Peer Support, Mental Health and Diabetes

Report from the
2017 Peer Support Research Conference
of the UM-UNC Peer Support Core of the
Michigan Center for Diabetes Translational Research
Peer Support, Mental Health and Diabetes:
Report of a Working Research Conference

University of Michigan-University of North Carolina Peer Support Core
Michigan Center for Diabetes Translational Research
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Table of Contents
A. Introduction
B. Conceptual Issues in Mental Health and Diabetes
   1. Setting the Stage – Critique of DSM-5
   2. Discussion: Current Mental Health Care Paradigm
   3. Diabetes and Depression
C. Discussion: Effective Practices in Addressing Issues of Mental Health, Distress, Quality of Life
D. Background Material: Peer Support Addressing Issues of Mental Health, Distress, Quality of Life, including Examples from Chronic Disease Management and Diabetes
E. Discussion: Challenges in Peer Support and Mental Health and Good Practices for Meeting Them
F. Discussion: Common Problems in Peer Support Interventions
G. Research Recommendations
H. Directions for Funding
I. References
J. Conference Participants
K. Introductory Presentations of Congress Participants addressing Peer Support, Mental Health and Diabetes

A. Introduction

In recent years there has been increased interest in and attention to the relationships among diabetes and other chronic diseases with varied mental health problems, including depression, anxiety disorders, personality disorders, and schizophrenia. At the same time, research on peer support (provided by community health workers, promotores de salud, health coaches, etc.) has shown broad effectiveness in diabetes, other chronic diseases, and mental health. Bringing these two trends together offers new directions for improving the care and lives of those with diabetes who often are doubly challenged by a range of psychological problems, from distress directly related to their diabetes, to co-occurring depression and other problems.

The University of Michigan-University of North Carolina Peer Support Core is part of the Michigan Center for Diabetes Translational Research (MCDTR) diabetesresearch.med.umich.edu/Cores_MCDTR.php. It includes Peers for Progress that has been developed at the University of North Carolina since 2008 (www.peersforprogress.org).

One of the Peer Support Core’s aims is strengthening a national and international network of researchers developing and evaluating innovative peer support models to help prevent and
manage diabetes. To further this aim, each year it holds a research conference addressing key and emerging issues in peer support related to diabetes. For its 2017 and inaugural conference, we chose how peer support might address the co-occurrence and interplay among diabetes prevention and management and mental health.

*Peer Support, Mental Health and Diabetes* was organized as a working meeting of leading researchers interested in peer support for mental health problems in diabetes (including, of course, depression but also other mental health problems such as anxiety disorders and schizophrenia). The meeting convened leading experts in diabetes, peer support and mental health as well as representatives from the NIDDK-supported Centers for Diabetes Translation Research. A list of all attendees is included at the end of this report.

The focus of the meeting was to discuss research including dissemination and identify new research opportunities using peer support to address mental health issues across the diabetes care continuum, from primary prevention to advanced disease and complications. Participants met over two days to: 1) Share and discuss current work on mental health in diabetes and peer support to address mental health concerns; 2) Identify opportunities for research in the field; and 3) Identify and discuss collaborative opportunities among attendees.

The peer support workshop was held in conjunction with the annual meeting of the Michigan Center for Diabetes Translation Research in Ann Arbor, Thursday and Friday, May 11-12, 2017.

The Report includes presentations several participants made to introduce themselves and their work and which were especially pertinent to broad issues surrounding peer support, mental health, and diabetes (see Appendix). In addition to those presentations, the Report summarizes discussion of a variety of issues, culminating in research recommendations and opportunities for funding.
Notes from Peer Support Working Meeting

Conceptual Issues in Mental Health and Diabetes

Stage Setting – Critique of DSM-5

Ed Fisher presented a critical overview of current models for categorizing and diagnosing mental disorders as in the Diagnostic and Statistical Manual – 5th Edition of the American Psychiatric Association (DSM-5). According to Fisher, problems with the DSM-5 include overlap among categories such that 50% of those who meet criteria for one category also meet criteria for another. At the same time, categories are amorphous. For example, two people can both be diagnosed with Major Depressive Disorder yet share only one of nine features on which that diagnosis is based. From a cross cultural perspective, concerns have also been raised about validity. The categories may be reliably applied in different settings so, for example, investigators in diverse countries can agree on what meets and does not meet criteria for depression or schizophrenia. Reliability, however, does not necessarily confer validity. What is important about depression or schizophrenia in a particular cultural setting may be overlooked by the criteria that have been developed largely on the basis of US research and clinical practice.

Criticisms of DSM-5 have also emerged from more conceptual perspectives. In most categories, there are no identifiable diseases or disorders other than the cluster of symptoms defining them. There is no depression or schizophrenia to treat other than the symptoms that comprise depression and schizophrenia. Additionally, biological bases for disorders are assumed but with discounting of a variety of developmental, socioecologic and psychological determinants. This is naïve vis a vis the enormous amount of evidence that early and later experience influences neurobiology. Indeed, neurobiology may properly be seen as the mediator of environmental effects on behavior, rather than some sui generis basis for later behavior.

As an alternative to the DSM-5, Fisher proposed a focus on specific problems, e.g., low mood, disengagement in formerly enjoyable activities, confusing communications, suspiciousness and sensitivity to slights, etc. This would focus attention on specific problems, the level at which most interventions are planned and implemented. Cognitive behavior therapy for depression, for example, does not treat depression but, rather, treats separately the cognitive distortions, interpersonal problems, lack of enjoyable activities and other specific problems that are present in those labeled “depressed” but that vary widely in their presence and importance in individual cases. This would also “chunk” problems in terms more useful to clinicians. The diabetologist and certified diabetes educator are more likely to find useful consultation from a psychologist about a patient’s suspiciousness, hypersensitivity to criticism, and very labile attitudes toward their clinicians than trying to figure out how to treat a patients personality disorder.

