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Type 2 diabetes in general practice – a focus-group study

ORIGINAL ARTICLE

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BACKGROUND

The National Diabetes Plan 2017–21 has implemented measures to improve diagnosis and follow-up of persons with type 2 diabetes by the primary health services. The objective of this study was to explore the experiences and thoughts of Norwegian general practitioners (GPs) with regard to diagnosis and follow-up of this patient group.

MATERIAL AND METHOD

In this qualitative study, three focus-group interviews were conducted with a total of 17 GPs. The interviews were recorded, transcribed and analysed using systematic text condensation.

RESULTS

The GPs reported having a busy daily schedule that rarely allowed for targeted identification of patients in the risk zone to be prioritised. They described a patient-centred diabetes care, in which motivating for lifestyle change was considered a necessary but demanding task. The doctors identified the need to find a balance between following the general clinical guidelines on the one hand and individually adapting the follow-up to each patient on the other. Furthermore, the participants reported being less updated on current medical knowledge than they wanted, due to time constraints.

INTERPRETATION

The GPs in the study described a patient-centred diabetes care that was driven by clinical experience. The guidelines have an advisory, but not mandatory function. This approach enables personalised and adapted treatment, but could also be a contributory cause of the failure to provide sufficient follow-up as required by the national guidelines.

Main findings

The guidelines were considered to be advisory, but not mandatory, for the diagnosis, follow-up and treatment of patients with type 2 diabetes.

Motivating for lifestyle change was seen as a necessary, but demanding part of the general practitioners' work.

The general practitioners focused on the patients as individuals, and sought to adapt the diabetes care to each patient to provide optimal treatment.

Approximately 216 000 persons have been diagnosed with type 2 diabetes in Norway (1, 2). In 2016, the Norwegian Institute of Public Health estimated that type 2 diabetes was the ninth most frequent cause of non-fatal health loss in Norway (2), and in 2019, a total of 556 amputations were performed as a result of complications from diabetes (3). The national medical guidelines for diabetes from 2016 emphasise prevention of type 2 diabetes in groups with a high risk of developing the disease or having long-term complications (4).

The ROSA-4 study from 2014 investigated the quality of the GPs' follow-up of patients with type 2 diabetes and found considerable discrepancies between the recommendations from the Norwegian Directorate of Health and the performance of screening procedures by GPs (5). The National Diabetes Plan 2017–21 has implemented a number of measures to improve the follow-up and treatment of diabetes patients in the primary health care service (6). One of the goals is to increase the quality of the GPs' diagnosis and follow-up of persons with diabetes (6).

In addition to follow-up of clinical and biochemical parameters, good diabetes care requires identification and follow-up of the patient's challenges and areas of disease management. Given the increased priority that the primary health

service places on the prevention and treatment of diabetes, it is relevant to take a closer look at the experiences and encounters that GPs have with this patient group. Previous studies show that doctors in the primary healthcare service vary considerably in their attitudes to diabetes prevention (7). Active prevention and risk assessment are incorporated into the procedures, but the effect is limited by the doctors' lack of confidence in their own ability to give advice, lack of knowledge and a heavy workload (7). Moreover, there seems to be some scepticism about the fact that diabetes guidelines are based on research at group level, and therefore fail to take account of individual complexity in terms of comorbidity, adverse effects and well-being (8, 9). This contrasts with the findings in a study from Oman, where the doctors do not adapt diabetes treatment based on information from the patient, and claim that poor treatment response is a result of insufficient patient compliance (10).

Since we have not found similar research in Norway, our goal was to explore the experiences and thoughts of Norwegian GPs regarding diagnosis and follow-up of patients with type 2 diabetes and the aspects of diabetes care that they focus upon.

Material and method

This qualitative study consists of three focus-group interviews with practising GPs in Norway, one in April 2017 and two in November 2018, and is part of two required coursework assignments for the medical studies programme at the University of Bergen. The focus-group method is well suited to eliciting viewpoints and experiences among health personnel (11). The reporting was done in accordance with the CASP (Critical Appraisal Skills Programme) checklist for reporting of qualitative studies (12).

The participants were recruited by two of the authors (UØS and RLSK), who sent invitations to various GPs in their respective networks. The sample can thereby be regarded as a convenience sample. The participants included a group of doctors in further and continuing education in general practice medicine, as well as a supervision group for GPs who were in training in general practice medicine. The contact persons extended an invitation to participate to the other group participants. The group in further and continuing education consisted of four participants, and the interview was conducted in a GP's surgery in April 2017. The supervision group consisted of thirteen participants, two of whom functioned as supervisors. This group was split into two focus groups with an approximately equal gender representation and with one supervisor in each group. The focus-group interviews were conducted in two rooms in the home of one of the supervisors in November 2018, with five and eight participants respectively. The participants, who were resident in two counties in Norway, included six who were affiliated with GP practices in a major city, while the others represented rural areas. Three participants (18 %) were younger than 30 years, seven (41 %) were 30–45 years of age, six (35 %) were 46–60 years of age, and one (6 %) was older than 60 years. Eight participants were men, and nine were women. They had been practising

medicine for a median of six years (range 1–31 years). Five of the participants were specialists in general practice, eleven were trainees in general practice and one was a foundation doctor.

