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Management of diabetes patients with comorbidity in primary care: a mixed-method study in Odisha, India

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Background: Diabetes patients with comorbidities need regular and comprehensive care for their disease management. Hence, it is essential to assess the primary care preparedness for managing diabetes patients and the perspectives of the diabetes patients on the care received at the primary care facilities.

Methods: All 21 Urban Primary Health Centres (UPHCs) in Bhubaneswar city of Odisha, India, were assessed using the modified Primary Care Evaluation Tool and WHO Package of Essential Non-communicable disease interventions questionnaire. Additionally, 21 diabetes patients with comorbidities were interviewed in-depth to explore their perception of the care received at the primary care facilities.

Results: All the UPHCs had provisions to meet the basic requirements for the management of diabetes and common comorbidities like hypertension. There were few provisions for chronic kidney illness, cardiovascular disease, mental health, and cancer. Diabetes patients felt that frequent change in primary care physicians at the primary care facilities affected their continuity of care. Easy accessibility, availability of free medicines, and provisions of basic laboratory tests at the facilities were felt to be necessary by the diabetes patients.

Conclusion: Our study highlights the existing gaps in India's healthcare system preparedness and the needs of diabetes patients with comorbidity. The government of India's Health and Wellness (HWC) scheme aims to deliver comprehensive healthcare to the population and provide holistic care at the primary care level for NCD patients. It is imperative that there is an early implementation of the various components of the HWC scheme to provide optimal care to diabetes patients.

Introduction

The rising burden of diabetes mellitus and other noncommunicable diseases in low- and middle-income countries (LMICs) is a public health concern.¹ According to the International Diabetes Federation report in 2017, almost 75% of the diabetes patients live in LMICs and this burden is expected to rise in future.² Prior studies have reported the high prevalence of coexisting chronic conditions or comorbidities among diabetes patients.³ Hence, management of diabetes patients entails management of not just diabetes but also multiple other chronic conditions.

The importance of primary healthcare facilities in the management of chronic conditions has been well documented.⁴⁻⁶

As the first level of care, the accessibility and affordability of primary healthcare centres make them the preferred choice for patients with chronic conditions who need continued care and long-term treatment. However, studies in the past have indicated the low priority of primary care health providers in LMICs for chronic conditions management in comparison to acute conditions.⁷ Conventionally, primary care in LMICs is mainly oriented toward managing infectious diseases, acute conditions, and reproductive and child health. Though ideally placed for also managing non-communicable diseases, the resource-constrained and overburdened primary care facilities find it a daunting task to deliver optimal care.

For a country like India, which has over 69 million diabetes patients, it is a challenge for the health system to provide quality care to diabetes patients with comorbidities.⁸ Though the government of India had launched the National Program for Control of Diabetes, Cancer, and Stroke (NPCDCS) to address the growing non-communicable disease burden and provide adequate care, studies have reported the gaps in the implementation of the programme to address the chronic conditions adequately.⁹ For example, studies indicate that diabetes patients have a wide range of comorbid conditions that are not included in the NPCDCS programme.¹⁰

Key messages

- Frequent change of healthcare providers affects continuity of care in diabetes.
- Accessibility, medicines, and laboratory facilities affect treatment adherence.
- Greater integration of vertical programmes at primary care level is essential.
- Health and Wellness Centres are a step forward to comprehensive primary care.

Disease-specific vertical programmes are more time-bound and disease-specific and fail to take an individual holistically. Past studies have also reiterated the need for a holistic approach to non-

communicable disease management.¹¹ Studies have proved that for the delivery of the highest possible care quality and improvement in the health system responsiveness, it is also important to understand the perspective of patients on the quality of care they receive.^{12,13} Better clinical outcomes have been reported with favourable patient experiences.¹⁴ There is a felt need to assess the preparedness of primary care facilities in the management of diabetes patients with comorbidities. Therefore, we evaluated the available facilities at Urban Primary Health Centres (UPHCs) and explored the perspective of diabetes patients on the quality of care received at these facilities.

