Input of stakeholders on reducing depressive symptoms and improving diabetes outcomes in India: Formative work for the INtegrated DEPrEssioN and Diabetes TreatmENT study

Deepa Rao1,2, Lauren Lipira1, Shuba Kumar4, Rani Mohanraj4, Subramani Poongothai1, Nikhil Tandon6, GR Sridhar7, Wayne Kator8, KM Venkat Narayan9, Lydia Chwastiak2, Viswanathan Mohan10, Mohammed K Ali7

Departments of 1Global Health, 2Psychiatry and Behavioral Sciences, 3Health Services, University of Washington, Seattle, Departments of 4Global Health and Epidemiology and 5Medicine, Emory University, Atlanta, GA, USA, 6Samarth, 7Department of Clinical Trials, Madras Diabetes Research Foundation, 8Department of Diabetology, Madras Diabetes Research Foundation, Chennai, Tamil Nadu, 9Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi, 7Endocrine and Diabetes Centre, Visakhapatnam, Andhra Pradesh, India

ABSTRACT
Context: Depression and diabetes are highly comorbid, adversely affecting treatment adherence, and resulting in poor outcomes. To improve treatment and outcomes for people dually affected by diabetes and depression in India, we aimed to develop and test an integrated care model.

Aims: In the formative phase of this INtegrated DEPrEssioN and Diabetes TreatmENT (INDEPENDENT) study, we sought stakeholder perspectives to inform culturally-sensitive adaptations of the intervention.

Settings and Design: At our Delhi, Chennai, and Visakhapatnam sites, we conducted focus groups for patients with diabetes and depression and interviewed health-care workers, family members, and patients.

Subjects and Methods: Key informants were asked about experiences with diabetes and depression and for feedback on intervention materials.

Analysis: Qualitative data were analyzed using a grounded theory approach.

Results: Three major themes emerged that have bearing on adaptation of the proposed intervention: importance of family assistance, concerns regarding patient/family understanding of diabetes, and feedback regarding the proposed intervention (e.g., adequate time needed for implementation; training program, and intervention should address stigma).

Conclusions: Based on our findings, the following components would add value when incorporated into the intervention: (1) engaging families in the treatment process, (2) clear/simple written information, (3) clear nonjargon verbal explanations, and (4) coaching to help patients cope with stigma.

Key Words: Depression, diabetes, integrated care models, South Asia

Introduction
The global burden of diabetes is substantial, accounting for considerable morbidity and mortality worldwide. Already, an estimated 387 million people across the world

are living with diabetes,[2] and diabetes accounts for close to 5 million deaths annually.[3] In India, 77.2 and 62.4
million people are affected by prediabetes and diabetes, respectively,[4] and the results of a 10-year cohort study indicate that Indians have an extraordinarily high diabetes incidence and rapid conversion from prediabetes to diabetes, suggesting that the numbers will continue to increase.[5] Furthermore, chronic diseases such as diabetes are a leading cause of death and disability in India.[6]

Studies from across India also show the heightened prevalence of depression among people with diabetes.[7-9] Importantly, individuals with comorbid diabetes and depression are at increased risk for poor outcomes, often beyond the sum of expected outcomes of the individual conditions.[10-12] The combination of depression and diabetes impairs diabetes treatment adherence[13,14] and is associated with poor glycemic control,[15,16] higher rates of microvascular and macrovascular complications,[17,18] increased disability and decreased quality of life,[9,10] greater health service utilization,[19,20] and increased diabetes-specific mortality.[11,21,22]

Evidence indicates that coordinated strategies simultaneously targeting diabetes and depression are effective in improving a variety of outcomes.[23-25] In the United States, an integrated treatment model named TEAMcare combined patient-centered self-care goals with pharmacotherapy interventions to improve depression scores; control of glycemic, blood pressure, and lipids and was associated with increased quality of life and greater satisfaction with care.[26,27] Although the TEAMcare model offers promise for people with comorbid diabetes and depression in India, merely adapting an empirically supported intervention generated in the dominant culture is not sufficient and represents antiquated dissemination of evidence-based practice.[28] Effective programs must be grounded in social, historical, and cultural context and fostered within the relevant community.[29] Therefore, we designed an integrated care intervention based on both local programs (the Center for Cardiometabolic Risk Reduction in South Asia [CARRS] Trial[30] and the work of TEAMcare) [Figure 1]. Furthermore, before implementing this culturally appropriate care model (named INtegrated DEPrEssioN and Diabetes TreatmENT [INDEPENDENT]), we sought to gather information and perspectives from individuals involved in diabetes care in India to ensure the intervention aligns with the cultural and economic context in which it is situated.[31-33] As its foundation, INDEPENDENT will include, (1) nonphysician care coordinators that are trained in basic psychotherapeutic techniques (motivational interviewing, behavioral activation, and problem-solving techniques), (2) an electronic health record enhanced with guideline-based prompts for physicians, and (3) oversight by specialists to regularly audit and improve clinical decision-making. The goal of this qualitative study was to inform the culturally sensitive intervention modifications necessary for the INDEPENDENT model of diabetes and depression care to be effective in India.

