

Convergences and divergences of diabetic patients' and healthcare professionals' opinions of care: a qualitative study

Stéphanie Lauvergeon PhD candidate,* Désirée Mettler MSc,* Bernard Burnand MD, MPH[†] and Isabelle Peytremann-Bridevaux MD MPH DSc[‡]

*Researcher, Institute of Social and Preventive Medicine (IUMSP), Lausanne University Hospital, Lausanne, †Professor, Institute of Social and Preventive Medicine (IUMSP), Lausanne University Hospital, Lausanne, Switzerland, and ‡Senior Researcher, PD, Institute of Social and Preventive Medicine (IUMSP), Lausanne University Hospital, Lausanne, Switzerland

Abstract

Correspondence

Stéphanie Lauvergeon PhD candidate
Institute of Social and Preventive
Medicine (IUMSP)
Lausanne University Hospital
Rte de la Corniche 10
CH-1010 Lausanne
Switzerland
E-mail: stephanie.lauvergeon@chuv.ch

Accepted for publication

6 September 2012

Keywords: chronic disease management, diabetes, patients' and professionals' opinions, qualitative study

Objectives To investigate opinions' convergences and divergences of diabetic patients and health-care professionals on diabetes care and the development of a regional diabetes programme.

Background Development and implementation of a regional diabetes programme.

Research design Qualitative study using focus groups to elicit diabetic patients' and health-care professionals' opinions, followed by content analysis.

Setting and participants Eight focus groups: four focus groups with diabetic patients ($n = 39$) and four focus groups with various health-care professionals ($n = 34$) residing or practicing in the canton of Vaud, Switzerland, respectively.

Results Perceived quality of diabetes care varied between individuals and types of participants. To improve quality, patients favoured a comprehensive follow-up while professionals suggested considering existing structures and trained professionals. All participants mentioned communication difficulties between professionals and were favouring teamwork. In addition, they described the role that patients should have in care and self-management. Financial difficulties were also mentioned by both groups of participants. Finally, they were in favour of the development of a regional diabetes programme adapted to actors' needs. For patients indeed, such a programme would represent an opportunity to improve information and to have access to comprehensive care. For professionals, it would help the development of local networks and the reinforcement of existing tools and structures.

Discussion and conclusions Acknowledging convergences and divergences of opinions of both diabetic patients and health-care

professionals should help the further development of a programme adapted to users' needs, taking all stakeholders interests and priorities into consideration.

Introduction

The rise in the prevalence of chronic diseases makes their care a major challenge of the 21st century.^{1, 2} Indeed, health-care systems are still directed towards acute care, and quality of care of chronic diseases is regularly described as suboptimal³ and varying between countries.⁴ In that context, chronic disease management programmes aiming at transforming current care of chronic diseases towards pro-active and collaborative approaches are being implemented.⁵ Literature reviews suggest that these programmes may have positive effects on the quality of patients' care.^{6–16}

Switzerland faces similar problems and challenges. It must now develop a national strategy to manage chronic diseases. Despite the lack of coordinated and comprehensive health policies, general interest towards chronic diseases initiatives is emerging.¹⁷ In this country constituted of 26 cantons, the health-care system is organized at the cantonal level. In the canton of Vaud, the ministry of health decided to develop, over the 2008–2012 legislature, a regional programme for diabetic patients ('Diabetes cantonal Programme'¹⁸; the word 'regional' will designate this programme throughout the text). Its main objectives are to limit the rise in incidence of diabetes and to decrease the impact of diabetes on the population. To set up a programme based on patients' and health-care professionals' needs, it was decided to explore their opinions. Indeed, knowledge of patients' and professionals' experiences and needs in chronic care is important for improving quality of care.¹⁹

Over the last 10 years, many reports on chronic care experiences and needs, using qualitative methods, have been published. Some target patients²⁰ or a particular group of health-care professionals (e.g. GPs or nurses).²¹ The perceptions of both patients and professionals have been considered less often.²² Moreover,

most authors target one specific aspect of care, such as treatment,²³ self-management²⁴ or patient–doctor relationships.²⁵ Little has been published on the opinions of patients and professionals on the quality of chronic disease care in general.²⁶ The literature on participation to chronic disease management programmes consists mainly of studies investigating one component, such as self-management^{27, 28} or finances.²⁹ Research also focuses on the opinions of participants after the implementation of a programme.^{30, 31} To our knowledge, studies that identify patients' and professionals' opinions on chronic disease management programmes in general, and/or on their feasibility before implementation, are rare.³²

Thus, we conducted a study aimed at investigating the opinions of both diabetic patients and health-care professionals, on diabetes care in general as well as on the feasibility of a regional diabetes programme.^{33, 34} In this analysis, we compared the opinions of diabetic patients and health-care professionals to examine if and how they converged or diverged.

Methods

This study was conducted within the framework of the development of a regional diabetes programme in the Canton of Vaud.¹⁸ We used focus groups, a qualitative method allowing the emergence of opinions and their discussion among participants.

