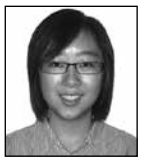

Sandy Lu
Mark F Harris

Prevention of diabetes and heart disease

Patient perceptions on risk, risk assessment and the role of their GP in preventive care

Background

There are gaps between current clinical guideline recommendations and current practice for the prevention of diabetes and heart disease. This study aims to explore patients' views on risk, assessment and their general practitioner's role, and how these factors may impact their uptake of preventive care.

Methods

A qualitative study was conducted using semi-structured telephone interviews with 18 patients from three general practices in New South Wales.

Results

Patients associated the GPs' role with their experience of their GP's actions. Most patients saw their GP's primary role as assessing single physiological risk factors. Test results influenced patients' perception of their risk, motivating them to make changes and engage in prevention. However, none recalled having multi-factorial assessments and those with normal results were infrequently offered lifestyle advice.

Discussion

Patient engagement in prevention could be promoted by multi-factorial risk assessments and communication of risk, and appropriate advice and follow up delivered by their GP or practice nurse.

Keywords

patients; perceptions; risk assessment; patient acceptance of care; diabetes/prevention; cardiovascular diseases/prevention

The consensus approach to prevention of heart disease and type 2 diabetes mellitus (T2DM) involves the combination of early risk identification and implementing intervention strategies.[1] Current guidelines for the adult Australian population[2] recommend patient assessment by the Australian Cardiovascular Risk Charts[3] and the Australian Type 2 Diabetes Risk Assessment Tool (AusDrisk),[4] which are risk assessment tools tailored to the Australian population. However, there is limited use of these tools in the Australian general practice setting, estimated to be as low as 40% and 14% respectively.[5,6]

The low uptake may be attributed to the newness of the development and introduction of these risk assessment tools; broader general practitioner factors such as GP characteristics, attitudes and prior beliefs; practical issues; structural barriers within practices and pressure from patient demands.[7–10] Continuity of care and development of the patient-doctor relationship have been identified as key enablers to preventive care.[11] Sustained participation in lifestyle intervention programs are also inhibited by patients' inaccurate risk perception, lack of motivation and time constraints.[12]

There has been relatively limited research into patients' perspectives on what influences their uptake of risk assessment and preventive care. The purpose of this study is to address the gap in knowledge on patients' views on prevention, risk, and risk assessment of heart disease and T2DM within the Australian general practice setting.

Methods

Sample and data extraction

The research was conducted, at baseline, as a qualitative sub-study of a randomised controlled trial of preventive care in general practice, the Preventive Evidence into Practice (PEP) study. The study population was drawn from three New South Wales general practices involved in the intervention arm of the trial. Patients who were aged 40 years and over and who did not have diagnosed diabetes or heart disease were selected.

The interviews were semi-structured and guided by the questions adapted by the researchers from a previous study (*Table 1*) to allow for discussion of key topics and exploration of any other issues that emerged during interviews. The interviews were conducted by telephone and recorded by the lead author (SL) between 27 July and 30 August 2012, until data saturation, indicated by the emergence of recurrent themes, was reached. The interviewer took notes during interviews and transcribed all interviews verbatim.

Analysis

The data was qualitatively analysed in a multi-step process that began with immersion in data through repeated readings of transcripts and notes. Sections of text from the transcripts were coded according to the themes identified in the initial step of analysis. A sample of coded transcripts was reviewed by MFH and differences were resolved by discussion. The list of themes was then grouped into seven categories. After further discussion, themes were reorganised into four major categories and two sub-categories. The relationships between major themes and sub-categories were developed through paper based mind maps, which conceptualised thematic interactions within the whole dataset.

Results

Participants

Twenty-four patients were approached, of which six patients were unable to be reached; 18 patients were interviewed for an average of 18 minutes (range 8–33 minutes). Eleven participants were female; all were aged between 40–69 years, reported having a regular GP and attended their current GP for at least 3 years (*Table 2*).

Table 1. Questions for semi-structured interviews

Patient perceptions of disease risk

- Do you feel you are at risk of diabetes or heart disease? Why/why not?
- What do you do to stay healthy and lower your risk of these diseases?

Patient perceptions of the role of general practice in preventive medicine

- What do you see as your GP's role in helping you stay healthy and free from long term diseases like diabetes or heart disease?
- How do you feel about the amount of time your GP spends with you on talking about staying healthy?
  - Is it enough? Do you get enough opportunity to ask questions or raise concerns?
  - How accurate do you feel the information provided by your GP is?