Methods

Study design, setting, and participants

We carried out an embedded mixed-method study with 2 components. First, we assessed available facilities at all existing UPHCs in Bhubaneswar, Odisha's capital city, to determine their readiness to manage non-communicable diseases. We employed a modified Primary Care Evaluation Tool (PCET) and a questionnaire from the WHO Package of Essential Noncommunicable Disease Interventions (PEN). We purposefully chose all 21 UPHCs. Furthermore, we did a qualitative study to establish the patient viewpoint on available treatments at UPHCs; for each facility, we purposefully picked 1 patient who received care at the UPHC. We did 21 in-depth interviews (IDIs).

Among the 21 interviewees, 13 were males, and 8 were females. The age of the interviewees was in the range of 35–65 years. The number of comorbidities among the interviewees ranged from 1 to 4 comorbidities. Twelve interviewees were from non-slum areas, and 9 were slum residents. Odisha has a literacy rate of 79%, and the respondents represent the general population who usually visit UPHCs (Table 1).

[Table 1]

Quantitative assessment tools

The PCET evaluates the primary healthcare facilities on accessibility, comprehensiveness, coordination of care, and continuity of care. The PCET was developed by the Regional Office for Europe of the WHO and the Netherlands Institute for Health Services Research (NIVEL).¹⁵ We adapted the 4 components in the context of non-communicable disease care. The WHO PEN is a questionnaire based on a set of cost-effective interventions that can be implemented in resource-constrained settings to deliver a standard of care for chronic conditions.¹⁶ Before collecting data, we piloted the tool at 2 facilities to determine its feasibility and contextualization.

IDI guide

In order to explore the diabetes patients' perception of care, IDIs were conducted, and data were collected using a semistructured interview guide (see Box 1). The interview guide was developed based on findings from previous studies.^{17,18}

Data collection procedure

For the assessment of the UPHCs, the questionnaire was completed by the pharmacists or the public health managers of the 21 UPHCs using structured questionnaires.

For the diabetes patients' perception of quality of care,²¹ IDIs were conducted among the diabetes patients with comorbid conditions attending the various UPHCs. Three diabetes patients were purposively contacted from each UPHC, and the first respondent was interviewed over the telephone using the IDI guide. All participants were approached over the phone by the first author (SP) before the interviews to get their consent for interviews. All participants participated voluntarily;

no payment was offered nor given. All interviews were conducted in the local language (Odia) or English. Owing to the ongoing COVID-19 pandemic, it was not feasible to conduct face-to-face interviews; hence the IDIs were conducted over the telephone by 2 trained interviewers with an educational background in public health and qualitative research as well as command of the Odia and English language. The interviews lasted an average of 30 (range 20–50) min.

Box 1. In-depth interview guide for exploring the perceived quality of care among diabetes patients with comorbidities at primary healthcare facilities

Sociodemographic characteristics

- Code, Gender, Place of residence (Slum/Non-slum), Level of education, No. of comorbidities

Accessibility

- Access to a care facility; length of time since accessing the healthcare facility. Could you explain why you prefer this facility? Time is taken to get to access the facility. What is your mode of travel?
- Access to a doctor when sick or needing medical attention, waiting time for consultation, and a prior appointment. Did you go to the ER for a condition that could have been treated by a regular doctor if available?
- Access to out-of-hours care. How difficult is it to get care on nights, weekends, and holidays without going to the ER?
- Additional suggestion: can that be arranged easily if you want to see a specific doctor (or your “regular” doctor)?

Out-of-pocket expenditure

- Cost-related access problem; Could you explain the effect of expenditure or costs on the management of your disease conditions? Did you skip tests, medications/treatment, or follow-up due to costs?

Communication

- Doctor–patient relationship and communication (listens carefully, explains things you do not understand, spends adequate time).
- Opportunities to engage patient in care (Clear instructions if given, discussion on treatment plan and goals, treatment choices, and opinion of the patients. Discuss doubts with doctor regarding the disease or treatment).

Continuity of care

- Regular doctor, satisfaction in choice, and the doctor–patient relationship.

Coordination of care

- Laboratory tests results, if available on time, if explained well; medications, if available on time.
- Availability of allied healthcare professionals, multidiscipline professionals like a nutritionist, mental health

- Referral; Aware of the referral procedures, experience of referral in the past, difficulty in accessing higher levels of care in the eventuality of referral. The major barrier to accessing the higher level of care.

Adherence and preventive care

- Reasons for nonadherence. Probe; medication, lifestyle, timely follow-up, laboratory tests or procedure or surgery. Any other reason for nonadherence? Suggestion for reduction of nonadherence.
- Health promotion advice on weight, nutrition, smoking cessation, exercise, emotional well-being, stress. Plans for self-management.