Four of the authors (LH, UØS and RLSK) and a contributor (ATF) designed a semi-structured interview guide. A former GP read the questions and assessed their face validity, and some amendments were subsequently made. The interview guide consisted of open-ended questions focusing on two main topics: a) identification and follow-up of patients who are at risk of developing type 2 diabetes and b) the diagnostic process and follow-up of patients with confirmed type 2 diabetes (see the Appendix). The moderator asked follow-up questions on topics that appealed to the participants, or when the interview needed to be refocused on the topic. The topics that held special appeal to the participants' interest are described in the 'Results' section.

Attendance was considered to constitute consent to participate. The objective was presented orally, and the participants were informed that the interview would be recorded, and that the recording would be deleted after transcription In the first interview, LH and ATF shared the role of moderator, while RLSK functioned as secretary. In the second and third interviews, RY and AH served as moderators and RLSK and UØS as secretaries respectively. Each focus-group interview lasted for approximately 90 minutes. The transcription of the recordings from the first interview was done by LH and ATH. For the second and third interviews, RY and AH used HyperTranscribe (ResearchWare, Massachusetts, USA) to perform the transcription. .

Malterud's method for systematic text condensation was used for the analysis (11). LH, RY, AH and UØS first read the transcripts separately and identified preliminary topics before meeting to arrive at a consensus. The meaning units were subsequently identified and coded. At the next stage, RY and AH wrote a condensed version of the content in each code group and sub-group, and each sub-group was illustrated by a quotation. LH and UØS read these and gave feedback. Finally, RY and AH rewrote the condensed version into an analytical text that represented the main content of the condensate. LH, UØS and RLSK read the text and gave feedback. The contact person in each group received a draft of the result from the different focus-group interviews with an opportunity to provide feedback.

The project was not considered subject to notification to the Regional Committee for Medical and Health Research Ethics (REK). The Norwegian Centre for Research Data has approved the project, since it was encompassed by Section 31 of the Personal Data Act (58924 and 59357).

Results

Topics that aroused special interest included the use of guidelines and challenges associated with motivating lifestyle changes. The analysis identified three main topics: *From suspicion to confirmed diagnosis*, *Guidelines are advisory* and *Adult education is extremely challenging* . These topics are described in more detail below.

From suspicion to confirmed diagnosis

Many of the GPs described type 2 diabetes as one of several diseases with a subclinical presentation that need to be considered. Many of the doctors focused more on health promotion through advice on diet and physical activity, rather than on a systematic identification of patients at risk.

'But then we also have a lot of other diseases that we also need to keep in mind and that are hard to diagnose, such as metabolic disorders and often heart disease, that we are also on the lookout for, aren`t we? So it's not just diabetes that we are looking for in our daily work, it's just one of many.' (GP specialist, urban)

Among the experienced GPs there was consensus that the patients had an increased awareness of the disease and that patients increasingly wanted a general assessment of their own health condition, with measurement of HbA1c as a natural part of this package.

Many of the GPs reported that they were sometimes surprised to see which patients had an elevated level, since these included some who did not 'look like' typical type 2 diabetes patients. Usually, most doctors themselves took the initiative to measure HbA1c in overweight patients.

'So why [did you measure] long-term blood sugar in him then, since he was healthy?' (GP specialist, urban)

'He is a little chubby.' (GP specialist, urban)

Many of the doctors were aware of the FINDRISC (Finnish Diabetes Risk Score), but the form was not used as a diagnostic tool during the consultations, because it contains questions that would naturally come up in a consultation anyway. The overall clinical assessment was more important than a strategic identification of patients at risk. One of the doctors argued that the form should be integrated into the patient record and remuneration systems to persuade the doctors to use it. For patients with an HbA1c level in the pre-diabetes range, the doctors described their task at the time of diagnosis as providing sufficient information about the disease and encouraging lifestyle change. Here the focus was on provision of general lifestyle advice and identification of areas in which the patient was able to cope well. Many of the doctors pointed to the importance of portioning the information over several consultations, since they had found that patients are rarely able to absorb more than three items after a consultation.

'Okay, now you have the diagnosis, we will not do anything acute. We have time. So let's use that time. And they receive information, and they receive it repeatedly.' (GP specialist, urban).