Most pertinent to the meeting, problem solving has become recognized as a major theme of many psychotherapeutic approaches to mental disorders. This kind of problem solving is very similar to that which is routine in diabetes self management. This and similar approaches are clearly those that can be implemented by peer supporters. An example was evaluated in a cluster randomized evaluation of cognitive behavior therapy and problem solving for post-partum depression that was implemented by peer “Lady Health Workers in Pakistan.” The intervention reduced depression 12 months after delivery by 50% relative to usual care. Thus, focusing on specific problems and problem solving and other therapeutic approaches to ameliorating them is something in which peer supporters may clearly play a substantial role.
Fisher’s critique of the DSM-5 status quo is controversial, as was reflected in the notes from the discussion that followed.

What follows are notes from general discussion about mental health and diabetes and the roles that peer supporters might play in this area. The notes are left in “telegraphic” format to convey the immediacy and interactive nature of the discussion.

**Discussion: Current Mental Health Care Paradigm**

- It’s real world problem-based. My job as a clinician is to identify the problem and deal with it. Does that make the DSM-5 redundant? Do I need that?
- If you take the DSM-5 for what it is, it’s very broad categories for slicing up the pie. If someone has the label of depression, you have hunches about what will be useful that may not be useful for another label. Until you talk to them, you don’t have a treatment plan. DSM-5 is okay for recordkeeping, a rough guideline, but it doesn’t identify what specific treatment to use. The solution doesn’t come from the guidelines.
- As a practicing clinician and psychiatrist, we’ve created a biological specialization. Not happy with psychiatry guild. I’ve come to emphasize collaborative care so that I can do whole patient care, otherwise you’re doing biological psychiatry. Having team care is the solution. Otherwise things are very reductionist. Value-based care and risk contracts with ACOs have been a wonderful opportunity.
- A doctor once said, when I have a patient who’s depressed and they become diabetic, I breathe a sigh of relief. When they’re depressed, I have pills and good luck. When they’re diabetic, they have a whole raft of self-management tools, classes, coaching, etc.
- I’m a big fan of the SCID (Structured Clinical Interview for DSM-5). I do not disavow admiration for DSM-5. I appreciate the presentation of an incorporative model and I agree with that.
  - Historically, we didn’t have a concept of big science. Our guilds were tightly defined. Psychiatry was fighting for legitimacy. DSM-5 has helped bring legitimacy. Now we’re in a different place.
  - I would not agree with throwing out the scaffolding that the DSM-5 created. DSM-5 is not meant to be a stopping point. It was always in the service of the medical model of finding the biological determinant. Don’t need to have exclusivity where there is overlap of symptoms
  - In our history of research in diabetes and depression, we have 30 years of messy data. Having learned some of those lessons, I appreciate our systems of psychopathology. I don’t think it’s either/or.
- People have seized on the DSM-5 categories as identifying reality. I would really question whether we can understand relationships between diabetes and depression when we have such a broad categorization of depression. We probably have the same problem in diabetes. Two heterogeneous bundles.
- The scaffolding is helpful to use as an interview scaffolding. Is it stigmatizing? They can talk about the symptoms, weave in other things. There’s a shared understanding of what depression is. We can follow these things in a “free flow.” I’m not thinking about interventions around the DSM-5. But many people don’t have the experience to “free flow” so the scaffolding is helpful.
Diabetes and Depression

- Treating depression and diabetes: depression gets better in 2-3 months, helping with habits and lifestyle. The focus shifts, deal with the depression first. Phasing, compartmentalizing, etc.
  - Many people don’t recognize depression, want to talk about diabetes first
  - Distress is a great gateway to start talking about mental health
  - How to talk about depression without mentioning depression [Note: Rahman has written well on this development of a cognitive behavior therapy intervention into the “Thinking Healthy” protocol that avoids mention of depression.4]
  - How do you write that into a grant?
    - Depression symptoms and diabetes distress
Mental disorders may be seen as emerging from a complex of biological, developmental, psychological, social and economic disadvantages. Individuals who are disadvantaged with regard to a number of factors in this complex of determinants of mental disorders are at greatly increased risk to develop serious problems in these areas. Thus, an important strategy is to develop interventions that address this underlying complex in order to reduce unnecessary burden of disease and associated costs.\(^5,6\)

There is much reason to think that peer support can be helpful in this. In addition to psychological problems complicating other health problems, they are also themselves the object of peer support. Both the social isolation or lack of a confidant that often accompany psychopathology and distress\(^5,6\) and the general importance of simple social contact and emotional support\(^7\) suggest that simple, frequent, affirming, and pleasant contact from a supporter may be especially helpful to those with emotional distress.

Data support this expectation. A meta-analysis by Pfeiffer, Heisler and their colleagues found a pooled, standardized mean difference between peer support for depression and usual care of -0.59 favoring the peer support.\(^8\) The emotional benefits of peer support were illustrated in a study commissioned by the UK-based Stroke Association. Having a stroke can negatively impact on emotional wellbeing both in the immediate aftermath of a stroke, and in the longer term. In a small-scale study of the Stroke Association’s peer support groups, some stroke survivors talked about “loss of the life and the person they were before their stroke.” They highlighted significant changes to their personal and role identity, including a loss of independence, and reduced ability to do things they had previously done, including taking care of others in their lives. For these stroke survivors, attending a group alongside supportive peers had a positive impact on their mental wellbeing. This was variously attributed to being among friends, to the creation of a supportive and social group atmosphere and to groups creating a space in which people could make sense of the on-going emotional ‘ups and downs’ that can follow a stroke.