Data management and analysis

Quantitative data on the facility assessment (manpower, medicines, equipment, and tests) were entered in Excel sheets and presented as numbers (n). We used descriptive statistics for the presentation of quantitative data.

For the qualitative data, the digitally recorded telephone interviews were transcribed verbatim and translated into English. The data were analysed using thematic framework analysis.¹⁹ In the process of transcribing and translating the data, the codes were stated and categorized, and then themes were identified. After coding, we identified codes–categories–themes (Table 1). The coding of data based on the identified themes and categories was done with MAXQDA software (MAXQDA Analytics Pro 2020, VERBI GmbH, Berlin, Germany). The emerging themes were reviewed and finalized. After the first author's (SP) preliminary check of the results, a consensus was reached through discussions with the author (KCS), who is from a public health background and has experience in qualitative research. To avoid any misinterpretation, during the coding of the data, both Odia and English versions of the transcripts and, in some complex cases, digital data were simultaneously used. The results are presented thematically, illustrated by exemplary quotes from the interviewees. The Consolidated Criteria for the Reporting of Qualitative Research (COREQ) guideline was used to report the study.

Ethical considerations

The Odisha state research and ethics committee gave the ethical approval for the study (letter no. 161/SHRMU dt. 16.05.2014). All participants were informed about the purpose of the study, and consent was obtained from them. The identity of the respondents was kept confidential.

Results

Preparedness of primary care facilities (see Supplementary Material)

All 21 primary care facilities were accessible to the patients during the day and evening hours and on weekends, and during holidays as prescribed by the government. However, there was no provision of special clinics for diabetes, hypertension, or any other chronic disease in any of the primary care facilities. Available clinical guidelines were followed for the management of diabetes and hypertension in all facilities. The Out Patients Department (OPD) register was maintained in all facilities, and the other Non-Communicable Disease (NCD) register was maintained in 20 out of the 21 facilities. The NCD register was used to keep a database of patients suffering from non-communicable diseases and did not keep any clinical records.

A referral register was kept in all primary care facilities to maintain a record of the patients referred to higher levels of care. However, there were no records of back referrals. A pharmacist and staff nurse were present in all primary care facilities. Twelve primary care facilities had a physiotherapist, 17 had a yoga instructor, but a mental health counsellor was present in only 1, and a nutritionist was present in 2 of the 21 primary care facilities. None of the primary care facilities had any provision for palliative care. Nineteen of the 21 primary care facilities had a functioning laboratory for multiple tests.

All primary care facilities had provisions for measuring blood glucose with a glucometer, 10 facilities had requirements for a cholesterol assay, and 4 for lipid profile tests. However, urea and creatinine measurements were not done in any facilities. Seventeen of the primary care facilities had a nebulizer, and none of the facilities had a peak flow meter. Eight of the facilities had a tuning fork. None of the primary care facilities had a provision for electrocardiography. Regarding medicines, all primary care facilities had oral antidiabetics (biguanides and sulphonylurea), insulin, antihypertensives, bronchodilators, statins, diazepam, and aspirin in stock. However, none of the primary care facilities had available diuretics, isosorbide dinitrate, glyceryl trinitrate, or anticoagulants. All primary care facilities had provisions for screening for diabetes, hypertension, and cancers (oral, breast, and cervical cancer) (Table 2).

Patient perspective on diabetes care

Accessibility All respondents felt that the primary care facilities were easily accessible and travel time was short; for some, it was within walking distance of their homes. With prior appointments, they could quickly consult the primary care physician. Easy accessibility was the primary reason for choosing the concerned health facility among the respondents for their health needs (Table 3).

I visit primary health care facility because it is near to my home, and the doctor is approachable.
(Participant 4)

Out-of-pocket expenditure

Respondents with common comorbidities like hypertension or acid peptic diseases said they did not spend much on the medicines as the primary care facilities had a regular supply of the prescribed drugs and were free of cost. But most of the respondents with multiple comorbidities had to purchase medicines. For example, diabetes patients with pulmonary or cardiac comorbidities had to buy inhalers and other drugs. Sometimes the antidiabetics prescribed by the primary care physicians, like gliptins or DPP4 inhibitors, were unavailable in the primary care facilities, and they had to buy them. Since they felt they needed the medicines to manage their diseases, they purchased them irrespective of the impact on the expenditure. However, it was an essential factor in accessing the primary healthcare facility for the respondents who could get free antidiabetic medication for their diabetes management.