Participants' sample

We used a purposive sampling strategy to include participants who would present a range of variations of a few characteristics. This was performed independently for patients and professionals, within the four sanitary areas of the canton (the canton of Vaud is divided into four sanitary areas facilitating hospital and socio-medical planning).

To recruit diabetic patients, we inserted advertisements in a well-known daily newspaper as well as in free home-sent regional newspapers. Because the patients' response rate was too low, we contacted the Diabetes Association of the canton of Vaud, which sent an invitation letter to all of its members. The selection of patients was then made, first based on their availability and, second, on the Diabetes Association memberships (the few non-members, recruited thanks to advertisements in newspaper were favoured). When necessary, we then selected patients based on other criteria (Table 1) to obtain maximum patient's variation.

Health-care professionals (general practitioners, diabetologists, diabetes specialist nurses, dieticians, pharmacists, home health-care managers and podologists) were recruited thanks to the contribution of representatives of the sanitary areas, of health-care professionals' associations and of members of working groups of the regional diabetes programme. When necessary, the selection of health-care professionals was based on place of practice and number of years of professional experience (Table 2).

Seventy-three participants were recruited (39 diabetic patients and 34 professionals) from the four sanitary areas. They all received an information letter detailing the aims of the study, date, time and location of the focus group, as well as a consent form (patients only). They were assured that the data would be kept confidentially and anonymous. Ethical approval was

received from the Cantonal Ethics Committee of research on the human being (Protocol No 160/09).

Focus groups

We developed and pilot-tested an interview guide that was similar for both patients and health-care professionals. The main topics covered by the guide were

1. Opinions on the quality of diabetes care
2. Patients' and professionals' needs in, and means to improve diabetes care
3. Key elements to be considered in the development of a regional diabetes programme
4. Acceptability/feasibility of and incentives for participation in such programme.

A total of eight focus groups were conducted: one with patients and one with professionals in each of the four sanitary areas. They were planned between April and June 2010 and lasted 2 h each.

One researcher, specialized in qualitative research methods, conducted the focus groups (SL), while another took notes to ease the transcription process (DM). All focus groups were audio-taped and transcribed literally.

Data analysis

Because of the exploratory nature of the study, analyses were carried out inductively. We per-

Table 1 Characteristics and number of diabetic patients who participated to the focus groups ($n = 39$)

Characteristics of diabetic patients			Sanitary areas			
			Centre	East	North	West
Rural place of residence	<65 years	Men	2	3	2	2
		Women	2	3	1	1
	≥ 65 years	Men	1	2	3	1
		Women	1	1		
Urban place of residence	<65 years	Men	1		1	1
		Women	2		1	1
	≥ 65 years	Men	2		1	
		Women	1			3
Total number of patients, by sanitary areas (non-members of the Diabetes association)			12 (2)	9 (1)	9 (1)	9 (3)

Table 2 Characteristics and number of health-care professionals who participated to the focus groups ($n = 34$)

Disciplines of healthcare professionals	Place of practice	Sanitary areas							
		Center		East		North		West	
		Number of years of professional experience							
		≤ 15	>15	≤ 15	>15	≤ 15	>15	≤ 15	>15
General practitioners	Rural		1		1	1	1		
	Urban			1					1
Diabetologists	Rural				1				1
	Urban								
Diabetes specialist nurses	Rural								1
	Urban	2		1					
Home healthcare managers	Rural	1		1				1	
	Urban	1			1				1
Pharmacists	Rural	1			2				
	Urban								
Podologists	Rural				1			1	
	Urban		1						
Dieticians	Rural	1							
	Urban			1					1
Total			8		10		9		7

formed a content analysis, using thematic analysis to reduce the content of discourses without losing information and to avoid their distortion. Transcripts were first analysed line by line and divided into sequences representing themes (thematic sequences). Thematic sequences linked to others were grouped into thematic categories, identical for all focus groups, so allowing comparisons. During that step, the participants' mode of expression was specified in terms of experiences, needs or solutions. Finally, the thematic categories were classified into the following six broader categories (supra-categories):

1. 'Diabetes care': categories on quality and structures of diabetes care
2. 'Information': categories on prevention, perceived quantity of information, sources or means of obtaining information
3. 'Patients' specific activities': categories on patients' role and motivation to self-manage diabetes
4. 'Professionals' specific activities': categories relating to team collaboration, professionals' role or training

5. 'Finances': categories such as problems with reimbursements or billing of services, and/or financial help (for patients)

6. 'Regional diabetes programme': categories directly referring to the development of the regional diabetes programme.

One researcher (SL) coded patients' transcripts, while the other (DM) coded professionals' transcripts. These researchers regularly checked the transcripts codes and exchanged information to strengthen consistency. Classifications were always discussed and validated by the last author (IPB).

Results will be presented separately for each supra-category, each time showing convergence first and then divergence of opinions. We will refer to convergence when same opinions or common themes appear. Divergence will refer to different manners of exploring a common theme rather than true opposite opinions.

Results

The distribution of supra-categories for both professionals' and patients' focus groups is shown in Fig. 1.