In a striking cluster randomized evaluation in Pakistan, “Lady Health Workers” implemented a cognitive-behavioral, problem-solving intervention for women who met criteria for major depression during the third trimester of their pregnancies. Relative to controls, the intervention substantially reduced depression 12 months \textit{post-partum} \((p < 0.0001)\).\(^3\) In India, peer support for depression, anxiety and other mental health problems included education about psychological problems and ways of coping with them (e.g., deep breathing for anxiety symptoms) as well as interpersonal therapy,\(^9\) all delivered by lay health counselors with back-up by primary care and monthly consultations from psychiatrists. Results included a 30% decrease in prevalence of depression and other common mental disorders among those meeting criteria at baseline, 36% reduction in suicide attempts or plans, as well as reductions in days out of work.\(^10\)

A population based study in the US evaluated Medicaid enrollees who had made a claim for both community mental health and peer support services. A comparison group who had made only claims for community mental health services was matched by gender, race, age,
urban/rural residence, and principle diagnosis. Those who had received peer support were more likely (OR = 1.345) to achieve crisis stabilization than the comparison group, and those who did not achieve stabilization were still less likely to be hospitalized (OR = 0.766).¹¹

Peer support also reduced distress and related hospitalizations among adults with diabetes in Hong Kong. The base of the program was, a standardized, systematic model of care¹²,¹³, incorporating many of the same emphases as Wagner’s Chronic Care Model and the Patient Centered Medical Home, e.g., quarterly reports to patients providing appraisal of clinical status and self-management recommendations. In addition, half of participants were randomized to receive telephone based peer support provided by trained peer supporters.

Reflecting patterns familiar to most in health policy and services, patients with elevated levels of depression, anxiety and/or stress, were more likely to be hospitalized (34%) than those without distress (20%). Among the group with heightened distress, the peer support intervention improved distress scores relative to standardized, high quality care alone (p = .03) and reduced overall hospitalizations (relative risk = 0.15, p < .001), a reduction to the “normal” level of those low on distress measures.¹⁴,¹⁵ That is, among the twenty percent of patients with high scores on distress and who account for greatly disproportionate hospital care, the addition of peer support to standardized, high quality clinical care reduced distress and lowered associated hospitalization rates to normal levels.

One of the striking aspects of these results of Chan and her colleagues in Hong Kong is that the peer support intervention was designed to assist diabetes management, not to reduce emotional distress. Yet it had substantial effects on distress and associated hospitalizations. Similar emotional benefits of peer support have been reported by Heisler and Oldenburg and their colleagues in the United States and Australia, respectively.¹⁶ The provision of peer support per se may have emotional and quality-of-life benefits, regardless of the particular curriculum or behavior changes the peer supporter is promoting.
Discussion: Effective Practices in Addressing Issues of Mental Health, Distress, Quality of Life

- Integrative role for problem solving and activation for depression
  - Problem solving steps common in all behavioral disease self-management
- Self Control, Self Management, and Problem Solving came out of behavior therapy/behavior modification
  - Ironically, they have been abandoned by much of mental health practice while being widely adopted in chronic care, including diabetes management
- When interviewing peer supporters, test their preconceptions about the condition and what their role would be in that relationship. Process versus content questions. Can we develop better interview questions for interviewing peer supporters?
- Observations on Collaborative Care (e.g., as developed by Katon and his group.\textsuperscript{17})
  - Just adding a care manager is a crapshoot. Doesn’t always result in outcomes or triple aim.
  - Adding systematic case review reflects the clinical process. Identifying goals and “closing the loop” on a weekly basis promotes focused activities and clinical gains.
  - Collaborative care is a great way to address maladaptive attachment.
  - Peer support lends itself to a team-based approach, as in collaborative care. The team structure of collaborative care provides an organizational niche in which to place peer support.
- Case management benefits the 50% of diabetes patients who may dismiss or discount benefits of diabetes care or be fearful of it.

Discussion: Challenges in Peer Support and Mental Health and Good Practices for Meeting Them

- Loneliness can be fundamental
  - “Being there” is a fundamental value of peer support; it addresses loneliness
  - Peer support also provides a sense of belonging to community.
- Surveys of programs associated with Peers for Progress identified “bossiness” as a common problem and one which it is difficult to change.
  - Bossy, naggy peer supporters will fail
  - Emphasizing “being there” might be a strategy for discouraging “bossiness” among some peer supporters. Bossiness can result from a feeling of responsibility to “fix problems.” Emphasizing “being there” might reduce the sense of responsibility to fix and the “bossiness” to which it may lead.
- There is value in an egalitarian peer support model (reciprocal peer support) in which peers both give and receive support.
  - Reciprocal peer support complements structured group activities
  - Does not work for everyone. Michele Heisler and colleagues reported success with those with diabetes\textsuperscript{18} but not so with heart failure.\textsuperscript{19}
  - Reciprocal support may require a level of energy that is not a problem for those with diabetes but is for many with heart failure.
• Characteristics of successful peer support
  o Social comparison theory and peer coping models: People who have struggled do better as coaches.\(^{20}\)
  o From perspective of modeling: “Peer Coping” model (“I struggled but I made progress”) better than mastery model.\(^{21}\)
• Importance of peer support being attractive to people. People don’t want to go to a clinic for support services, they want peer support to be an enjoyable experience.
• Challenge of ongoing support and follow up: how to sustain these efforts after the research team goes away.
• Recognize that all the content is behavioral skills. Sometimes clinicians ask for diabetes content and we provide that on the side. But no one is asking how the pancreas works.
• Great resource in sharing among peer supporters and program managers.
  o E.g., when one staff is much better at recruiting participants than others, get them together to share strategies
  o Bringing groups together to share both provides good ideas to programs and energizes and motivates the peer supporters and the managers
• Have to adapt US truisms about roles, autonomy, reciprocity, etc. to differing cultures.
  o For example, in India, people are used to didactic education system and power hierarchies.
  o If you don’t respect the organizational structure, you will bump into it. You have to use the hierarchical structure as part of the intervention.
  o If they have a leadership position in the church or a management position in a workplace, they can’t not be the leader or manager.
• Additional characteristics to be considered in maximizing reach and effectiveness of peer support:
  o Proactive outreach
  o Flexible and sustained follow up
  o Sound behavioral training and skill
  o Promote trust
  o Strong community presence and links across a range of health and community organizations