In addition, the intensification of the consultations served as a tool to maintain the motivation and lifestyle change. One of the GPs drew a parallel with a visit to the dentist:

'Just think of yourself, when did you have your last appointment with a dentist, right? Afterwards, you're a little better with the dental floss, right. [...] So really, the frequency we're looking at is a lot more effective than a large training course. (GP specialist, urban)

In cases where more than simple measures were considered necessary to achieve a lifestyle change, patients were referred to a diabetes patient education course. Many of the GPs from rural areas pointed out long travel distances and low availability of such courses as possible barriers to referral and participation.

Guidelines are advisory

The participants agreed on the importance of striking a balance between adherence to the guidelines and use of their own clinical experience in diabetes care. For example, one doctor used insulin and C-peptide rather than HbA1c to identify patients with diabetes. This was not supported by the other participants. The most committed doctors stated that blind adherence to the guidelines could threaten their autonomy and turn them into 'robot doctors'. Some participants pointed out that the GP has the best overview of the patient's health and life situation, and that experience and clinical discretion are required to provide optimal treatment to each individual.

And I'd like to add that general practice is the art of the possible, (...). This doesn't mean that it should be an excuse, right. After all, we should aspire to goal achievement etc., etc., but as someone just said, the guidelines are advisory, they are not a compulsory exercise.' (GP specialist, urban).

Many of the participants highlighted the importance of staying clinically up-to-date, but some also referred to the challenges involved in relating to new and various guidelines and drugs in a busy working situation.

'It's our job to stay up-to-date, no doubt about that. But managing to do it, especially when it's very busy in the surgery, that's certainly not so easy.' (GP specialist, urban)

Most of the doctors were familiar with the Noklus diabetes form, but opinions were divided regarding its use. Some were critical of the form, since it was considered extra work on top of already established procedures. Some of the doctors who used it actively referred to the reminder for an annual check-up as particularly useful, since it helped ensure a more structured follow-up of the patients.

'I have introduced it in the surgery where I'm working now, and yes, it makes things a whole lot easier. Because earlier I did the same checks without the form, but with the form there are many items that are sort of filled in for you.' (GP trainee, rural)

Adult education is extremely challenging.

One of the GPs stated that 'adult education is extremely difficult' and that motivation is the only way to bring about lifestyle change. Motivating lifestyle changes was regarded as 'fresh produce', and that finding out what would motivate each individual was a necessary, but difficult task. It was pointed out that this had to be explored together with the patient, and that it could be time-consuming. Some patients considered the disease to be so common and harmless that they saw no need to make any major changes to their lifestyle.

'[...] '"Oh, so it's only diabetes," you can hear someone say. And I think: no, it's not as simple as that.' (GP trainee, rural)

The doctors described various strategies they used to increase the patients' motivation. For example, one doctor wrote a partial sick note for a couple of months each year to a diabetes patient who had a sedentary job. The patient spent this time on physical activity, and was thereby able to maintain a satisfactory HbA1c value. Many were especially motivated by figures:

'Some of my patients are clearly motivated by HbA1c, when they see the level drop and approach a normal level.' (GP specialist, urban)

With regard to patients who previously had not been very motivated, some of the doctors described situations that could serve as catalysts for change, for example the risk of not receiving an approved health certificate. Even among patients with whom the doctors considered they had a good relationship of trust and cooperation, there were some who failed to change their lifestyle.

'It's clear that the better the doctor is at doing their job, the better perhaps are the chances that the patient will do well, but there is likely to be a lot that we are unable to influence, no matter how good a job we're doing.' (GP specialist, urban)

In situations where the GPs felt that the patient failed to take the disease seriously, some GPs reported to resort to scare tactics.

'I had a patient [...] and he sort of said that diabetes is so common, and it's not all that important, so I had him come in for more consultations, but I couldn't get through to him, and finally I showed him a picture of a diabetic foot, then ... After that, things improved.' (foundation doctor, urban)

The most experienced GPs reported that they preferred to lay the groundwork for individual disease management, but left the patients free to decide for themselves what they would do: *'People are responsible for their own lives, period.'* (GP specialist, urban)

Discussion

The GPs in this study underscore that diabetes is one of several diseases that they should be aware of, and they do not necessarily investigate actively for the disease. They describe that in their encounter with type 2 diabetes patients, they take an active role in supporting lifestyle changes. Considerable emphasis is placed on personal competence and clinical experience, but the time constraints are seen as a hindrance to keeping as up-to-date as they would wish. Clear instructions are available as to who should be tested and risk assessed for type 2 diabetes, and how (4). However, in line with previous studies (7, 13, 14), the doctors in our study reported that an active approach to risk assessment is often given low priority due to time constraints. The fact that an increasing number of patients are now requesting a general health check-up that includes HbA1a might give the impression that more patients are now examined with a view to this disease. It is nevertheless worth noting that the use of general health check-ups has a social gradient (15) which is inversely proportional to the prevalence of type 2 diabetes (16), and that this may lead to some groups being underdiagnosed.

