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*May have attended multiple education sessions

Perceptions about diabetes

All respondents considered T2D a serious condition regardless of treatment regimen, with the condition perceived to increase in severity according to treatment type (diet alone, tablets or insulin). A high percentage of respondents rated the fasting blood glucose test as important (94%). In regard to ongoing education and advice, there was high respondent agreement about the importance of education and advice regarding diet (99%), hypoglycaemia (95%), psychological aspects (94%), oral medications (92%), insulin (93%), blood glucose monitoring (92%), foot care (95%), and exercise (95%). Less importance was assigned to more personal aspects of education and advice such as contraception (22%), sexual function (12%), employment (12%) and driving (12%). These community-based HPs appear to value the medical aspects of diabetes management much more than the personal aspects that can be very important to individuals with diabetes, and person-centred care.

Attitudes to T2D

The findings relevant to attitudes to T2D are described in Table 3. Respondents expressed varying levels of confidence in their ability to manage diabetes. Almost half reported that their therapeutic actions or advice improve outcomes, indicating that another half may have doubts about their effectiveness. Most respondents agreed that a team approach in diabetes management was required. There was very high agreement that person-centred care can improve adherence to care. Almost half tended to agree that diabetes is difficult to treat because people do not adopt recommendations into their self-care practices, however this was not significant. These findings suggest that HPs in the community setting have limited confidence in their ability to manage diabetes and their ability to improve outcomes, particularly in relation to individuals with diabetes taking on recommended actions or advice.

Table 3: Attitudes to T2D care

	Likert rating: Number (%)						X ² goodness of fit			
	1	2	3	4	5	N [^]	X ²	df	p	
	1 = very confident, to 5 = not confident									
Confidence in my management of patients	7 (9)	26 (35)	19 (26)	17 (23)	5 (7)	55	2.1	1	0.138	
	1 = very confident, to 5 = not confident									
My therapeutic actions/advice improve diabetes outcomes	11 (15)	25 (34)	25 (34)	11 (15)	2 (3)	49	10.8	1	0.001*	
Difficult to treat because PWD do not adhere to recommendations	10 (14)	24 (32)	19 (26)	13 (18)	8 (11)	55	3.073	1	0.08	
I have enough training	10 (14)	17 (23)	24 (32)	19 (26)	4 (5)	50	0.32	1	0.572	
I have adequate time and resources	5 (7)	19 (26)	28 (38)	16 (22)	6 (8)	46	0.087	1	0.768	
Diabetes care requires a team approach	58 (78)	4 (5)	3 (4)	2 (3)	7 (9)	71	10.8	1	0.001*	
Patient-centred care can improve adherence to care	60 (81)	3 (4)	2(3)	2(3)	7(9)	72	40.5	1	0.001*	

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[^] Number included in the analysis; *P-value statistically significant

Use of clinical guidelines

Table 4 outlines responses to items concerning the use of clinical guidelines. Respondents indicated that the use of guidelines was highly supported by the organisation. Clinical guidelines were also highly rated in relation to 'keeping up to date with research findings', 'providing access to research findings' and 'saves time reading research papers'. Respondents were unanimous in their agreement that the use of guidelines benefits the application of research in practice and aids clinical decision-making.

Table 4: Use of clinical guidelines

	Likert rating: Number (%)						X ² goodness of fit		
	1 = very little support, to 5 = very high support								
	1	2	3	4	5	N [^]	X ²	df	p
Organisational support for use of guidelines	4 (5)	4 (5)	14 (20)	29 (40)	22 (30)	59	31.339	1	<0.001*
	1 = strongly agree, to 5 = strongly disagree								
	1	2	3	4	5	N [^]	X ²	df	p
Guidelines affect on patient centred care	5 (7)	18 (25)	21 (29)	20 (27)	9 (12)	52	0.692	1	0.405
	1 = not a benefit, to 5 = very much a benefit								
	1	2	3	4	5	N [^]	X ²	df	p
Keeps you up to date with research findings	1 (1)	2 (3)	3 (4)	30 (41)	37 (51)	70	58.514	1	<0.001*
Access to research	1 (1)	3 (4)	5 (7)	32 (44)	31 (43)	66	51.955	1	<0.001*
Saves time reading research papers	0 (0)	1 (1)	8 (12)	33 (46)	29 (41)	63	59.063	1	<0.001*
Shows how to apply research in practice	0 (0)	0 (0)	3 (4)	33 (45)	37 (51)	70	na	na	na
An aid to clinical decision-making	0 (0)	0 (0)	5 (7)	26 (36)	42 (57)	68	na	na	na

[Edit](#)

*P-value significant

Despite the perceived benefits, respondents identified several barriers to using clinical guidelines in practice (see Table 5). Specifically, they felt strongly that lack of time to 'read or access computer' and 'implement new ideas on the job' were barriers. Respondents felt that 'facilities are inadequate for implementation' and 'organisation will not cooperate fully' were not barriers, corresponding with the perception that organisational support was ranked highly.