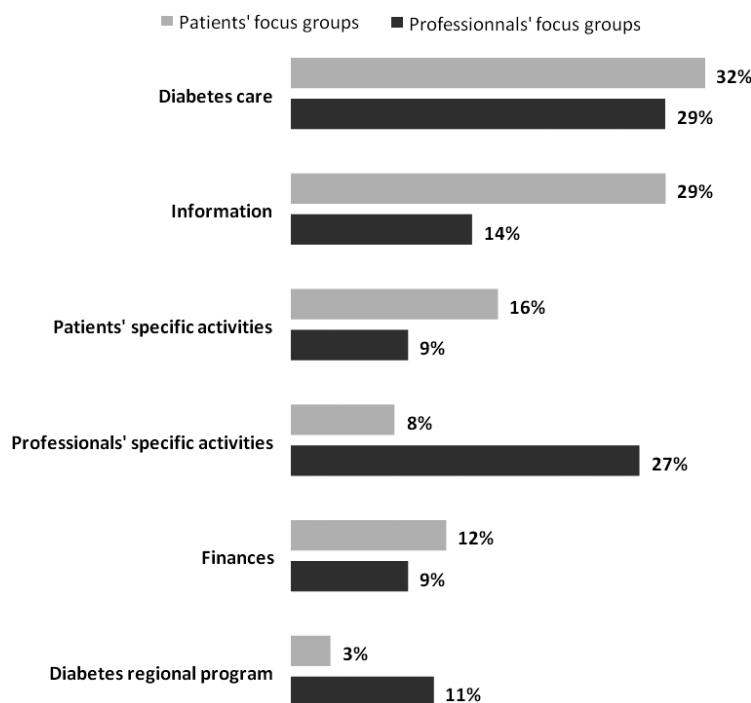


Figure 1 Distribution of supra-categories for both patients' and professionals focus groups. (■) Patients' focus groups; (■) Professionals' focus groups.

Supra-category 'Diabetes care'

We observed variations in the perception of the quality of diabetes care among patients and professionals: while some described a good quality, others mentioned problems with diabetes care.

For patients, good quality of care was reinforced by regular visits to GPs and annual visits to diabetologists.

"[...] I have a general practitioner with whom I get on well and who referred me to a delightful diabetologist [...] I'm feeling privileged compared to what I'm hearing [...] yes, it seems to me that diabetes care [...] is optimal [...]" (Patient)

Health-care professionals reported improvements in diabetes care secondary to the reinforcement of patients' follow-up by physicians, as well as the intervention of diabetes specialist nurses working in the physicians' practices or in home health-care.

'At our office, all diabetics are seen four times a year systematically and if they don't come for their blood test, they are called [...] it works [...]

- And it works better since we set up the nurse follow-up [...] (GPs)

While patients attributed sub-optimal quality of care to the GPs' lack of time and lack of spontaneous referral to diabetologists, health-care professionals mainly linked these quality problems to difficulties in knowing whether patients were compliant or not, with their medical treatment. They also mentioned difficulties with the follow-up of diabetic children and teenagers. Moreover, they feared the forecasted shortage of health-care professionals.

Patients emphasized the utility of the Diabetes Association of the canton of Vaud but regretted its lack of availability, while speaking about care structures. For their part, professionals exposed the lack of visibility of this kind of association. All participants found important to strengthen existing care structures. Patients proposed to strengthen the Diabetes Association and asked for its financial support to enable the development of activities and classes better suited to their needs. Professionals, suggested to strengthen home

health-care or care providers networks (formal or informal). Both patients and professionals also suggested the development of new targeted care structures. Indeed, patients proposed the creation of some kind of a multidisciplinary centre that would be more responsive than the Diabetes Association; professionals suggested a structure they could use to refer patients to for better organization of their medical follow-up as well as for self-management education.

Finally, participants wished comprehensive diabetes care that would include regular visits. However, the patients' and professionals' views of what would constitute global care differed. Indeed, patients asked to visit a diabetologist and be systematically referred (by their GP) to a diabetologist. They suggested also a psychosocial support, especially for patients not yet accepting their illness, because these could face self-management difficulties.

'[...] it's true that it takes time just only to accept [...] I think I haven't accepted yet after two years and it's not easy, so it's a daily constraint that saturates me [...] so it's true that the psychological follow-up [...] is important [...]' (Patient)

By contrast, professionals asked for the creation of 'strict protocols' of care and for improvements in clinical and diet follow-ups procedures.

'[...] I perhaps see too often people who come [...] with overweight obesity [...] too late [...] and then there are food habits changes that cannot be made overnight [...] it takes time [...] so it's true that the quicker we see people, the better the chances are that it turns out all right [...]' (Dietician)

Supra-category 'Information'

Patients explored this supra-category more than professionals (29% vs. 14%). Issues relating to the necessity to improve general information and primary prevention targeting the general population emerged from the discourses of both patients and professionals. Nevertheless, their comments were not identical. Patients mainly

reported a lack of information on diabetes in general, whereas professionals felt a lack of information on health behaviours/habits (health promotion and disease prevention).