Discussion: Common Problems in Peer Support Interventions
• People with insecure attachment style are less likely to participate, but if you can get them to uptake, they benefit more from the intervention. Key may be consistency and not “getting ahead” of people by intensifying the relationship beyond what they ready to engage.
• Clinical inertia and the challenge of motivating individuals
• May intensify treatment now “as a bandaid” that we can remove later
  o Challenge of motivational strategies for patients that can fit into routine clinical encounters
• Changing how people think is the hardest thing.
  o E.g., around women’s issues, “my husband doesn’t let me go to the clinic because the doctor is a man”
  o Intimate partner violence; there may be limited or no awareness that this is not okay.
• Cost may or may not be a key factor for decision makers
  o With substitution of services and less utilization, costs of the program are trivial relative to overall system costs.
  o Present peer support as a way of making care management more efficient
Research Recommendations

Research questions and topics for investigation

1. Where does Peer Support best fit and how in the treatment of different mental health conditions? Does it vary by condition, and if so, how?
2. What are optimal combinations of different modalities of professional and peer support?
3. What is the comparative effectiveness of peer supporters compared with other care team members? How does this vary depending on role peer supporter plays and condition treated?
4. What is comparative effectiveness of different models of integrating peer supporters into the care team?
5. What are the mechanisms by which peer support may be effective for adults with diabetes and co-morbid mental health conditions? Again, does this vary by different condition? What are mediators and moderators of effectiveness?
6. Who benefits from different types of peer support models and combination of peer support with different types of care team and model?
7. What are characteristics of effective peer coaches and peer dyad matches in peer support models for diabetes and co-morbid mental health conditions? How are these the same or different from emerging evidence on this from current studies on peer support in diabetes?
8. Many current ‘peer specialist’ programs seek to match on mental health problems. How important is this?
9. How are peer supporters for adults with co-existing diabetes and mental health conditions best recruited and trained?
10. What are barriers and facilitators to and effectiveness of the implementation of peer support models in real-life clinical and other settings?
11. What is comparative effectiveness of different frequency and duration of peer supporter contacts?
12. What is comparative effectiveness of different modalities and combinations of modalities of peer support (e.g., face-to-face, phone, email, text, social media, web)
13. What is effectiveness of virtual forms of peer support?
14. What are ways to provide support for peer leaders/educators?

Evaluation tools and approaches

1. What are key processes and outcomes that should be measured across interventions?
2. What are best approaches to measure fidelity?
3. What are new technological approaches to assess fidelity to behavioral counseling approaches such as in motivational interviewing (e.g., technology that identifies whether peer support is using motivational interviewing tone, percentage of time talking)
4. How best to assess training, follow-up support, and fidelity to intervention?
   a. What is the balance between initial and follow up training?
5. What are the key outcomes that we should all be looking at?
   a. Need to compile and share measures of social determinant scales
   b. Need to develop an Inventory of validated patient-reported and other measures to make available and recommend to peer support researchers for Peer Support Core
6. Consider Research Domain Criteria, “endophenotypes” and other alternatives to DSM-5 in characterizing mental disorders for research purposes.
Directions for Funding

An aim of the Peer Support Core is to help applicants apply for grants if they are using peer support and evaluating outcomes. NIH is very interested in psychosocial behavioral issues and comparative effectiveness studies on how best to address these. Health equity, addressing disparities, advancing implementation science are strong interests. There are a number of NIH mechanisms to consider for applications:

Pamela Thornton presented an overview and answered questions regarding opportunities for research around peer support, mental health and diabetes.

- NIH is very interested in psychosocial behavioral issues
  - The topic is identified in various FOAs across Institutes
  - It is relevant to Dr. Thornton’s portfolio that focuses on implementation science, health equity, disparities
- Practicality, innovation, and cost are important issues for translational and dissemination research
- Emphasis on integration of existing systems (staff, electronic records, etc.) in research proposals to promote rapid adoption and sustainability within the healthcare system after the funded project period
- Natural experiments are a growing interest at NIH and CDC
- The Time-Sensitive FOA involves a rapid peer review process by the NIDDK and represents an innovation because the time from submission to award is approximately 3-4 months
- What kinds of things have we been funding (examples):
  - Encouraging mail order pharmacy use to improve outcomes and reduce disparities
  - The Alabama Care Plan: Assessing the impact of regional care organizations on diabetes outcomes in a sample of Alabama Medicaid recipients
  - Large scale program to evaluate built environment on physical activity
- Implementation science, health equity, disparities and behavioral issues in diabetes are of interest for career development and training applications. However, currently, most applications submitted to NIDDK focus on basic science
- Question: What is the definition of pragmatic trials? Are large scale settings with large sample sizes required? These can be quite daunting for investigators.
  - Answer: Pragmatic trials must include integration within a healthcare system (making use of existing staff, resources, etc.) and testing the intervention in which it would be implemented. Using the healthcare system as a recruitment site only is not acceptable. Strong letters of support are encouraged from leadership within the healthcare system indicating the intervention will be adopted should the trial show positive findings. The Pragmatic Healthcare program includes an R18 (full scale trial) and companion R34 (pilot and feasibility trial to prepare for an R18). For the R18, samples sizes vary; however, a detailed power calculation must be provided. A fully-powered trial is not required for the R34.
- With particular reference to costs, effectiveness, adoption, there is growing interest in peer support.
- The R18 lends itself to peer support studies. The challenge is to show feasibility that the system would actually use peer support resources/intervention as part of sustainable staffing instead of an adjunct resource in the community that may or may not get utilized.
References