A meta-study that compared the prevalence of diabetes in selected groups of immigrants with the prevalence among ethnic Norwegians found that Pakistani immigrant women in Norway had a diabetes prevalence of 26 per cent, compared to 3 per cent among ethnic Norwegian women (17). It could thus be important for doctors to assume a more active role in the identification of type 2 diabetes in especially vulnerable groups. Use of the diabetes risk test could simplify this work, especially if the test was integrated into the patient records system, as suggested by the participants in this study. It is worth noting that for patients with an African or Asian ethnic background, it is not recommended to use FINDRISC, but to measure HbA1c directly (4).

The guidelines stipulate that GPs should offer referral to patients with newly discovered diabetes to a patient education course (4). The GPs in our study believed that they could provide the patients the same service in the GP surgery. This concurs with findings in a previous study, where only 4 per cent of GPs reported to prefer a diabetes patient education course as an information channel for patients (18). However, the same study showed that 24.5 per cent of the patients wished to attend a course (18). Lack of information about diabetes from the GP at the time of diagnosis (18–20) was one of the reasons why the patients wished to attend a course (20). The fact that the doctors in our study mainly referred patients whom they felt needed more follow-up than they could provide themselves, illustrates the GP's function as a gatekeeper to society's resources. On the other hand, this could be problematic, given that the doctors also report to have too little time available to keep updated in terms of knowledge.

Our study revealed some scepticism among the GPs towards the guidelines and the same has also been found in other studies (8, 21, 22). Part of the reason for this scepticism is that the guidelines refer to groups, whereas GPs treat individuals (21, 22). GPs in a focus-group study in the Netherlands described the challenges associated with the use of guidelines in the treatment of multimorbid patients (23), which persons with type 2 diabetes often can be. As in our study, the Dutch doctors described how clinical experience is needed to provide optimal patient-centred treatment.

The GPs in our study referred to their important role as motivators. Although some challenges associated with this role were highlighted, they did not describe the same degree of helplessness as found in studies from other countries, that cause doctors to give up treating the patient (9, 24). An interesting finding, which illustrates both this and the GPs' autonomy, is the example of the doctor who wrote a partial sick note for a patient once every year to help increase the patient's physical activity and normalise their HbA1c level. Such a practice will be controversial, since the patient had no functional impairment, but the GP considered this to have a preventive effect for this particular patient's continued health and ability to work. The use of insulin and c-peptide to capture prediabetes is also controversial, and can be an example of an overextension of the GPs' autonomy.

The ROSA-4 study shows that Norwegian GPs have a potential for improvement when it comes to diabetes care, especially with regard to screening for microvascular complications, for which the monofilament test has

only a 26 per cent coverage rate (5). By using the Noklus diabetes form, the GP receives feedback on their results compared to nationwide results. It seems that the use of this form leads to more frequent microvascular screening procedures, including an odds ratio of 4.51 for a completed monofilament test (25). This shows that although adult education may be extremely difficult, figures and feedback can motivate both patients and doctors for better diabetes care.

Strengths and weaknesses

The strength of focus-group interviews is that they create a group dynamic, where an exchange of experiences and thoughts can open up new insights and reflections (11). On the other hand, there will always be a risk that the group dynamic creates a situation where the participants adapt to the group or to what they believe is expected of them. The interviews were conducted in established groups, the purpose of which is to exchange experiences. We therefore felt that there was a relationship of trust between the participants that could facilitate an open exchange, but there is also a risk of group thinking/conformity. The most experienced GPs were also the most active during the interviews.

At the time of the analysis, none of the authors had previously worked as GPs, and this gave us an 'outsider' perspective on the GPs' daily work. This can be both an advantage and a disadvantage.

The objective of this qualitative study was to gain insight into GPs' experience with and thoughts about this patient group. The fact that findings similar to ours can be found in international studies lends support to a degree of transferability.

Since there is little knowledge available from Norway with regard to this topic, our goal was to gain a glimpse, rather than an in-depth analysis of these topics. Failure to go deeper into some of the topics that are elucidated is a weakness of this study. The moderators' lack of experience with this method may have meant that the interviewers were less able to capture conflicts within the group and topics that should have been more closely examined, when compared to what more experienced interviewers might have achieved. However, this also testifies to the strength of this study: it has triggered reflections on diabetes care in Norwegian general practice and shown that this is an area that requires further studies and analysis.

Conclusion

The GPs in this study describe patient-centred diabetes care driven by clinical experience. Guidelines have an advisory, rather than a mandatory function. Such adaptation enables personalised treatment, but can also contribute to a deficiency of follow-up in accordance with national guidelines.

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reviewed.

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