Patient perceptions of risk assessment by GPs

- In the past 5 years, has your GP assessed your risk of or tested you for diabetes?
  - If yes: What was the reason for testing? How did you feel about being tested/assessed? What was the result? Has that changed anything/what you do? How did you feel about the result? When do you feel you need to be re-tested?
  - If no/didn't accept testing: Would you like your GP to offer you risk assessment? Why/why not? What would it mean to know your risk of diabetes?
- In the past 5 years, has your GP assessed your risk of or tested you for heart disease?
  - If yes: What was the reason for testing? How did you feel about being tested/assessed? What was the result? How did you feel about the result? When do you feel you need to be re-tested?
  - If no/didn't accept testing: Would you like your GP to offer you risk assessment? Why/why not? What would it mean to know your risk of diabetes or heart disease?
  - If tested for only one or the other: Do you know the reason you were tested for ___ but not ___?

Factors that motivate patients to follow advice

- Have you received advice from your GP about lowering your risk for diabetes or heart disease? What did your GP say you should do to lower your risk?
- Tell me, what motivated you to follow your GP's advice about lowering your risk of diabetes and heart disease?
- What do you see as possible barriers for doing this (following your GP's advice)?

Patient perception of referral services

- Has your doctor told you about medical specialists or community programs that can help you to stay healthy (eg. dietician, exercise physiologist, or specialist, diet and/or exercise program)?
  - If yes; Did he/she refer you? How did you find it? Was it helpful? Did you experience any difficulties with the referral service?
  - If no; How would you feel about your GP referring you to a program to help you to improve your diet, weight or exercise?

Any further comments?

Background questions

How old are you? Do you speak any other language at home? How long have you been with your GP? Do you regularly attend this GP practice? Do you see this GP most of the time?

Patient views on risk

Patients perceived lifestyle habits (diet and exercise), weight, family history, blood tests, or physical examination results as the main factors influencing their own risk of heart disease and T2DM. They appraised these individual risk factors differently according to whether overall they felt at a higher or lower risk. Patients who felt at risk of either or both diseases commonly cited their family history for the disease as the main reason.

> 'Maybe heart disease, not diabetes … I feel the family history probably qualifies me for some problem later on.' [P 01]

Conversely, patients who felt they were not at risk of the diseases interpreted their risk profile as a combination of lifestyle, absence of family history and other factors.

> 'I pretty well look after my health and I exercise regularly and I eat the correct food most of the time. I go to the doctor probably once every 12 months for a thorough check-up … I can't see anything else. It doesn't run in my family.' [P 07]

Some patients expressed uncertainty about their risk profile because of a disjunction between individual risk factors, some of which they felt put them at higher risk and others that reflected a lower risk.

> 'Maybe not. Because I've always had a lot of sugar and chocolates ... but I've been fine every time, yeah I've been tested. So I'm not sure whether it makes a lot of difference or not.' [P 15]

Patient's views on risk assessment

Patients' views on risk assessment were influenced by what they experienced in general practice. All patients reported having blood tests performed by their GP to assess their blood sugar and cholesterol levels. Some also described undergoing physical examination such as weight measurements and blood pressure checks. No patients interviewed recalled having had multifactorial risk assessments for cardiovascular disease or diabetes.

In most cases, the blood tests were conducted as part of routine check-ups done regularly, at least once in the previous 2 years. A few patients reported having blood tests for sugar or cholesterol levels after presenting with risk factors (eg. high blood pressure) or symptoms. The majority of patients had a positive attitude to taking blood tests, preferring to know their risk.

> 'I just think it's important because it's something they say can be a silent killer if you don't know that you have high cholesterol.' [P 15]

One patient had a negative attitude to blood tests, believing these were only warranted if/when she became symptomatic. As the carer for her husband

Table 2. Patient characteristics

Gender	Age group (years)	Speaks other language at home	Years with current GP
Female	65–69	No	6–7
Male	45–49	French	4
Male	60–64	No	15
Male	40–44	No	8
Female	50–54	No	7
Female	40–44	No	17
Female	45–49	No	5
Female	60–64	No	5
Male	60–64	No	10
Male	45–49	No	9
Female	65–69	No	4
Female	50–54	No	–
Female	60–64	Hokkien	>10
Male	60–64	No	10
Female	55–59	No	10
Female	60–64	No	3–4
Male	60–64	No	5
Female	40–44	No	4

who has T2DM and heart disease, she was confident of being able to recognise symptoms.

Patients views on the role of their GP in preventive care

Patients described three distinct roles for GPs in helping them stay 'healthy' and 'disease free':

- providing check-ups and blood tests
- monitoring their lifestyle
- giving advice, both addressing present concerns and preventive.

The former two roles reflect the patients' views of the GP as a source of monitoring and support to their own efforts to lower risk. Those patients who emphasised 'role 3', tended to view prevention as a personal responsibility, independent of GPs.

Generally, patients' actions were linked to the way they used their GP. Patients who regularly attended their general practice for check-ups were more likely to discuss general health and lifestyle and see the provision of preventive advice as part of their GP's role.

> 'I think it's important that he keeps up-to-date with the latest preventive things that are available, or information or provide me with guidance.' [P 07]

Patients who only consulted their GP for specific problems were more likely to receive reactive care focused on that issue alone. Some of these patients preferred this approach. Others nonetheless wanted their GP to initiate check-ups and broader discussions on health.