'[...] at present if you go in the street and ask, nobody can tell you what diabetes is [...] honestly the problem is here [...] people talk about AIDS, they talk about cancers, whatever, diabetes has become an everyday feature, we forget that we can lose eyesight [...] we forget that we can lose a leg [...] we forget many things simply because we are not informed [...] by medias at all [...]' (Patient)

'[...] but before we spoke about prevalence so it means that we must be proactive [...] because people who will be diabetic in 20 years [...] are today young people who are sedentary [...] who are not doing sport, who eat like pigs, who have no sensibility about the problematic of overweight [...] there's not only diabetes, there's all the stories linked to cholesterol and heart problems, so in fact I think that I would be inclined towards a massive fight for a better quality of health [...]' (Home healthcare manager)

Professionals also pointed out the lack of visibility of information campaign and of their impact.

Other information gaps were mentioned by all participants. However, neither did they focus on the same topic nor propose similar solutions. Indeed, while professionals noticed a lack of information on existing structures and other professionals taking care of diabetic patients, the latter emphasized lack of information on diabetes and its treatment. They acknowledged, however, that several information sources existed (e.g. pharmaceutical newspaper) and that information needs were different between patients and dependent on their level of acceptance of the disease. Therefore, patients suggested the implementation of information days, if possible per region, to allow an optimal participation. They also hoped for more self-management education classes, especially for recently diagnosed diabetic patients. They expressed the need to get information on where to find treatment while abroad. Emerging solutions were the possibil-

ity to reinforce the role and activities of the Diabetes Association in the field of information or to create information centres for patients.

The idea of an electronic medical record common to all health-care professionals was shared both by patients and by some professionals. They agreed that electronic records could help the transmission of patients' information among professionals. This solution was more discussed by professionals than by patients, however. Pros noticed that electronic records could reinforce communication between professionals. Cons' argued that selective information reporting would be necessary because not everything could be shared; they also emphasized the need to get prior patients' consent.

Patients and professionals suggested other means to improve the transmission of information. Patients imagined the creation of a 'health card', kind of smart card containing their medical data, which would be updated after each consultation. To facilitate the exchange of information between health-care professionals, the latter proposed the use of a computerized system sending fax.

Supra-category 'Patients' specific Activities'

Patients and professionals commonly acknowledged the difficulty to motivate patients to take care of themselves. Explanations differed, however. Patients related this motivation barrier to difficulties to change their health habits and to reconcile self-management with professional activities, whereas professionals related it to difficulties in daily management of the disease and to the treatment's burden.

'[...] somehow I know everything I must do [...] be careful and [...] I sometimes tell myself 'why isn't there anywhere we can be taken care of' [...] but yes, I don't know, it's difficult because
- mmhmmh you need to be motivated [...]
- yes because in fact I snack a lot [...]' (Patient and Moderator)

'[...] I have the impression that it's characteristic of the silent disease probably [...] we see a sugar level of 8–10 millimoles, it doesn't give symp-

toms; to have a cholesterol level 6 or 7, they don't have symptoms; a little tension, not too high, it doesn't give symptom but, on the other hand, the constraints and imperatives of treatment are enormous [...] so it's difficult to motivate them (patients) in the long run [...]' (Diabetologist)

All participants recognized the fact that patients' participation to care was dependent on the patients themselves, on their personalities, as well as on responsibilities patients assigned to themselves. However, patients explored this supra-category more than professionals (16% vs. 9%), insisting on the opinion that they were largely responsible for the quality of their care and for the quantity of information they were getting. In fact, patients needed to be proactive and change physicians if they were not satisfied, for example. They also had to contact specialist physicians if their GP did not refer them or search information on their own if they thought they did not receive enough.

To motivate patients towards self-management, patients and professionals agreed that it would be helpful to propose sport activities to patients. Patients nevertheless emphasized the need to have activities adapted to their physical capacities.

Patients and professionals mentioned different other incentives. While patients suggested implementing peer groups including old and recently diagnosed diabetic patients as well as an occasional professional to answer questions, professionals proposed self-management education classes.

Supra-category 'Professionals' specific Activities'

All participants emphasized the lack of communication and of collaboration between professionals. They did not explain it similarly. Patients stated that transmission of information between professionals was sometimes natural and sometimes dependent on their request and therefore mainly dependent on the professionals' will or motivation to communicate.

'[...] I have a GP who coordinates everything [...] I always do the analyses at his surgery then he sends them to the cardiologist [...] I had thyroid problems, he phoned the diabetologist so they discussed together [...]
- in the end you are lucky [...] to have a GP [...] who is close to you [...]' (Patients)

Professionals said that difficulties to collaborate were linked to the challenge of multidisciplinary work. They explored this supra-category more than patients (27% vs. 8%).

'[...] everyone always tends to work rather on his own and not collaborate as much as he could
- I agree with you too [...] it's sure that collaboration [...] between professionals can, I think, always be improved [...]' (Diabetologist and Dietician)

Thus, professionals emphasized the importance to clearly define each other's roles and respect each other's competencies to better collaborate and more appropriately address patients to other professionals. They also stressed their role and responsibility in patients' awareness of self-management.