### Conference Attendees

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Appendix of Attendee’s Research Descriptions
Over the past two decades, I have conducted research in three related areas of work that are germane to the topic areas of the First Annual Working Conference on Peer Support in Diabetes Management:

1) **Diapression**\textsuperscript{1} – understanding the patient’s experience, the epidemiology, and treatment implications of the convergence of diabetes and depression-related symptoms,

2) **Collaborative care**\textsuperscript{2,3} treatment models for effectively addressing polychronic patients,

3) **Attachment theory**\textsuperscript{4,5} as a practical framework for understanding and improving communication with patients who are less inclined to engage with their treatment teams, particularly those who have experienced adverse childhood experiences.

As a health services and clinical researcher with 25 years of clinical experience as a family doctor and consultation-liaison psychiatrist, I have always been interested in models of care that improve outcomes in highly complex patients – particularly medical patients in whom complexity is related to social determinants, early trauma, and behavioral health. By recognizing and effectively treating depression while optimizing communication with a disengaged individual with diabetes and a “dismissing attachment style”, for example, we can improve outcomes, improve long-term communication and access (on the patient’s terms), and reduce healthcare costs. We have specifically shown in clinical trials that collaborative care\textsuperscript{5} helps improve outcomes in just such individuals with diabetes, depression and dismissing/fearful attachment styles.

As we shift from fee-for-service to value-based reimbursement models of care, there are greater opportunities to integrate psychological principles into medical team-based care. In our work over the past decade, we have expanded collaborative care treatment models from focusing primarily on behavioral health conditions to focusing on common medical conditions like diabetes and hypertension, which requires a greater focus on health behaviors\textsuperscript{3}. We emphasize the use of problem solving treatment, behavioral activation, pleasant events scheduling, motivational enhancement, and attachment theory by frontline clinicians for enhancing behavior change, and optimizing communication with hard-to-reach individuals.

With this important pivot, there are more opportunities for peer support in diabetes management. We have recently been using collaborative care frameworks where nurses and health navigators work as a dyad to provide bio-psycho-social care. Additionally, one of my co-investigators, Evette Ludman, Ph.D. has recently developed a dyadic model with collaborative care components where care managers and peer supports address depression in primary care\textsuperscript{6} with a dyadic focus on self-management support and on “recovery” from depression.

\textsuperscript{1} Ciechanowski PS. Diapression: An Integrated Model for Understanding the Experience of Individuals with Co-Occurring Diabetes and Depression. Clinical Diabetes 2011; 29(2): 43-49.


Collaborative Care for Diabetes and Co-Morbid Conditions

- Health Behavior and Behavioral Health
- Population Health
- Self-Management Support
- Achieve Quadruple Aim
- Addressing Clinical Inertia
- Value-Based Care

“I worry that I will be hurt if I allow myself to become too close to others.”

“I prefer not to depend on others or have others depend on me.”

Adverse Childhood Experiences
Laura Damschroder, MPH, MS
Ann Arbor VA Center for Clinical Management Research
Health services Research & Development Center of Excellence &
Personalizing Options through Veteran Engagement (PROVE) QUERI Program

Rapid-fire Findings

The views expressed in this presentation are my own and do not reflect the position or policy of the Department of Veterans Affairs or the United States government.
Reach X Effectiveness = Impact

• Group-based VA DPP
  – High/Moderate Reach X High Effectiveness = Moderate/High Impact
    • What about lost opportunities?
• Online DPP
  – High/Low Reach X High Effectiveness = Mod/High Impact

Conclusions

• Quality of delivery → Participant satisfaction → Engagement
  – Organizational Level Considerations
    • Strategy and processes to Reach targeted population
    • Costs
      – Higher Participation → lower cost
      – Changing landscape with potential future CMS reimbursement
  – Mitigating barriers
    • Tailor multi-level implementation strategies
    • Centralized support
Understanding and Treating Depression in Adults with Type 2 Diabetes

Mary de Groot, PhD
Indiana University School of Medicine
Research Interests and Key Findings

Course and impact of depression on diabetes outcomes


- Depression and diabetes are associated with increased inflammation compared to either condition alone. (Doyle, T.A., de Groot, M., Harris, T., Schwartz, F., Strotmeyer, E.S., Johnson, K., Kanaya, A. *J. Psychosomatic Research*. 2013)

- Duration of diabetes is longer in T2DM than in the general population (de Groot, M., Crick, K., Long, M., Saha, C., Shubrook, J. *Diabetes Care*, 2016).