> 'I think they have an enormous responsibility to actually bear on their patients to [start] living in a healthy manner.' [P 02]

Patient action

The preventive action taken by patients was predominantly lifestyle related, reflecting advice given to them and their perception of its importance. All patients described taking physical activity or dietary measures (commonly both) to lower their risk for diseases and some aimed to achieve weight loss through such efforts. Their perception of 'risk' was inherently linked to their motivation to take up preventive actions. When it came to following their GP's advice, patients were motivated by their blood test results. The response of patients with 'bad' blood test results ranged from being 'not concerned' to 'shock', 'concern' and 'disappointment'.

> 'I was a bit concerned. I didn't think it was high 'cause you know, I attribute high cholesterol to overweight people and I'm not overweight.' [P 10]

> 'It shocked me. And it was a wake-up call. I knew then that I had to actually put in place some measures.' [P 02]

The main difficulty with maintaining or making positive lifestyle changes was time constraints due to work or family commitments. Many patients would have liked to increase their physical activity if they had the time.

> 'It leaves me very little time after work … to indulge in any physical activity on a regular basis.' [P 02]

Cost was a related barrier for some patients to continue to participate in lifestyle programs.

> 'Cost probably was 'cause I used to go to a gym and I was working and it was getting expensive as well and I wasn't getting there very often, so yeah I stopped going.' [P 15]

Patients also cited stress and difficulty breaking old habits as barriers to maintaining positive lifestyle changes. Stress caused some patients to revert to unhealthy eating patterns. Older patients found it difficult to maintain their lifestyle changes because their 'bad' habits were so ingrained.

> 'You have to change the pattern, you have to change the lifestyle … It might be difficult. I think when you grow old, you are so set in your ways and you don't like change.' [P 13]

The patient-doctor relationship

Central to the interaction was the relationship patients have with their GP. Trust was bolstered by GPs' professionalism, knowledge, patience, honesty and willingness to address patient concerns. Patients preferred it when their GP gave clear explanations and presented a range of choices so they could make informed decisions on their own health. Patients recognised that GPs gave 'sensible' advice 'for good reason'.

> 'But I tend to follow, the advice of the doctor is for a good reason and it's, and I would be stupid if I didn't take the advice of the doctor.' [P 06]

Discussion

Patients had mixed views toward risk assessment, prevention and their GP's role in prevention and these attitudes influenced their uptake of preventive care. These views were in turn influenced by their previous experience in the general practice. None of the participants could recall having a multi-factorial risk assessment for cardiovascular disease or T2DM. This is consistent with previous research which has suggested low levels of use of these in Australian

general practice despite their recommendation in a number of evidence based guidelines.[5,6] While all patients who had abnormal blood test results reported receiving lifestyle advice from their GP, those with normal test results usually did not. Regardless of test results, patients were motivated to make changes if they were recommended by the GP, underlining the value of GPs engaging in health discussions with their patients and follow up in subsequent consultations[13] to address any barriers patients may experience with the interventions.[12]

Patients saw diet and inactivity as key risk factors for T2DM and heart disease. Their perception of their own risk tended to be simplistic, focused on family history, diet and exercise, and/or blood test results. Consistent with the health belief model, they reported taking action for their health if they perceived themselves to be susceptible to a condition; the condition to have serious consequences; and the benefits of taking action outweighed potential barriers or costs of doing so.[14]

These findings underline the importance of risk communication that focuses on the positive actions that patients can take, not just the threat of disease.[15,16] General practitioners and patients over-emphasise blood tests as the mode of risk assessment. This can lead to a focus on single physiological risk factors at the expense of behavioural risk factors.[17] While general practice is an ideal setting for providing preventive care, it is constrained by time pressures and lack of resources.[10] Patient education about risk assessment takes time and other priorities in the consultation may take precedence. This problem may be at least partially addressed by expanding the role of practice nurses, a source of risk assessment and advice found acceptable to patients overseas,[18] although there has been relatively little research on this in Australia.

The qualitative approach of this study facilitated an exploration of patient attitudes and opinion. The telephone interview was used because this was preferred by patients, perhaps due to the relative anonymity.[19] It also allowed access to patients who may be harder to reach and produces data of comparable quality to face-to-face interviews.[19,20] However, the generalisability of the findings is limited by the recruitment of patients from only three practices and under-representation of those from non-English speaking backgrounds and diverse geographical locations.

Implications for general practice

The findings of this study suggest that patients need to be more engaged in preventive care for heart disease and T2DM that includes multifactorial risk assessment, communication of risk linked to appropriate advice and follow up care delivered by the GP or practice nurse. In research to determine how such a system of preventive care can be facilitated in Australian general practice, the opinions and attitudes of patients need to be taken into account.

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