Subjects and Methods

Subjects
The study took place at three sites in India: A private diabetes specialty center in Chennai, a private diabetes care clinic in Visakhapatnam, and a public diabetes care center at a major medical center and training institution in Delhi. Key informants in the study met the following criteria: They were over the age of 18, native speakers of Tamil, Telugu, or Hindi, and they were members of at least one of three key stakeholder groups: (1) Patients with depression and poorly controlled diabetes (i.e. elevated blood pressure, low-density lipoprotein cholesterol, or glycated hemoglobin above guideline levels), (2) family members of patients, or (3) health-care workers working in the diabetes care context (e.g., physicians and nutritionists who have a primary role in clinical management of diabetes in India).

To ensure data saturation (no new information emerges), we conducted two focus groups with diabetes patients at each of the three sites (total six focus groups with at least five participants in each group): One with men and one with women.[34] We also conducted 45 individual in-depth interviews to triangulate data from the focus groups, 15 at each of the three sites. At each site, five interviews were conducted with patients, five with family members, and five with health-care providers.
and five with health-care workers. Based on previous experiences in supplementing focus group information with individual interviews, we expected that 15 key informant interviews at each site would be enough to reach data saturation.\[33,36\]

**Materials and procedures**

**Research assistant training**

Research assistants from Visakhapatnam and Chennai traveled to Delhi, where we trained them in Patient Health Questionnaire nine-item administration for optimal screening of potential key informants in the study. In addition, qualitative methods experts in Chennai trained the research assistants in interviewing techniques and focus group moderation.

**Interview and focus group content**

We conducted individual interviews and focus groups to elicit information on (1) the experience of living with diabetes and depression in India, and (2) the feasibility, content, and structure of the INDEPENDENT intervention, integrated diabetes, and depression care model. We specifically inquired about ways to refine the intervention for the Indian context, its cultural appropriateness and acceptability, potential barriers to implementation, and how the program could be taken up by clinics. Moderator guides contained semi-structured and open-ended questions to obtain feedback without biasing responses and probes to inquire about specific points of feedback on the intervention [Appendix]. Visual aids and intervention materials were used to describe the intervention.

For patients, questions focused on their personal experience, for example, what are the factors that have helped you to control diabetes? Do you think (the intervention) would be appropriate for you? Family members were asked similar questions pertaining to the family member with diabetes and depression, for example, what is your understanding of your family member’s diagnosis? If your family member were offered the opportunity to participate in INDEPENDENT, would s/he choose to do so? Finally, health-care workers were asked similar questions regarding their patients with diabetes and depression, for example, what has worked well and what has not worked so well in treating your patients with diabetes? Do you think a component of the INDEPENDENT intervention is appropriate for your patients? Instruments are available upon request to the corresponding author.

**Recruitment**

A research assistant approached potential key informants in the diabetes clinics, described the study, obtained informed consent, and scheduled focus groups or interviews at a time that was most convenient for the potential key informants. The research assistant then reviewed the medical record to abstract clinical information and solicited sociodemographic information from the key informant. We conducted the interviews and focus groups in local languages (Tamil in Chennai, Hindi in Delhi, and Telugu in Visakhapatnam). Each interview and focus group was audio-recorded, transcribed, and translated into English. Participants were compensated with Rs. 200 to cover transportation and food costs. All recruitment, consent, and study procedures, including audiotaping sessions, were approved by the Institutional Ethics Committee at each of the clinical sites and the relevant academic institutions.