Development of community-based treatments for depression for underserved T2DM adults: Program ACTIVE


Development of standards of care for the psychosocial treatment of people with diabetes

Improving Depression and Diabetes Outcomes with In-Home Community Health Workers

Darrell Hudson, PhD, MPH
Washington University in St. Louis

Diabetes is the seventh leading cause of death in the United States and an estimated 29 million Americans, 9.3% of the U.S. population, have type 2 diabetes mellitus (T2DM).1,2 African Americans are twice as likely to have T2DM compared to whites (13.2% of African Americans compared to 7.6%).1 The rate of diabetes among African American men has increased by 136% since 1980 and diabetes is the fifth leading cause of death among African American men.2

Depression and T2DM co-occur frequently, even more so for African Americans.3,4 In fact, patients with T2DM are twice as likely to have depression5–7 and mortality risk is greater among T2DM patients with depression.11 Depression is associated with compromised diabetes self-care (e.g. poorer diet, physical inactivity, medication compliance, and glycemic control), as well as challenges to quality of life among patients with T2DM.8–10 Yet, depression is often treated less aggressively in patients with T2DM, especially minority and low-income patients.22,23 Screening and treatment of depression has been recognized as a critical factor in improving diabetes self-management outcomes12–21 While African American men may be especially vulnerable to depression, they underutilize mental health treatment services.13–16 Depression could negatively affect the likelihood of engagement in diabetes self-management behaviors among African American men. African American men exhibit poorer diabetes self-management behaviors and greater likelihood of serious complications of T2DM.24 Despite significant barriers to mental and physical care among African American men,18 there are virtually no interventions that have been specifically developed to address depression among African American men with T2DM.

The scientific premise of this study is that the implementation of a community health worker led intervention will improve depression symptoms, diabetes self-management behaviors and diabetes-related outcomes among African American men with T2DM. Evidence from previous interventions has indicated that community health workers (CHWs) are effective in improving diabetes self-management behaviors and diabetes-related outcomes.25,26 There is also evidence that indicates the effectiveness of CHWs in addressing unmet mental health needs among underserved populations.27–29 These CHW led interventions have been effective because they are peer-led, culturally appropriate, and improve access to care.25,30 However, few studies have examined the efficacy of using CHWs to treat depression as a way to improve T2DM self-management behaviors and outcomes.27 To our knowledge, there are no studies that have used CHWs to treat comorbid depression and T2DM among African American men.27

The objective of this R21 application is to test the efficacy of an in-home intervention designed to improve depression and diabetes outcomes among African American men with T2DM and unmet depression needs. This objective will be achieved through the use of CHWs to providing in-home diabetes self-management training and depression care using motivational interviewing (MI) and behavioral activation (BA). The goals of this study will be achieved through three specific aims.

Aim 1: Determine the efficacy of training, supervision, and monitoring of CHWs in recognition of depression, use of MI and BA to address depressive symptoms and to improve diabetes self-management behaviors.

Aim 2: Examine the efficacy of a CHW led, home-based intervention using MI to improve depression outcomes (e.g. number and frequency of depressive symptoms, feelings of stress) among African American men with T2DM.

Aim 3: Examine the efficacy of a CHW led intervention in improving diabetes self-management behaviors (e.g. medication adherence, diet, physical activity, and attending doctor’s appointments), and diabetes-related outcomes including glycemic control measured by glycosylated hemoglobin (HbA1c).

This proposed study will have significant public health implications and is expected to contribute to efforts to improve diabetes-related outcomes among African American men. This study is innovative in that it provides in-home, culturally appropriate depression care, providing access to depression care that is available, affordable, and acceptable using a CHW and use a face-to-face, in-home intervention model and will provide evidence-based diabetes self-management to fit within a home visiting protocol to improve T2DM outcomes among a vulnerable, yet understudied population.
Improving Depression and Diabetes Outcomes with In-Home Community Health Workers

Darrell Hudson, PhD, MPH
May 11, 2017

Background

- Depression and T2DM co-occur frequently, even more so for African Americans; depression is associated with compromised diabetes self-care.
- African American men with T2DM may be especially vulnerable to depression but underutilize mental health treatment services.
- Premise of this study is that the implementation of a home-based, CHW led intervention will improve:
  - Depression outcomes
  - Diabetes self-management behaviors and self-efficacy
  - Diabetes-related outcomes
Specific Aims

- **Aim 1:** Determine the efficacy of training, supervision, and monitoring CHWs.
- **Aim 2:** Examine the efficacy of a CHW led, home-based intervention to improve depression outcomes.
- **Aim 3:** Examine the efficacy of a CHW led intervention in improving diabetes self-management behaviors (e.g. medication adherence, diet, physical activity), and diabetes-related outcomes including glycemic control.
What we know about 1) dietary patterns to reduce heart disease risk and 2) peer support

- Mediterranean dietary (Med-diet) pattern yields substantial reduction in heart attack and stroke (30%) and also reduces the risk for diabetes, cancer, and dementia. A Med-diet pattern includes more nuts, oils, fruits, vegetables & whole grains.
- We have evaluated a Med-diet intervention in Lenoir County. It was well received and led to sustained improvement in blood pressure and weight.
- Peer support:
  - Helps to promote and sustain healthful behaviors
  - Reaches and engages diverse populations
  - Is flexible and can be tailored to community settings

Why participants like the Med-diet, which we call Med-South diet (for southeastern US)

- Easier to follow than most diets: More “do’s” and fewer “don’ts.”
- Endorses southern favorites (nuts, mayonnaise, tartar sauce) shunned by low fat diets
- Easier to maintain and can be helpful for weight loss

Reason for project—to learn more about:

- Community members’ preferences for intervention format, acceptability of the intervention, and feasibility of the intervention
- The role of peer support in helping community members make lifestyle change

Who may take part and brief description of intervention?

