What are the Barriers to Patient Engagement in Managing Type 2 Diabetes? How Can We Overcome Them?: A Review Article

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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ABSTRACT

Diabetes Mellitus (DM) is a chronic disorder resulting from the deficiency of insulin in the body, disturbance of insulin action or both, resulting in high blood glucose levels causing long term complications.

Diabetes is well known to increase cardiovascular risk because of its association with obesity, sedentary life style, hypertension, hyper or dyslipidemia and a tendency to develop thrombosis. Diabetic patients can have poor quality of life and reduced life expectancy due to its long term macro-vascular and micro-vascular complications. The aim of this article is to highlight the many barriers to patients’ engagement in their management of diabetes and the ways how they can be overcome.

The author during day to day practice came across many barriers while managing diabetic patients. Extensive searches were done on electronic databases like MEDLINE/PubMed and google scholar, with medical headings diabetes, type 2 diabetes and barriers to management.

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ABBREVIATIONS

IDF : International Diabetes Federation
WHO : World Health Organization
DM : Diabetes Mellitus

1. INTRODUCTION

1.1 Diabetes Mellitus is of Two Types

Insulin-dependent or type 1. This type is more common in adolescents and children but can occur in adult life too. There is lack of insulin secretion from the pancreas.

Non-Insulin-Dependent Diabetes (NIDDM) or type 2. There may be enough insulin produced by the pancreas but there is reduced response or there is lack of response - resistance of the body to the action of insulin [1]. It occurs most commonly in adults, but is being noted increasingly in adolescents as well. Type 2 diabetes accounts for the vast majority of diabetic cases. [International Diabetes Federation-IDF [2]

Globally, the prevalence of type 2 diabetes has been high and is rising across all world regions. An estimate from the International Diabetes Federation [2] that about 425 million people aged 20-79 year have diabetes. This is on the rise and about 25 years from now, 629 million people aged 20-79 years or 693 million people aged 18-99 years old may have diabetes.

Type 2 diabetes can be effectively managed by overcoming obesity and adopting a healthy lifestyle (diet and physical activity), combined with medication when required (IDF) [2].

Type 2 diabetes can be prevented, delayed or treated (diet controlled DM) with a healthy life style like increased physical activity and consuming a healthy diet. It needs active engagement of patients in their care, however there are many barriers.

2. DISCUSSION- BARRIERS

Despite the advances in medical sciences, newer treatments and guidelines, a majority of people have their diabetes poorly controlled and targets not achieved [3,4].

Limited resources and environmental constraints are described by doctors as barriers, especially in relation to achieving glycaemic control or general aspects of care. High workload and time pressures affect clinicians’ abilities to deliver care to their own satisfaction [5].

‘It is a burden on one doctor to see 30 or more patients, we had to do a lot of things to each patient in addition to documentation of the findings in the computer’. A physician

It is very important to have good communication between primary and secondary care but unfortunately this is not always the case.

‘I generally tell people that once they have been to see a specialist that they come back and see me afterwards and tell me what happened, that’s my way of finding out. And we obviously get letters which are quite often not actually of sufficient depth to be of much use to us.’ A physician

Limited continuing education for doctors, lack of personal continuity of care, poor availability of IT-information technology and protocols to structure diabetes care are some of the organisation-level factors which affect diabetes care.

Self-management is an important aspect of in the care of diabetes. This can be adversely affected by occupational and socioeconomic circumstances of the patients [6].

‘You know, if they’re not in very good housing ... they’ve perhaps got young children or if life’s stacked against them anyway, then I don’t think they’re as able to make the [suggested lifestyle] changes.’ A nurse

‘The minute people are on shift work, it’s really hard for them to control everything, from remembering to take their pills when they’re home and when they’re not, when they’re at work and when they’re not.’ A physician.

Other health problems and co-morbidities can also be barriers [7,8].

‘It’s become something ... of a spiral here ... [arthritis] has reduced his ability to exercise, which has made his weight go up, which has made his diabetic control worse.’ A physician
Glycaemic goals cannot be achieved due to limited knowledge and skills among clinicians and patients. Physicians find it difficult to recall or keep up with changing recommendations. Treatment intensification is at times needed and clinicians' lack of confidence when commencing or considering insulin can result in poor management [9].

It is important to change patient behaviour but there is lack of effective strategies:

‘...there are some patients that I just can't get to make changes, despite my best efforts.’  
Physician

Adherence to self-management plans need a lot of support for some patients [10].

‘One client was documenting “error” every time [the blood glucose] meter said error … no one had explained this meant error with machine/strip!.’  
A nurse

Patient education is important but doctors are concerned about overloading them with information which may affect them in a negative way [11].

Nurses’ and physicians’ roles have evolved as diabetes care has become integrated into primary care, with nurses playing a central role. However, both in primary and secondary care, physicians and nurses express uncertainty or disagreement over who is responsible for various elements of patient care [12].

‘... ambiguity about who was responsible for managing diabetes care contributed to difficulty coordinating care with other providers such as pharmacists, diabetes educators, and endocrinologists.’  
A physician

‘The fact that insulin conversion involves setting dosage levels seemed to be at the root of [nurses’] concern [about accountability], and this was perceived as a major shift in responsibility … “I think we’ve got to recognise the level of responsibility and the GPs have got to recognise that and pay us appropriately”.’  
A nurse

A range of often negative emotions are experienced by physicians in dealing with diabetes, especially around patient compliance to management plans or adverse effects of treatment, and employ varying approaches to dealing with emotions in patient care. They become frustrated at patients’ compliance to advice [14]:

‘We just give them the medicine ... and the next time they come in we ask them if they’ve taken it and they say “No”. That frustrates us [because] ... the patient doesn’t want to change for the better.’  
A physician

When discussing insulin, there is great fear of needles and hypoglycaemia.

‘The very words “needle” or “injection” carried complex connotations and, sometimes, the suggestion of starting insulin could signify a message of failure in other therapies to the patient, that is, that “drastic” measures were now needed.’

Beliefs about consequences, social influences, and (lack of) reinforcement emerged as further key influences on treatment targets and general aspects of care. Wider social influences also feature in several studies, including family, community, and cultural beliefs [15,16,17,18,20,21]:

‘I think they [patients] were thinking that the insulin is from, what do you call this, non-halal (“lawful”) ... products.’  
A physician [22]

In some countries, financial problem is a great obstacle in the management of patients with type 2 diabetes who are from the low socioeconomic group and third world countries [15,19].

A study from Brazil mentioned poor communication between physicians and patients, time constraints, unawareness and lack of patient education. For a long time, a delay in escalating therapy at the appropriate time (clinical inertia) has been recognised as a barrier in the management of diabetes [23].

3. CONCLUSION

There are multiple barriers to the treatment and care of diabetes from both the patients’ and medical practitioners’ perspective. Some are practitioner-orientated (delivery of diabetes education and information presented to the patient); some are patient-related (accessing services); and some require improvement and compromise from both (creating an effective, shared treatment plan and treatment goals). Barriers to implementing care include financial
barriers as well, barriers to accessing services and knowing when and who to consult/refer to.

Existing barriers may be rectified with greater access to services, understanding of referral requirements and further practitioner/patient education. Identification by both health practitioners and patients of the barriers that apply will enable them to improve their education and care strategies. Spending more time with the patient, help from diabetes nurse, referral to a local group education/multidisciplinary team, financial assistance (in some countries) and creating greater support networks for the patient will lead to the creation of effective care plans. Improvement in these areas will hopefully lead to a change in diabetes care that prevents diabetes complications for the patient.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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