**Data analysis**

Once the focus group and interview data were transcribed, psychologists with extensive qualitative experience and training from Chennai independently coded the transcripts using QSR International’s NVivo qualitative analysis software.\[37\] The coders then jointly identified themes that emerged from the data using a grounded theory approach.\[38\] The coding team met by phone to name the themes that emerged and resolve discrepancies between coders.

Emphasis was given to themes with the potential to guide the development of INDEPENDENT. We paid special attention to identifying barriers to implementation, points of modification for existing materials, and innovative ways to implement INDEPENDENT in an Indian context.

**Results**

In all, 82 people participated in the study: 45 key informants participated in individual interviews and 37 patients participated in focus groups. The mean age of participants was 44 (standard deviation = 10.5), with a minimum age of 27 and a maximum of 67. Detailed demographic information on the participants is given in Table 1.

**Table 1: Demographic information on participants (n=87)**

| Variable              | Patient | Family member | Healthcare worker | Total |
|-----------------------|---------|---------------|-------------------|-------|
| Chennai site          | 21 (40.4) | 5 (33.3) | 5 (33.3) | 31 (37.8) |
| Delhi site            | 16 (30.8) | 5 (33.3) | 5 (33.3) | 26 (31.7) |
| Visakhapatnam site    | 15 (28.8) | 5 (33.3) | 5 (33.3) | 25 (30.5) |
| Age (all sites)       | 47 (9.2)  | 44 (13.4) | 35 (6.1) | 44 (10.5) |
| Married (all sites)   | 51 (98.1) | 12 (80.0) | 12 (80) | 75 (91.5) |
| Female (all sites)    | 27 (51.9) | 10 (66.7) | 9 (60) | 46 (56.1) |

SD - Standard deviation
Key informant responses fell into four major themes: (1) the importance of family assistance in diabetes care, (2) concerns over patient and families’ understanding of diabetes management, (3) stigma and labeling associated with diabetes and depression care, and (4) feedback on the intervention. We describe these themes and provide exemplary quotations from the respondents below.

**Importance of family assistance**

Patients, family members, and health-care workers all discussed the importance of family assistance in supporting diabetes management. Some mentioned that food was an important aspect of family life, bringing family members together for festivals and regular meals. They noted that when a patient's food was different from food being served to other family members, this caused much distress to the patient. Some mentioned that withholding certain foods led to patients binging at night. One family member in Chennai said,

“He is crazy in taking snacks. I could not change him. Mostly I avoid preparing anything at home because he would eat it... But he likes eating outside rather than eating at home. I used to give him sundal (boiled pulses, seasoned with spices) but he likes to have that spicy not just simply boiled. So I am forced into making it spicy (laughs). So I put lot of effort to control him, but I could not do anything when he eats outside.”

Patients would oftentimes describe how family members were too strict with them. One patient from Visakhapatnam said,

“In social gatherings, my relatives and friends are focusing on me and trying to restrict and giving some advices like: ‘Don’t do this,’ ‘don’t eat this,’ and so on. I don’t like this type sympathy and suggestion, mainly these leads me to be more depressive. Others’ feeling like it’s a deadly disease, they are asking some questions like ‘why you got this?’ ‘Where did you get it?’ Being a diabetic, I am totally restricted for my favorite foods and I lost my enjoyment, this is the main stressor for me.”

Patients recommended that family members remain open to negotiating which foods should be prepared at home. They described how family members needed suggestion from health-care workers to work together with the patient and come to mutual agreements on treatment, nutrition, and exercise approaches, rather than strict, top-down approaches to nutrition.

**Concern over patient and families’ understanding of diabetes**

Several patients and family members did not immediately recognize the terms “diabetes” or “depression.” Many used terms such as “sugar” or “stress” to describe the more Western terminologies of diabetes and depression, respectively. Other patients and family members defined depression as “anger” or “aggression.” Patients also described how much miseducation existed about diabetes. One key informant’s family in Delhi believed that diabetes was contagious by sharing utensils:

“I am very sad. I always feel sad. A person (with diabetes) is always sad. Have problems, pain. Even people taunt that ‘she has got this disease.’ Those having elder and younger sister-in-laws refrain; they also keep the utensils separate. Our family has many restrictions. They think because she (meaning me) has this, our family will also get this disease... But now they don’t do this because they heard from others that it does not spread like that. Initially, they separated the utensils.”

This key informant seemed to imply that this type of misinformation fueled her depressive symptoms.