Both patients and professionals suggested that teamwork should be developed to improve communication and collaboration between professionals. Professionals underlined this aspect more than patients. Indeed, they required the setting-up of a common language that would favour better communication within a multidisciplinary team of professionals and avoid the transmission of different or contradictory discourses to patients. They also proposed having access to a list of professionals, to be aware of and have contact addresses of all the actors involved in diabetes care.

All participants also evoked pharmacists as a possible resource in the follow-up of diabetic patients. While patients described pharmacists as professionals advising or indicating possible interactions between drugs, professionals suggested reinforcing their role in information exchange with doctors, which could improve patients' compliance with treatments.

To strengthen professionals' training in diabetes care, patients suggested improving specifi-

cally basic diabetes training of GPs, while professionals rather emphasized reinforcing multidisciplinary meetings including all the professionals involved in diabetes care.

Supra-category finances

Problems of reimbursement of foot care were raised both by patients and by professionals.

'[...] The podologist is another thing that they (insurance companies) do not cover [...]
- now I'm surprised, I think that there is a quality of information which doesn't arrive because the podologist [...] for my part, I have a physician's prescription and I think it's once a month which is covered; in the beginning, there must be a physician's prescription
- not in the basic insurance policy, no' (Patients)

'[...] where we have the most problems for obtaining reimbursement [...] is for podologists [...] it's a disaster [...] there are competent persons that we can just about use because it costs [...] from the point of view of the insurance companies [...]' (GP)

Other reimbursement problems were also described. For example, patients raised the problem of the limited number of glucose test strips reimbursed for type 2 diabetic patients, and professionals stressed the issue of the time spent on collaboration with other professionals, on self-management education and telephone consultation, which seemed sometimes difficult to bill.

Finally, participants described other financial difficulties. Patients denounced the cancellation of financial assistance for specific diets as well as the cancellation of the tax reduction they had benefited from, while professionals pointed out the lack of financial support to integrate GPs in networks. Patients also raised the problem of having to pay their treatment before being reimbursed by the insurance companies.

Supra-category 'Regional diabetes programme'

All participants were in favour of the development of a regional diabetes programme.

However, in each area, it must be adapted to the needs of both patients and professionals.

'[...] I think it should be a thing a self-service so [...] we go to the thing we are concerned [...]
- mmhmmh so it should be flexible adaptable to your situation
- that's right [...] according to the needs of the person [...]' (Patient and Moderator)

'[...] we are really a region which is bi-cantonal you see [...] Health homecare services of the canton of Valais and those of the canton of Vaud are integrated in the same Federation [...] so there yeah
- so there [...] we could say there is a cantonal framework [...] with an application rather
- regional [...] yeah [...]' (Specialist and Moderator)

According to all participants, the programme should be developed on already existing structures such the Diabetes Association for patients or other care structures for professionals.

We noticed that participants did not envision its usefulness in the same way. For patients, such a programme should integrate comprehensive care and be easily accessible (i.e. be located near patients). For their part, professionals considered the programme as a help to reinforce collaboration between professionals. In addition, the programme should not be too time-consuming for professionals. The main difference between patients and professionals in this supra-category was that patients explored it less than professionals (3% vs. 11%). One reason was that patients considered that it was the professionals' role to appropriately develop a programme. Another reason was that patients, compared to professionals, did not often refer to the idea of a programme. Indeed, they did not perceive the programme as something completely new, structured, with different components, but rather as the improvement in some already existing aspects, aspects that were not necessarily included within a structured programme. As only thematic sequences directly linked to a programme were classed in the supra-category 'Regional diabetes programme', most of the answers provided by

patients were categorized into one of the other five supra-categories.

Discussion

This study shows that patients and professionals share common opinions about the care of diabetic patients. Indeed, convergences of opinions included: variability in the perceived quality of care, difficulties to motivate patients to self-management, communication/collaboration barriers between professionals, importance of involving multiple professionals in the follow-up of diabetes care, as well as financial difficulties. To improve quality, all participants suggested the reinforcement of existing structures, teamwork and primary prevention. Beyond these common opinions, patients and professionals did not explore the themes (supra-categories) similarly, expressing divergences of opinions indeed. While patients emphasized the importance of benefiting from comprehensive care, professionals mentioned problems with the follow-up of patients. We also found variability in the perceived amount of disease-specific information received by patients, while professionals noticed lack of information on existing structures and health-care professionals in charge of diabetic patients. Solutions to encourage patients to manage their disease, suggested by patients and professionals, were the implementation of peer groups and more self-management classes, respectively. In addition, professionals proposed multidisciplinary meetings for solving their collaboration difficulties, while patients suggested improving GPs' diabetes-specific knowledge. Even if patients explored this theme less, all participants favoured the development of a regional diabetes programme, mainly viewing it as a means to reinforce existing structures and tools.