- Up to 80 community members, age 35-80, with or without type 2 diabetes
- Intervention will be offered in both group and individual formats
- Intervention includes 4 monthly visits, each followed by brief phone check-ins
  - Groups format: meet at community location monthly, sessions 60 to 90 minutes
  - Individual format: first visit face-to-face; others face-to-face or by phone
  - Content of visits is focus on different foods and increasing physical activity
    - Session 1: Nuts, Oils, Dressings, and Spreads
    - Session 2: Vegetables, Fruit, Whole Grains, and Beans
    - Session 3: Drinks, Desserts, Snacks, Eating Out, and Salt
    - Session 4: Fish, Meat, Poultry, Dairy, and Eggs
- Between visits, participants will receive support for making lifestyle change from peer counselors who will also link participants to appropriate community resources

How will we identify participants?

- Publicize to community--will invite groups (churches, volunteer organizations, etc) to participate.

Compensation for taking part

- The program is free
- Participants will be paid for project measures (questionnaires, blood pressure check, and weight). Payment will be $50 for the baseline and follow-up measures.

Peer counselors will be hired from the local community
Peer-Delivered Lifestyle Intervention to Reduce Heart Disease Risk

Red Springs, NC

PROGRAM STRUCTURE

- Intervention offered in group and individual formats
- Intervention web-based, promoting remote counseling via screen sharing technology (paper format an option)
- Intervention includes 4 monthly visits, each followed by brief phone check-ins
- Group sessions will be given by health professional with support from peer counselors
- First individual counseling session given by health professional; rest by peer counselors
- Phone check-ins done by peer counselors
PROGRAM CONTENT

• Dietary pattern (Mediterranean-style, adapted for NC)
  • Session 1: Nuts, Oils, Dressings, and Spreads
  • Session 2: Vegetables, Fruit, Whole Grains, and Beans
  • Session 3: Drinks, Desserts, Snacks, Eating Out, and Salt
  • Session 4: Fish, Meat, Poultry, Dairy, and Eggs

• Physical activity
  • Primary focus is walking
  • Will offer participants a Fit-Bit or pedometer to help with self-monitoring
I am a practicing internal medicine physician and health services and outcomes researcher who is committed to improving outcomes for patients with Type 2 diabetes by ensuring that they receive care that is personalized, timely, and addresses both physical and mental health.

1. Key findings

   A. Glycemic legacy effect: I study the glycemic legacy effect (the long-term effects of glycemic exposure in patients with newly diagnosed diabetes) and whether information about this effect could change patient decision-making. Both the UKPDS and DCCT found that patients randomized to early intensive glycemic control had improved patient outcomes for 1 to 2 decades after they had returned to usual care and there were no longer differences in glycemic control. Using data from Kaiser Permanente Northern California’s Diabetes Registry, I identified a family of 5 glycemic trajectories among patients with newly diagnosed Type 2 diabetes, which differed in their risk of microvascular complications and mortality. I also found that the period of early glycemic control may be as short as 1 or 2 years after diabetes diagnosis. In qualitative interviews, I also informed 60 patients with Type 2 diabetes about the glycemic legacy effect and found that about a third of patients were motivated by this information to start new glucose-lowering medications. I also found that most patients had misperceptions about how long they would have diabetes and how long they would be on medications for diabetes.

   B. Integration of behavioral health (BH) and diabetes care at CHCs: The integration of the collaborative care model with diabetes care has been shown to improve patient outcomes for diabetes and depression. However, little is known about to what extent BH and diabetes care is integrated at CHCs. I surveyed health centers and providers at health centers for their perceptions of BH/diabetes care integration.

2/3. Lessons Learned / Major Challenges

   A. Glycemic legacy effect: i) Endocrinologists are very knowledgeable about the glycemic legacy effect; however, most patients with Type 2 diabetes receive care in primary care. Thus my intuition as a PCP as to what is fundable research may be inaccurate. ii) Diabetes education is not a standard curriculum, so it is hard to determine whether information about the glycemic legacy effect is included.

   B. Integration of behavioral health (BH) and diabetes care at CHCs: Studying health centers and their providers is very challenging because of issues of staff turnover and patient/practice heterogeneity. However, because the providers at HCs are often mission-driven, it is also very rewarding and fruitful.

4. Important dimensions / directions for future work

   A. Glycemic legacy effect: I am developing a patient education intervention that incorporates realistic information about the natural history of diabetes and its treatments as motivators to intensify glycemic control earlier in the disease course.

   B. Integration of behavioral health (BH) and diabetes care at CHCs: After analyzing results from the provider surveys, I may be developing a system-level intervention to improve integration of BH and diabetes care at CHCs.
Should We Tell Patients About the Legacy Effect?

“How much longer do you think you’ll need to take your current diabetes medications?”

<table>
<thead>
<tr>
<th>N (%)</th>
<th>&lt; 6 years</th>
<th>It depends</th>
<th>Rest of life</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (%)</td>
<td>29 (48%)</td>
<td>18 (30%)</td>
<td>13 (22%)</td>
</tr>
</tbody>
</table>

“Through the diet... I think this is going to go away.”

“Do you think you’ll have to take more medications in the future?”

<table>
<thead>
<tr>
<th></th>
<th>Pills</th>
<th>Insulin</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>51 (85%)</td>
<td>52 (87%)</td>
</tr>
<tr>
<td>It depends</td>
<td>2 (3%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Yes</td>
<td>7 (12%)</td>
<td>7 (12%)</td>
</tr>
</tbody>
</table>

“Because I don’t plan to take anymore. Well, I’m not going to take anymore. This is it. I’m never taking more.”