Health-care workers emphasized that much time was needed to bring patients and families to a point where they understood nutrition and exercise related to controlling diabetes. They suggested that similar time was needed to improve health literacy around depression. Some health-care workers highlighted that they often needed to explain concepts without written materials so that patients and families with limited literacy could understand the concepts.

**Stigma and labeling**

Many patients did not feel comfortable admitting that they had diabetes or “sugar” in public. They did not like any public attention for their condition. A patient from Chennai said,

“Near my home in my area they speak very bad about diabetes people. If there is a problem they talk like what did you do to get diabetes and that is why you are suffering with diabetes.”

In addition to stigmas associated with diabetes, one health-care worker from Visakhapatnam was concerned about layering stigmas associated with depression. He said:
“This method will not work out for my clinic because we will be touching their family and personal aspects of their lives. Due to this reason, patients will refuse to respond. In general, patients seek only medical assistance more than psychological support. They believe that psychological counseling is only meant for those who are having mental problems. Sometimes, it will lead to degradation of the reputation of the clinic due to the negative attitude toward psychological counseling.”

This health-care worker was quite concerned that patients would not want to discuss their problems or be labeled as having a mental health condition, and the stigma associated with a mental health condition would affect patient retention in his clinic. This comment was an outlier when compared to other health-care workers feedback about handling mental health issues in a diabetes clinic. However, this comment was highlighted here to demonstrate that mental health issues carry their own stigmas in India, and the study team should remain attuned to compounded impacts that could occur as a result of adding a label of depression to people already feeling stigmatized as living with diabetes.

Feedback on the intervention

Nearly, all of the health-care workers, family members, and patients had positive things to say about the intervention materials that were presented. Patients and family members generally liked the idea of spending more time with their health-care workers via counseling. A family member said, “Suggesting them to do activities that give them happiness is a good idea. This helps them to take their mind off from their illness.” Other family members liked the idea of playing an active role in the patients’ treatment and exploring ways to motivate the patient.

Patients liked the opportunity to gain more knowledge of how to stay healthy. A patient from Chennai said, “The care coordinator can explain the benefits of doing exercise. Instead of just saying ‘go walking’ they can explain that if you walk you will sweat, for some time you may feel tired but overall you will be energetic and can do the day’s work with enthusiasm. You will feel happy as though you have achieved, like if you walk for 5 km and come back home, we feel we have done something great and achieved something.”

Overall, the patients, family members, and health-care workers liked the explanation, activation, and coping mechanisms that the intervention materials contained.

The key informants did provide some explicit guidance on how to adapt the intervention for the Indian context. As noted above, adding a strong family component to the intervention was positively viewed. Key informants also cited unique barriers to exercise. A health-care worker highlighted that some women might have additional challenges with safety, as walking in their communities were a common form of exercise, but women do not go out by themselves, particularly after dark. Patients and family members thought that discussing feasible exercises for their context with a care coordinator would be helpful.

Health-care worker time constraints were another identified barrier to implementing the intervention in India. One health-care worker in Visakhapatnam said: “In my opinion this program will be useful in private hospitals where there are no major challenges, but in government hospitals it will be very difficult to establish because they need to appoint a new person for this program.”

This health-care worker had concerns that staff would not have the time to provide additional counseling services, and clinics may need to hire new staff to take on the additional responsibilities. On the other hand, patient respondents did not voice a concern that the intervention may take more time. In fact, patient respondents appeared to enjoy the idea that a health-care worker would be able to spend more time with them.

Conclusions

A well-adapted integrated approach to managing diabetes and depression has the potential to make a large impact in India. While integrated care models have shown great success in the United States, there are many cultural factors to consider for an Indian audience. Through interviews and focus groups at three different sites around the country, our key informants provided much guidance on addressing topics at the intersection of depression and diabetes treatment in India.

Strengthening the family members’ role in patients’ diabetes and depression treatment was cited as a major facilitator to implementing the intervention in an Indian context. Specifically, key informants suggested family involvement in the care plan and joint discussions
Health literacy and stigma are also salient characteristics of the Indian experience with diabetes and depression. Poor health literacy is associated with poor diabetes control and depressive symptoms. Correspondingly, our key informants recommended that materials and messages given to patients and family members be simple and clear and time needs to be taken to ensure that patient and family understand the treatment options available. Using words that patients bring in themselves (e.g., sugar, tension, and feeling low) and avoiding medical terminology may help establish rapport and promote patient participation and joint decision-making with health-care workers. Simultaneously, the care coordinator can help patients strategize ways to avoid stigma in public (e.g., taking coffee with no sugar because that is the way that they prefer it, rather than because of a diabetes diagnosis).