Several important aspects emerge from this study. First, it is interesting to notice that patients and health-care professionals tackled the same issues (supra-categories) while discussing quality of diabetes care and possibility to develop a regional diabetes programme. In

addition, participants mentioned similar problems and solutions despite their different positions regarding the disease. This result highlights the existence of concerns common to patients and professionals, linked to the specificity of the disease and to the organization of the health-care system. This is consistent with the study of Yen *et al.*²⁶, which explored professionals' reaction to patients' experiences and showed that both agreed upon the problems related to the management of a chronic illness.

However, these common concerns were not always described in the same way and did not bear the same importance for patients and professionals. For instance, regarding the variability in perceived quality of care, patients assigned low quality to insufficient diabetes care competencies of GPs. Therefore, when they talked about professionals, patients suggested the improvement in GPs' diabetes basic training. A similar solution was evoked by Australian patients with chronic conditions while exploring their opinions on the quality of their general practice care.³⁵ In our study, patients also emphasized their responsibility in diabetes care, in general and not only regarding self-management, as if they wanted to palliate problems of professionals' competencies. By contrast, professionals did not express the need to be more trained because they did not assign poor quality of care to their skills and knowledge. Rather, they emphasized the communication and collaboration problems they were facing. Similar results were found in a cross-national assessment of patient and provider opinions of diabetes care in various countries that found that health-care providers had difficulties to communicate with specialists.¹⁹ Another study showed that Australian pharmacists underlined communication problems between health-care professionals and between professionals and patients.³⁶ Our findings can be related to the solutions that participants suggested to motivate patients for self-management. Indeed, patients proposed to set up peer groups, giving a secondary place to professionals who would only participate occasionally. This solution reinforces the patients' feeling of responsibility in care, of

increased autonomy as well as of a more active role in diabetes care. Unlike patients, professionals suggested more self-management education classes, as others have done.³⁷ We interpreted this last proposal as a means for professionals to keep control of care and to give information to patients which they would, supposedly, not have access to with peer groups because professionals would not be always included in these meetings. Indeed, professionals have been shown to perceive a sense of responsibility in care, which guaranteed the quality of care, using guidance and support to reinforce patients' involvement in care.^{38, 39} This sense of responsibility was explored in more details by Oldroyd *et al.*⁴⁰ who showed, conversely to our findings, that GPs felt a pressure from some patients to take overall control of their disease. These differing results could be explained by the fact that, in Oldroyd's study, GPs were specifically asked to think about patients' expectations towards general practice while, in our study, we asked professionals to talk about their own needs, but not about their opinions regarding patients' needs. In both studies, however, professionals said that quality of care depended on, among other things, patients, their personalities and their motivations.

The last aspect of this study that is worth discussing is the patients' and health-care professionals' opinions towards the development of the regional diabetes programme. We mentioned that patients were willing to participate in the programme if it was integrating comprehensive care. This matches patients' experiences collected after the implementation of a chronic disease management programme. For example, in the study of Russel *et al.*⁴¹, patients reported better care coordination and the feeling of being considered as a whole person. However, in our study, patients explored the theme of a regional diabetes programme less than professionals. The reasons are, first, that improvements in diabetes care could be reached, for patients, without the development of a programme, and, second, that patients considered that it was the professionals' responsibility to think about the components and organization

of the programme. By contrast, professionals were particularly interested in the development of the programme, probably because they considered it more as a resource for improving diabetes care, especially through their enhanced collaboration, than patients. It is nevertheless interesting to note that professionals favoured the programme's development only under certain conditions: covering patients' and professionals' needs, using existing care structures, not generating too much administrative work, and considering financial support. These findings are similar to those of Steuten *et al.*,⁴² who explored personal opinions of GPs with regard to the implementation of disease management. Dutch GPs considered a good network as a promoting incentive to the implementation of disease management, while the absence of reimbursement and overtime were seen as impending incentives to it.

The main strength of this study lies in the use of qualitative methods that allowed us the detailed exploration of both the opinions of patients and health-care professionals within the four sanitary areas of the canton of Vaud, giving us access to very rich data. The following limitations need to be considered. First, our sampling strategy cannot allow for the generalization of results to the whole population of diabetic patients of the canton, especially to those who ignore their diabetes. However, the aim of sampling in qualitative studies is not to draw representative samples, but to purposively select participants with various characteristics. This variety makes discussions particularly dynamic with differences in, and confrontations of, opinions.⁴³ Second, despite the fact that research participants are often described as being different from non-participants (e.g. socio-economic status, care motivation), this did not prevent participants raising problems directly involving themselves, such as motivation problems and difficulties to work in teams.

Conclusion

Despite the different perspectives and roles of patients and health-care professionals regard-

ing diabetes care, their opinions on current care and the development of a regional diabetes programme converged in several ways. Actually, both patients and health-care professionals tackled the same issues and expressed similar problems and solutions. Opinions also diverged, however, highlighting the specific needs of patients and professionals. Indeed, participants explored themes neither similarly nor with the same importance. Acknowledging the convergences and divergences of opinions of both diabetic patients and health-care professionals should help the further development of diabetes programme adapted to users' needs, taking all stakeholders interests and priorities into consideration.