Communication

Most of the respondents shared that their primary care physician explained about diabetes and gave advice on diet, exercise, and the importance of taking medications. But it was also found that apart from the treatment plan, there was less discussion on the overall management of multiple conditions or any long-term diabetes management plan. For example, 1 respondent felt intimidated to share with the primary care physician about the fasts she kept for religious purposes. Since the primary care physicians had advised her that repeated fasting would affect her diabetes management, she felt scared to share it with the primary care physician when her blood glucose levels were abnormal.

I stopped taking medicine sometimes during my daughter's wedding. That is why it increased. I can feel that discontinuing medication and overthinking increase diabetics. I do not tell anyone, can't remember, and keep myself busy. I got to know after it increased. After that, I took medicine and did tests but did not tell the doctor I was doing wrong. I had stopped taking medicine. I keep it to myself. (Participant 17)

[Table 2]

Continuity of care

All respondents shared that they would feel better if they had the same doctor for consultation. They thought it was easier to share their concerns since the doctor knew them and their treatment history. But since the primary care facilities were government facilities, doctors were transferred after a few years, and they had no choice but to consult whichever doctor was present. One of the respondents shared that after the recent transfer of her primary care physician, she consulted the physician in his private clinic as she felt he managed her blood glucose well.

No, any doctor is available. I just consult him. I don't have any choice but to consult the doctor. (Participant 9) In Government hospitals, one doctor goes, and another comes. (Participant 10)

Coordination of care

The respondents agreed that they depended on the primary care facilities for testing blood glucose and measuring blood pressure, but for other tests, they had to go to private laboratories. Though they knew the need for a multidisciplinary approach to their management of diabetes and other comorbidities, only a few accessed the yoga instructor in the primary care facilities. Few opined that they felt more comfortable in private yoga classes or laughter clubs that had their friends and neighbours.

I heard that a person was there to instruct exercise. The doctor used to advise me to come and exercise in the hospital. I have never visited; I couldn't manage my time. I spent my time doing household chores, festivals and attending to relatives and neighbors. I am busy with this and don't get time. (Participant 4)

Adherence and preventive care

The respondents who explained their diseases well were more adherent to the treatment. They were more aware of their disease conditions and were more regular with their follow-up visits. Similarly, easy accessibility, free medicines, and fewer waiting periods were enablers for adherence. All respondents shared that they received adequate information on preventing chronic conditions and lifestyle modification.

In our government hospital, all medicines, treatment, and tests are available free of cost, so I did not skip any of this. Doctor Sir, at the time of consultation, advised me to do regular morning walk and not eat sweets. (Participant 19)

[Table 3]

Management of diabetes with comorbidities during the COVID-19 pandemic

As a long-drawn disease, diabetes and other chronic conditions need regular follow-up and laboratory investigations. However, in the past 2 years, COVID-19 pandemic has thrown healthcare out of gear. Most respondents shared that they accessed the primary care facilities to get their

medicines and tests. However, only 2 respondents had a face-to-face consultation with a primary care physician in the past 2 years. The primary care physicians avoided physical consultation due to the ongoing pandemic. Almost all the respondents depended on a telephone consultation to seek advice on their disease conditions.

Discussion

The present study has explored the preparedness of public primary care facilities in managing diabetes and other comorbidities and the care for diabetes patients from their perspectives.

Our study found that all urban primary healthcare facilities were easily accessible for patients and had provisions of essential medicines and simple laboratory tests to detect and manage diabetes and hypertension. All facilities had preventive care services for non-communicable diseases like diabetes, hypertension, and common cancers like oral, breast, and cervical cancer. However, the provision of allied healthcare providers like nutritionists, physiotherapists, or mental health counsellors were scarce. Diabetes patients shared that ease of accessibility and free medicines with the availability of basic laboratory tests at the UPHC help them in the management of their disease. However, the non-availability of medicines for multiple comorbidities lack of testing facilities for comorbidities makes it difficult for them to manage multiple conditions.