Finally, overcrowding and time constraints were identified as barriers for health-care workers. Various strategies have been proposed for disseminating innovations in health including restructuring and quality management. Indeed, investing in practice change or quality improvement interventions – even if it means higher upfront costs – can be very cost-effective and/or cost-saving on account of saving more physician time and savings related to better control and health outcomes. Incorporating operational research into the implementation process can help identify and quantify the value of approaches for maximizing efficiency.

Limitations
Our study had important limitations. While there was a diversity of care settings (small private clinic, large private specialty hospital, and large public hospital clinic), there was a limited number of sites, and sites were all located in major metropolitan cities. Our findings may, therefore, not be generalizable to rural settings or certain areas of the country. In addition, the sample size was small. Although sample sizes in qualitative research tend to be small to obtain rich data, this too limits the generalizability of our findings. Notably, the findings are context-specific and directly applicable to the next phase of implementation, as an effectiveness trial will be conducted at the same study sites from where the qualitative data were collected.

In conclusion, key informants expressed enthusiasm for intervening on depression in a diabetes context in India. Most importantly, they provided information toward developing an effective and culturally appropriate intervention. Our findings indicate that the following components be incorporated into integrated care models for Indian urban settings: (1) Formal engagement of family members in the treatment process, (2) clear and simple information and materials for patients and families, (3) use of patient-friendly language instead of medical jargon, (4) coaching for patients in coping with stigma, (5) cross-training of existing staff instead of hiring new staff, and (6) ongoing process evaluation. By combining these program elements with experiences from previous successful care models (e.g., TEAMcare and CARRS), the INDEPENDENT intervention has the potential to be an extremely effective option for depression and diabetes treatment in India.

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Conflicts of interest
There are no conflicts of interest.

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Appendix 1
Interview guides - supplemental material

Collaborative Care for Depression and Diabetes in India

Interview Guide for Diabetic Patients

Introduction
We have asked you to take part in this interview because we are interested in your thoughts, feelings, and experiences about living with diabetes and depression. We would also like to hear your opinions about a new programme that seeks to relieve symptoms of depression and diabetes. The information that you provide may help us to find better ways to treat depression and diabetes. Do you have any questions at this point?

1. Can you please describe how living with diabetes has been for you? [Probes: general experiences, caring for self]
2. What are the factors that have helped you to control diabetes? [Probe: medications, diet, exercise]?
3. What is your understanding of the term "depression"? How common do you think depression is among diabetic patients? [Probe: Symptoms like having little interest or pleasure in doing things; feeling down, depressed, or hopeless.]
4. Do you think counseling or medications can be useful in treating depression? [Probe: Why or why not?]

Transition Statement
Thank you for sharing these personal details. We are carrying out a research study to adapt an American programme for the Indian setting. The programme uses a team approach to help people feel better and take better care of themselves. We know it’s a challenge to deal with diabetes and our goal is to improve overall quality of life. I will describe the program to you now and would like to hear your opinion of its appropriateness to help reduce depression and diabetes burdens. After I describe each component, I will go through a set of questions.

5. The programme consists of three parts. In each part the nurse uses counseling methods to help the person with diabetes and depression.
a. In one part the nurse encourages the person to try pleasurable activities between visits. For example, the nurse may ask the person to go for a walk, watch TV, or talk with a relative. [Probing questions to be repeated after each method description:]
   • Do you think this programme would be appropriate for you? [Probe: Why or why not?]
   • Do you think this would be an important part to include in the programme? [Probe: Why or why not?]
   • What are some challenges we might have in using these approaches? How can these challenges be overcome? [Probe: What challenges might you face in adopting this approach? What might be some challenges in delivering this programme to others?]
b. In another part, the nurse helps the person examine their readiness to adopt healthy habits with respect to diet, exercise, and taking medications.
   • Do you think this programme would be appropriate for you? [Probe: Why or why not?]
   • Do you think this would be an important part to include in the programme? [Probe: Why or why not?]
   • What are some challenges we might have in using these approaches? How can these challenges be overcome? [Probe: What challenges might you face in adopting this approach? What might be some challenges in delivering this programme to others?]
c. Lastly, the nurse will help the person learn how to solve problems that come in the way of treatment and lifestyle changes.
   • Do you think this programme would be appropriate for you? [Probe: Why or why not?]
   • Do you think this would be an important part to include in the programme? [Probe: Why or why not?]
• What are some challenges we might have in using these approaches? How can these challenges be overcome? [Probe: What challenges might you face in adopting this approach? What might be some challenges in delivering this programme to others?]