Source of funding

The project described in the article was funded by the Department of Public Health of the canton of Vaud. Dr. I. Peytremann-Bridevaux is supported by a grant from the Swiss National Science Foundation [PROSPER No 3233B 123817/1 to I.P.B].

Acknowledgements

We would like to thank all diabetic patients, healthcare professionals and institutions, who participated to the study. We also thank the Diabetes Association of the canton of Vaud, the directors of regional care networks and working groups of the regional diabetes program (Diabetes cantonal Program) for their collaboration. We thank Mrs. Lucienne Boujon for copy editing the manuscript.

Conflict of interest

No conflict of interest has been declared.

References

- 1 Epping-Jordan JE, Pruitt SD, Bengoa R, Wagner EH. Improving the quality of health care for chronic conditions. *Quality and Safety in Health Care*, 2004; 13: 299–305.

- 2 Harris MF, Zwar NA. Care of patients with chronic disease: the challenge for general practice. *The Medical Journal of Australia*, 2007; **187**: 104–107.
- 3 McGlynn E, Asch S, Adams J *et al.* The quality of health care delivered to adults in the United States. *The New England Journal of Medicine*, 2003; **348**: 2635–2645.
- 4 Schoen C, Osborn R, Doty M, Bishop M, Peugh J, Murukutla N. Toward higher-performance health systems: adults' health care experiences in seven countries, 2007. *Health Affairs*, 2007; **26**: 717–734.
- 5 Steuten LMG. How to move from belief to proof? Articulating the value of chronic disease and care management programs for adults with asthma. *Respiratory Care*, 2009; **54**: 844–846.
- 6 Coleman K, Austin BT, C B, Wagner EH. Evidence On The Chronic Care Model In The New Millennium. *Health Affairs*, 2009; **28**: 75–85.
- 7 Göhler A, Januzzi JL, Worrell SS *et al.* A systematic meta-analysis of the efficacy and heterogeneity of disease management programs in congestive heart failure. *Journal of Cardiac Failure*, 2006; **12**: 554–567.
- 8 Knight K, Badamgarav E, Henning JM *et al.* A systematic review of diabetes disease management programs. *American Journal of Managed Care*, 2005; **11**: 242–250.
- 9 Mattke S, Seid M, Ma S. Evidence for the effect of disease management: is \$1 billion a year a good investment? *American Journal of Managed Care*, 2007; **13**: 670–676.
- 10 Norris SL, Nichols PJ, Caspersen CJ *et al.* The effectiveness of disease and case management for people with diabetes. A systematic review. *American Journal of Preventive Medicine*, 2002; **22**: 15–38.
- 11 Ofman JJ, Badamgarav E, Henning JM *et al.* Does disease management improve clinical and economic outcomes in patients with chronic diseases? A systematic review. *The American Journal of Medicine*, 2004; **117**: 182–192.
- 12 Ouwens M, Wollersheim H, Hermens R, Hulscher M, Grol R. Integrated care programmes for chronically ill patients: a review of systematic reviews. *International Journal for Quality in Health Care*, 2005; **17**: 141–146.
- 13 Peytremann-Bridevaux I, Staeger P, Bridevaux PO, Ghali WA, Burnand B. Effectiveness of chronic obstructive pulmonary disease-management programs: systematic review and meta-analysis. *American Journal of Medicine*, 2008; **121**: 433–443.
- 14 Roccaforte R, Demers C, Baldassarre F, Teo KK, Yusuf S. Effectiveness of comprehensive disease management programmes in improving clinical outcomes in heart failure patients. A meta-analysis. *European Journal of Heart Failure*, 2005; **7**: 1133–1144.
- 15 Tsai AC, Morton SC, Mangione CM, Keeler EB. A meta-analysis of interventions to improve care for chronic illnesses. *American Journal of Managed Care*, 2005; **11**: 478–488.
- 16 Weingarten SR, Henning JM, Badamgarav E *et al.* Interventions used in disease management programmes for patients with chronic illness-which ones work? Meta-analysis of published reports. *British Medical Journal*, 2002; **325**: 925.
- 17 Peytremann-Bridevaux I, Burnand B. Inventory and perspectives of chronic disease management programs in Switzerland: an exploratory survey. *International Journal of Integrated Care*, 2009; **9**: 1–8.
- 18 Hagon-Traub I, Hirisger P, Bovet P *et al.* *Programme cantonal Diabète, présentation du programme*. Lausanne: Service de la Santé Publique du canton de Vaud, 2010.
- 19 Peyrot M, Rubin R, Lauritzen T *et al.* Patient and provider perceptions of care for diabetes: results of the cross-national DAWN Study. *Diabetologia*, 2006; **49**: 279–288.
- 20 Isaksson A, Ahlström G. Managing chronic sorrow: experiences of patients with multiple sclerosis. *The Journal of Neuroscience Nursing*, 2008; **40**: 180–191.
- 21 Fried T, Tinetti M, Iannone L. Primary care clinicians' experiences with treatment decision making for older persons with multiple conditions. *Archives of Internal Medicine*, 2011; **171**: 75–80.
- 22 Rosemann T, Joest K, Körner T, Schaefer R, Heiderhoff M, Szecsenyi J. How can the practice nurse be more involved in the care of the chronically ill? The perspectives of GPs, patients and practice nurses. *BMC Family Practice*, 2006; **3**: 7–14.
- 23 Gordon K, Smith F, Dhillon S. Effective chronic disease management: patients' perspectives on medication-related problems. *Patient Education and Counseling*, 2007; **65**: 407–415.
- 24 Wilson P, Kendall S, Brooks F. Nurses' responses to expert patients: the rhetoric and reality of self-management in long-term conditions: a grounded theory study. *International Journal of Nursing Studies*, 2006; **43**: 803–818.
- 25 Haugli L, Strand E, Finset A. How do patients with rheumatic disease experience their relationship with their doctors? A qualitative study of experiences of stress and support in the doctor–patient relationship. *Patient Education and Counseling*, 2004; **52**: 169–174.
- 26 Yen L, Gillespie J, Jeon Y *et al.* Health professionals, patients and chronic illness policy: a qualitative study. *Health Expectations*, 2010; **14**: 10–20.
- 27 Jerant AF, von Friederichs-Fitzwaterb MM, Moorec M. Patients' perceived barriers to active self-management of chronic conditions. *Patient Education and Counseling*, 2005; **57**: 300–307.