Though medicines for a few common chronic conditions like diabetes and hypertension were regularly available for free, medication for other comorbidities was mostly not available. Studies in the past have emphasized the role of affordable medicines in adherence to treatment among patients with chronic diseases.²⁰ Similarly, in primary care facilities that did not have provisions for a wide range of laboratory tests, respondents felt it led to increased expenditure and longer travel time to do the tests in private laboratories and then come back with the reports to the consulting primary care physicians. For well-coordinated care, the accessibility of adequate laboratory facilities is one of the basic requirements.²¹ Hence, it reiterates the need for strengthening the existing primary care facilities' laboratories and expanding the range of tests. Though many primary care facilities had provision of a yoga instructor and physiotherapist, it was found that respondents did not utilize them. Lack of awareness or motivation could be the reason for this. More awareness by the community health workers on the various amenities provided at the primary care facilities could motivate diabetes patients. The role of counselling in the management of multiple chronic conditions is well documented.²² Our study shows that only one of the 21 facilities had mental health counsellors. Both the National Mental Health Program and the Health and Wellness Centre initiative of the Indian government have guidelines for providing mental health counsellors at the primary care level.^{23,24} Hence, the inclusion of mental health counsellors into the primary care team should be considered a priority. Familiarity with the primary care physician and interpersonal communication was supposed to facilitate adherence to treatment and optimal disease management. This emphasizes the primary care physician's integral role in managing chronic conditions. Previous studies have also highlighted the importance of continuity of care by the same primary care physician in managing chronic diseases.^{25,26} For public primary care facilities where it is common to have frequent changes of healthcare providers, it underscores the need to maintain a consistent team of providers to ensure a satisfactory continuity of care for diabetes patients with comorbidities.

The present study was conducted in public primary care facilities, and the exclusion of private healthcare facilities is a limitation of our study. However, as all public primary care facilities under the Capital Hospital were included (n = 21), our study findings allow a generalization for public primary care facilities. Another limitation is the conduct of IDIs over the telephone due to COVID-19 pandemic restrictions for the qualitative component of the study. Nonverbal communication during the face-to-face IDI could have added to the strength of the qualitative data of the interview. Moreover, it is felt that the ease of communication is greater in face-to-face interview than in a telephone interview. Similarly, because of the ongoing pandemic of COVID-19, diabetes patients in

their interviews shared that sometimes the primary care physicians did the consultations from a distance and they sometimes only received the medicines from the primary care facilities. The robust sample size of 21 respondents for the qualitative component is a strength of the present study. In this study, all authors are from various educational and professional backgrounds; the diverse educational experience and nationalities of all authors brought their unique perspectives and enhanced the conformability of the study findings.

For an LMIC country like India, with a large diabetic population that is expected to increase manifold in the future, strengthened and efficient primary care is the need of the hour. As indicated in our study, though multiple initiatives under the various public health schemes and vertical health programmes to meet the healthcare demands of diabetes patients have been initiated, successful implementation is yet to be achieved. Ensuring early implementation of the initiatives, greater integration of vertical programmes with primary care, and generating more awareness among the community on the availability of these services at the healthcare facilities will go a long way in delivering accessible and quality healthcare to diabetes patients.

Supplementary material

Supplementary material is available at Family Practice online.

Funding

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Ethical approval

The Odisha state research and ethics committee gave the ethical approval for the study (letter no. 161/SHRMU dt.16.05.2014).

Conflict of interest

None declared.

Data availability

The data underlying this article will be shared on reasonable request to the corresponding author.

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Tables

Table 1. Patient characteristics.