6. Do you think the program has the potential to reduce depression for you? Do you think the program has the potential to improve your diabetes care?

7. What format should the program have? [Probe: Should there be weekly 1 hour meetings for 8 to 10 weeks, or something like 4 half day workshops? Probe: Should the meetings be separate for men and women? Probe: Would you have a preference for who helps you in the program? (Probe: Family member, Nurse, Person living with diabetes/depression, man/woman)]

8. Do you have any other ideas or concerns about the programme that we have not discussed?

9. If you had the chance, would you participate in this sort of programme?

Collaborative Care for Depression and Diabetes in India

Interview Guide for Family Members

Introduction
We have asked you to take part in this interview because we are interested in your thoughts, feelings, and experiences about your family member with diabetes and depression. We would also like to hear your opinions about a new programme that seeks to relieve symptoms of depression and diabetes. The information that you provide may help us to find better ways to treat depression and diabetes. Do you have any questions at this point?

1. What is your understanding of your family member’s diagnoses (What were you told about his/her health condition)? What has your role been in helping manage their health?
2. What are the factors that can help your family member control their diabetes? [Probe: medications, diet, exercise]
3. What do you understand by the term “depression”? How common do you think depression is among people with diabetes? [Probe: Symptoms like having little interest or pleasure in doing things; feeling down, depressed, or hopeless.]

4. What is your understanding of the role of counseling and antidepressant medications in the treatment of depression?

Transition Statement
Thank you for sharing these personal details. We are carrying out a research study to adapt an American programme for the Indian setting. The programme uses a team approach to help people feel better and take better care of themselves. We know it’s a challenge to deal with diabetes and depression. Our goal is to ensure that the overall quality of life improves for people in the programme. I will describe the programme to you now and would like to hear your opinion on how appropriate this approach might be to help people with depression and diabetes.

5. The programme consists of three parts that involve a nurse using counseling methods to help the person in the programme. After I describe each part, I will ask you a set of questions.

a. In one part the nurse encourages the person to try pleasurable activities between visits. For example, the nurse may ask the person to go for a walk, watch TV, or talk with a relative. [Probing questions to be repeated after each method description:]

• Do you think this part is appropriate for someone like your family member?
• Do you think this part would be received well or not so well by your family member? [Probe: Why/why not?]
• Are there challenges we might have in using these methods with your family member? What suggestions do you have to overcome these challenges?

b. In another part, the nurse helps the person examine his/her readiness to adopt healthy habits with respect to diet, exercise, and taking medications. [Probing questions to be repeated after each method description:]

• Do you think this part is appropriate for someone like your family member?
• Do you think this part would be received well or not so well by your family member? [Probe: Why/why not?]
• Are there challenges we might have in using these methods with your family member? What suggestions do you have to overcome these challenges?
c. Lastly, the nurse will help the person learn how to solve problems that come in the way of treatment and lifestyle changes.

[Probing questions to be repeated after each method description:]

• Do you think this part is appropriate for someone like your family member?
• Do you think this part would be received well or not so well by your family member? [Probe: Why/why not?]
• Are there challenges we might have in using these methods with your family member? What suggestions do you have to overcome these challenges?

6. If your family member were offered the opportunity to participate in this programme, would he/she choose to do so?
[Probe: Why/why not?
Probe: If not sure, what additional information would help you decide?]

7. Do you think the programme has the potential to reduce depression for your family member? Does it have the potential to improve their overall health? Why or why not?

8. What format should the programme have?
[Probe: Should there be weekly 1-hour meetings for 8 to 10 weeks, or something like 4 half day workshops?
Probe: Should the meetings be separate for men and women?
Probe: Would you have a preference for who helps your family member in the program? (Family member, Nurse, Person living with diabetes or depression, man/woman)
Probe: Would you as a family member have a role in this programme? What would it be?]