Table 5: Barriers to use of clinical guidelines

	Likert rating: number (%)						X ² goodness of fit		
	1 = not a barrier, to 5 = very much a barrier								
	1	2	3	4	5	N [^]	X ²	df	p
No time to read or access computer	10 (14)	8 (11)	11 (15)	31 (42)	13 (18)	62	10.9	1	0.001*
Relevant literature not accessible	12 (16)	20 (27)	21 (29)	13 (18)	7 (10)	52	2.77	1	0.1
Lack of time to implement new ideas on the job	3 (4)	7 (10)	23 (31)	24 (33)	16 (22)	50	18	1	<0.001*
Facilities are inadequate for implementation	13 (18)	18 (25)	26 (36)	15 (20)	1 (1)	47	4.79	1	0.029*
Organisation will not cooperate fully	16 (22)	23 (32)	23 (31)	8 (11)	3 (4)	50	15.68	1	<0.001*
Ability to evaluate quality of research	10 (14)	18 (25)	23 (31)	18 (25)	4 (5)	50	0.72	1	0.396
Little understanding of statistics	17 (23)	18 (25)	21 (29)	16 (22)	1 (1)	52	6.23	1	0.013*
Adverse effect on patient relationship	22 (30)	20 (28)	26 (36)	4 (5)	1 (1)	47	29.12	1	<0.001*

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[^] Number included in the analysis; *P-value statistically significant

Respondents also ranked 'little understanding of statistics' as not being a barrier to implementing the guidelines. These findings indicate that HPs may be confusing guidelines with health service policies or national quality and safety standards.

Discussion

The predicted worldwide T2D epidemic requires intensive community-based solutions to care. In the current study, we were interested in community-based HPs' perceptions about T2D practice. Respondents expressed a range of confidence about their management of T2D, with most reporting an understanding of contemporary clinical guidelines for care. Clinicians who feel more confident about T2D management are more likely to be confident that their care and advice has resulted in improved patient outcomes. ²¹

However, although respondents reported feeling confident, almost half found it difficult to support individuals who were perceived to not integrate recommended therapies into their self-care strategies. This finding is consistent with other studies where healthcare professionals struggle with individuals' perceived lack of adherence to their recommendations. ^{24, 25} The HPs in this study rated clinical aspects of care as highly important and the personal aspects as much less important, raising concerns about their ability to make recommendations about lifestyle change. While the provision of information and motivational support for lifestyle change is considered to be part of the HP role in primary care settings, ²⁴ the requirement to learn more about the person's life situations and values is often not attended due to time constraints associated with busy schedules²⁴ and lack of skills in lifestyle counselling. ^{24, 25} Further investigation into the barriers to valuing individuals' personal matters as part of T2D practice in the community is required.

A paradox emerges between the respondents' ascriptions of low value to personal aspects of care and their view of high value for 'person-centred care improves adherence'. Adopting a more person-centred approach with a focus on overall wellbeing, may improve global satisfaction with diabetes treatment, quality of chronic illness care and support and person-centred communication. ^{8, 9} The DAWN2 study demonstrates that psychological distress is a significant issue for people living with diabetes and is elevated in those people taking medication for their disease. ⁶ It is established that self-management is linked to glycaemic control, ^{8, 26, 27} and therefore health professionals need well-developed strategies to support effective diabetes self-management. Continuing professional education must focus on how HPs can support individuals as they negotiate the challenges associated with the clinical prescriptions for T2D.

In this study, there was agreement among respondents that multidisciplinary teams are most appropriate to provide diabetes care. This is congruent with studies acknowledging the benefits of multidisciplinary team care in meeting the complex health needs of individuals with diabetes and potentially improving clinical outcomes. ^{3, 4, 28}

The respondents valued organisational support for their practice and did not perceive the organisation or facilities as a barrier to implementing the guidelines. However, they did indicate that inadequate time and resources to provide diabetes-related care was considered a barrier to implementing the guidelines. Further investigation into the nature of nursing and allied health patient consultations and exploration of opportunities to collaborate across professions, is required to further promote multidisciplinary team practice.

In summary, the aim of this study was to identify community-based HPs' perceptions about T2D practice. The alignment of the value of person-centred care with practices that focus on 'the person' is recommended as a key area for professional education and development. The value of the multidisciplinary team can be translated to interprofessional approaches to continuing education. Clinicians could learn from and about the contributions of other team members, thereby enhancing the team approach, fostering mutual respect, collaboration and high quality care in the workplace. ²⁹ Continued professional education should focus on strategies for person-centredness and balancing personal and clinical considerations in care.

Limitations

While the sample size may not have been representative of community-based health professionals more generally, the response rate of 37% is comparable to other surveys using similar methodology. ^{21, 30} Convenience sampling with voluntary participation can be problematic and contribute to bias, with the respondents being the more motivated clinicians with a particular interest and knowledge of diabetes compared to non-respondents. It is acknowledged that the survey tool (PODQ©) developed in 2007, ¹⁸ may not meticulously reflect the current framework for diabetes care. However the tool framed questions about the importance that respondents attached to essential areas of diabetes care rather than current targets, enhancing its transferability to other settings. Following a review of similar diabetes attitudes surveys, the PODQ© ¹⁸ with its established validity and reliability was adopted as the best fit for the target population of multidisciplinary teams providing diabetes community- based care.

The definition of clinical guidelines was intentionally vague, consistent with the original survey. It is likely that the HPs in this study have not read guidelines specifically for the care of people with T2D, nor know where to access them. Future studies using the PODQ© should consider specifying the clinical guidelines in use for the jurisdiction.

Conclusion

Diabetes educators, general practitioners and multidisciplinary community-based teams are required to work together to meet the growing challenges associated with the global rise of people with T2D. In order to implement the guidelines for T2D care, HPs in the community will need further support to manage the personal, as well as clinical, aspects of T2D management. While HPs value being person-centred, future professional development programs should focus on how to **do** person-centred T2D care. In this study, the Perceptions of Diabetes Questionnaire (PODQ®),¹⁸ was found to provide useful information community-based healthcare teams in one area of Australia. It is recommended as a relatively quick and easy method to collect information about diabetes-related perceptions in geographically distributed services, such as those found in the community.

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