- 28 Nagelkerk J, Reick K, Meengs L. Perceived barriers and effective strategies to diabetes self-management. *Journal of Advanced Nursing*, 2006; **54**: 151–158.
- 29 Jeon YH, Essue B, Jan S, Wells R, Whitworth JA. Economic Hardship associated with managing chronic illness: a qualitative inquiry. *BMC Health Services Research*, 2009; **9**: 1–11.
- 30 Hroschikoski MC, Solberg LI, Sperl-Hillen JM, Harper PG, McGrail MP, Crabtree BF. Challenges of change: a qualitative study of chronic care model implementation. *Annals of Family Medicine*, 2006; **4**: 317–326.
- 31 Solberg LI, Crain AL, Sperl-Hillen JM, Hroschikoski MC, Engebretson KIL, O'Connor PJ. Care quality and implementation of the chronic care model: a quantitative study. *Annals of Family Medicine*, 2006; **4**: 310–315.
- 32 Dejesus RS, Vickers KS, Stroebel RJ, Cha SS. Primary care patient and provider preferences for diabetes care managers. *Patient Preference and Adherence*, 2010; **4**: 181–186.
- 33 Lauvergeon S, Mettler D, Peytremann-Bridevaux I. *Exploration des expériences et des besoins des patients diabétiques et des professionnels de la santé dans le canton de Vaud*. Lausanne: Institut universitaire de médecine sociale et préventive, 2010.
- 34 Peytremann-Bridevaux I, Lauvergeon S, Mettler D, Burnand B. Diabetes care: opinions, needs and proposed solutions of Swiss patients and healthcare professionals: a qualitative study. *Diabetes Research and Clinical Practice*, 2012; **97**: 242–250.
- 35 Infante F, Proudfoot J, Powell Davies G *et al.* How people with chronic illnesses view their care in general practice: a qualitative study. *The Medical Journal of Australia*, 2004; **181**: 70–73.
- 36 Lehnbohm E, Brien J-AE. Challenges in chronic illness management: a qualitative study of Australian pharmacists' perspectives. *Pharmacy World and Science*, 2010; **32**: 631–636.
- 37 Jowsey T, Jeon Y-H, Dugdale P, Glasgow NJ, Kljakovic M, Usherwood T. Challenges for co-morbid chronic illness care and policy in Australia: a qualitative study. *Australia and New Zealand Health Policy*, 2009; **6**: 1–8.
- 38 Blakeman T, McDonald W, Bower P, Gately C, Chew-Graham C. A qualitative study of GPs' attitudes to self-management of chronic disease. *British Journal of General Practice*, 2006; **56**: 407–417.
- 39 Carbone ET, Rosal MC, Torres MI, Goins KV, Bermudez OI. Diabetes self-management: perspectives of Latino patients and their health care providers. *Patient Education and Counseling*, 2007; **66**: 202–210.
- 40 Oldroyd J, Proudfoot J, Infante F *et al.* Providing healthcare for people with chronic illness: the views of Australian GPs. *The Medical Journal of Australia*, 2003; **179**: 30–33.
- 41 Russel G, Thille P, Hogg W, Lemelin J. Beyond fighting fires and chasing tails? Chronic illness care plans in Ontario, Canada. *Annals of Family Medicine*, 2008; **6**: 146–153.
- 42 Steuten LMG, Vrijhoef HJM, Spreuwenberg C, Van Merode GG. Participation of general practitioners in disease management: experiences from the Netherlands. *International Journal of Integrated Care*, 2002; **2**: 1–7.
- 43 Marková I. Les focus-groups. In: Moscovici S, Buschini F, eds. *Les méthodes des sciences humaines*. Paris: Presses Universitaires de France 2003: 221–242.