9. Do you have any additional ideas or concerns about the programme that we have not discussed?

Collaborative Care for Depression and Diabetes in

Interview Guide for Health Care Providers (HCP)

Introduction
We have asked you to take part in this interview because we are interested in your thoughts, feelings, and experiences about your patients with diabetes and depression. We would also like to hear your opinions about a new programme that seeks to help relieve symptoms of depression and diabetes. The information that you provide us may help us find better ways to treat depression and diabetes. Do you have any questions at this point?

1. What does the term “depression” mean to you? How common do you think depression is among diabetic patients?
[Probe: (a) Symptoms like having little interest or pleasure in doing things; (b) feeling down, depressed, or hopeless. (c) Would you be able to identify someone with a diagnosis of depression?]

2. What factors can help a person control their diabetes? Can depression hinder this process? How?

3. What do you think a person with diabetes and depression should do in order to deal with their symptoms of depression? (Probe: therapies [medication or counseling], talk to a relative or friend, support groups; Why do you think so?)

4. What has worked well and what has not worked so well in treating your diabetic patients?

Transition Statement
Thank you for sharing these thoughts. We are carrying out a research study to adapt an American diabetes and depression care programme for the Indian setting. The programme uses a team approach to help patients feel better and take better care of themselves. We know it’s a challenge to deal with diabetes and our goal is to ensure that the patients’ overall quality of life improves. I will describe the program to you now and would like to hear your opinion on how appropriate this approach might be to help reduce depression and diabetes burdens. After I describe each component, I will go through a set of questions.

5. One part of the programme involves a nurse using counseling methods to help the patient.
   a. In one method, called "Behavioral Activation", the nurse encourages the patient to try pleasurable activities between visits. For example, the nurse may ask the person to go for a walk, watch TV, or talk with a relative.
   • Do you think this method is appropriate for your diabetic patients?
   • Do you think this method will be received well by patients and their families? [Probe: Why or why not?]
   • Are there challenges we might have in using this method in your clinic? How could we overcome these challenges?
b. As part of another method, called “Motivational Interviewing”, the nurse helps the patient examine his/her readiness to adopt healthy habits with respect to diet, exercise, and taking medications.

- Do you think this method is appropriate for your diabetic patients?
- Do you think this method will be received well by patients and their families? [Probe: Why or why not?]
- Are there challenges we might have in using this method in your clinic? How could we overcome these challenges?

b. As part of another method, called “Motivational Interviewing”, the nurse helps the patient examine his/her readiness to adopt healthy habits with respect to diet, exercise, and taking medications.

- Do you think this method is appropriate for your diabetic patients?
- Do you think this method will be received well by patients and their families? [Probe: Why or why not?]
- Are there challenges we might have in using this method in your clinic? How could we overcome these challenges?

• Do you think this method is appropriate for your diabetic patients?
• Do you think this method will be received well by patients and their families? [Probe: Why or why not?]
• Are there challenges we might have in using this method in your clinic? How could we overcome these challenges?

6. Another important part of the program is a weekly meeting between a psychiatrist, physician, and nurse. The nurse describes challenges that have come up in managing the patient’s diabetes and depression. The psychiatrist and physician discuss how to navigate these issues and then make recommendations for treatment. Here are 2 videos of how such a weekly discussion may go.

[Play example videos 2 and 3: http://www.trainingxchange.org/our-programs/teamcare/videos]

- Is this type of team meeting something that can be reproduced in this clinic?
- What type of challenges might there be if this approach were used in your clinic? How could we overcome these challenges?
- What are some benefits of trying this approach here? Now I would like to ask you about the programme as a whole.

7. What is your comfort level in prescribing psychiatric medications based on a psychiatrist’s recommendation of type of medication and dose?

8. Do you think the programme has the potential to help reduce symptoms of depression for your diabetic patients? Do you think the programme can help your patients take better care of themselves? Why or why not?

9. What format should the programme have? [Probe: Should there be weekly 1-hour meetings for 8 to 10 weeks, or something like 4 half day workshops?]

- Should the meetings be separate for men and women?
- Would you have a preference for who helps the patient? (Family member, Nurse, Person living with diabetes or depression or both, man/woman) What made you choose this person?

10. Do you have concerns about the programme that we have not discussed?