Participants	Sex	Age in years	Education	Place of residence	Comorbidities conditions
Participant 1	Female	46	High School	Slum	Acid peptic disease
Participant 2	Female	40	High School	Slum	COPD
Participant 3	Female	35	High School	Slum	Thyroid
Participant 4	Female	50	High School	Non-slum	Hypertension, thyroid, muskuloskeletal disorder
Participant 5	Female	43	Graduate	Non-slum	Depression
Participant 6	Female	45	Graduate	Non-slum	Hypertension
Participant 7	Female	37	Post Graduate	Non-slum	Hypertension, thyroid
Participant 8	Female	44	Graduate	Non-slum	Hypertension
Participant 9	Male	50	High School	Slum	Hypertension, acid peptic disease
Participant 10	Male	61	High School	Slum	Osteoarthritis
Participant 11	Male	57	High School	Slum	Hypertension, COPD
Participant 12	Male	64	High School	Slum	Hypertension, chronic kidney disease
Participant 13	Male	42	High School	Slum	COPD
Participant 14	Male	65	High School	Slum	Hearing impairment
Participant 15	Male	52	Post Graduate	Non-slum	Acid peptic disease
Participant 16	Male	64	Graduate	Non-slum	Hypertension
Participant 17	Male	55	Graduate	Non-slum	Hypertension, heart disease
Participant 18	Male	48	Graduate	Non-slum	Hypertension
Participant 19	Male	65	Graduate	Non-slum	COPD, acid peptic disease, hypertension, osteoarthritis
Participant 20	Male	50	High School	Non-slum	Musculoskeletal disorder
Participant 21	Male	63	Graduate	Non-slum	Hypertension, heart disease

COPD, Chronic Obstructive Pulmonary Disease.

Table 2. Services available at primary care facilities

Available facilities	N
The average number of patients per day (range)	90 (40-
Accessibility	
Functioning hours per day (as prescribed by the govt)	6
Accessibility during evening hours	21
Accessibility during holiday	21
Special clinic for Diabetes Mellitus	0
Special clinic for Hypertension	0
Special clinic for Geriatric	0
Special clinic Family Planning Immunization	21
Palliative care	0
Records	
Clinical guidelines for Non-Communicable Diseases	21
Complaint box present	21
The medical record for Out Patient Disease	21
Non-Communicable Disease register	20
Referral form for referral	21
Information education and communication leaflets, poster for NCD	21
Human resources	
Facilities with shortage of staff	4
Staff nurse	21
Pharmacist	21
Physiotherapist	12
Health Worker Female	19
Dietician/nutritionist	2
Mental health counsellor	1
Yoga instructor	17
Laboratory services	
Functional lab service	19
Provisions of types of tests (mean (range))	14 (10-
Cholesterol assay	10
Lipid profile	4
Urine microalbuminuria	12
Preventive care	
Screening for dm	21
Screening for htn	21
Screening for oral cancer	21
Screening for cervical	21
Screening for breast cancer	21
Equipment	
Thermometer	21
Stethoscope	21
Sphygmomanometer	21
Measuring tape	21
Weighing machine	21
Peak flow meter	0
Spacers for inhalers	8
Glucometer	21
Glucometer strips	21
Urine protein test strip	17
Urine ketone test strip	17

Table 2. Continued

Available facilities	N
WHO/ISH Prediction chart	21
Flow chart with referral	0
Patient clinical record	0
Nebulizer	17
Pulse oximeter	21
Tuning fork	8
ECG	0
Defibrillator	0

Table 3. Coding tree (themes, categories, and codes).

Themes	Categories	Codes
Accessibility	Challenges in access to the facility	<ul style="list-style-type: none"> • Travel time • Mode of transport
	Challenges in access to the healthcare provider	<ul style="list-style-type: none"> • Appointment procedure • Waiting time at the healthcare facility for consultation • Availability of the primary care physician
Out-of-pocket expenditure	Medicines/drugs for the management of diabetes and comorbidities	<ul style="list-style-type: none"> • Lack of regular supply of medicines • Lack of provision of medicines for a wide range of comorbidities • Availability of free medicines
	Laboratory investigations	<ul style="list-style-type: none"> • Provision of only a few basic tests • No costs or free tests at the healthcare facility
Communication	Counselling on Diabetes	<ul style="list-style-type: none"> • Discussion of treatment of diabetes
	Counselling on the management of comorbidities	<ul style="list-style-type: none"> • Lack of counselling on the management of multiple chronic conditions • Lack of inclusion of patients' views on the overall management plan
Continuity of care	Continued care with the same primary care physician	<ul style="list-style-type: none"> • Frequent changes of primary care physicians in the public healthcare facility
Coordination of care	Team of multidisciplinary professionals	<ul style="list-style-type: none"> • Lack of a full-fledged multidisciplinary team for the care of multiple chronic conditions • Lack of awareness on providing any multidisciplinary professional at the primary care facility
Preventive care	Awareness of other chronic conditions and complications of diabetes	<ul style="list-style-type: none"> • Availability of informative materials like posters in the healthcare facility • Counselling by the healthcare providers at the facility.