“If your doctor told you that you could stop taking this medication after 10 years and the benefits of this medication would last another 10 years, would your likelihood of taking this medication change?”

<table>
<thead>
<tr>
<th>N (%)</th>
<th>Increase</th>
<th>Stay the same</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (%)</td>
<td>19 (32)</td>
<td>40 (67)</td>
<td>1 (2)</td>
</tr>
</tbody>
</table>

“I don’t like taking pills or nothing you know, and after 10 years I don’t have to take those anymore.”

Integration of BH and Diabetes Care at Midwest HCs

<table>
<thead>
<tr>
<th>HCs (N=77)</th>
<th>N (%)</th>
<th>PCPs (N=573)</th>
<th>Mean (SD) / N (%)</th>
<th>Below median A1c&lt;9% N (%)</th>
<th>AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH services at all sites</td>
<td>47 (61%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BH services at some sites</td>
<td>28 (36%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>51 (66%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>42 (55%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes prevalence</td>
<td>13% (4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncontrolled diabetes (A1c &gt; 9%)</td>
<td>30% (11%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>46.6 (11.8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>409 (73%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>424 (74%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MD/DO</td>
<td>259 (48%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years at health center</td>
<td>5.7 (6.6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-located BH and primary care</td>
<td>62 (81%)</td>
<td>5.2 (1.1, 23.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes education</td>
<td>448 (79%)</td>
<td>2.6 (1.6, 4.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BH provider with diabetes knowledge</td>
<td>287 (51%)</td>
<td>1.6 (1.1, 2.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical decision support tools for diabetes</td>
<td>243 (43%)</td>
<td>1.7 (1.2, 2.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage of Integration: Implementation (vs. pre-implementation)</td>
<td>332 (59%)</td>
<td>2.1 (1.3, 3.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage of Integration: Maintenance (vs. pre-implementation)</td>
<td>113 (20%)</td>
<td>2.7 (1.5, 5.1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refer patients with diabetes to BH who have depression</td>
<td>390 (70%)</td>
<td>1.7 (1.1, 2.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evidence demonstrates the benefits of diabetes self-management education (DSME) on diabetes knowledge and self-care behavior, clinical outcomes, quality of life, use of primary and preventive services, and lower costs. While the initial benefits of DSME are well documented, the effects decline approximately six months following DSME. Additionally, the majority of studies in this area are singularly focused and comparisons between multiple approaches are limited. The 2012 National Standards for DSME and Support emphasize the importance of providing both initial DSME and on-going diabetes self-management support (DSMS) to assist people with diabetes in maintaining effective self-management throughout a lifetime. While a great deal is understood about how to provide effective DSME, less is known about how to provide effective DSMS. Additionally, DSME is a covered benefit in the healthcare system, while DSMS is not. This ultimately limits access and availability of DSMS programs; therefore posing a critical need to develop, evaluate, and understand effective DSMS models that are ongoing, patient-driven, responsive to change, and embedded in existing community infrastructures. African-American churches are a potentially effective venue for delivering such interventions. The goal of this study is to examine the effectiveness of three DSMS approaches compared to enhanced usual care within the context of churches. A cluster randomized, practical behavioral trial with three parallel intervention groups is currently being implemented. Twenty-one churches in southeast Michigan and northwest Ohio were randomized to either 1) Parish Nurse+Peer Leader DSMS 2) Parish Nurse DSMS, or 3) Peer Leader DSMS. All participants began with enhanced usual care and will transition into the respective DSMS groups based on church membership. Each church will enroll 20-23 individuals with type 2 diabetes, who are offered six weeks of DSME, followed by 12 months of support group sessions led by either the parish nurse, peer leader, or a combination of both. Following DSMS, all participants and churches will transition into a one-year period of on-going support to evaluate if participants, parish nurses, and peer leaders sustain self-management efforts by capitalizing on the infrastructure of the church. We hypothesize that 1) participants in both Parish Nurse DSMS and Peer Leader DSMS will have improved outcomes over enhanced usual care, and that 2) participants in Parish Nurse + Peer Leader DSMS will sustain improvements in outcomes achieved following DSME at significantly higher levels than participants in Parish Nurse DSMS and Peer Leader DSMS. We anticipate that providing formal infrastructure and supervision for peer leaders is critical in the uptake of DSMS. All interventions will be superior to enhanced usual care. A similar pattern of findings is anticipated for blood pressure, weight, and quality of life. The cost effectiveness and long term impact of each approach will be determined. This information will have significant public health impact and will be pivotal in determining effective, sustainable strategies and approaches to address DSMS in underserved communities.
Fostering Sustainability of Diabetes Self-Management Support in Church-Based Settings

Gretchen A. Piatt, MPH, PhD
Assistant Professor
University of Michigan
Department of Learning Health Sciences

Specific Aims

- **Aim 1**: Determine the relative effectiveness of three church-based DSMS approaches: 1) Parish Nurse + Peer Leader DSMS; 2) Parish Nurse DSMS; and 3) Peer Leader DSMS compared to enhanced usual care.
- **Aim 2**: Conduct a qualitative process evaluation of the implementation of ongoing DSMS approaches.
- **Aim 3**: Study the incremental cost-effectiveness of the DSMS approaches compared to enhanced usual care and the long-term effects of each approach using simulation modeling.

Study Description

- 5-year (2016-2021) cluster randomized, practical behavioral trial.
- 21 African American churches in Detroit/Flint/Toledo
- 20-23 African American individuals with type 2 diabetes per church
- 14 parish nurses, who are volunteers at the churches, and 28 peer leaders trained to deliver diabetes self-management support.
- Measures are collected at baseline, 6, 9, 21 and 33-month follow-up.
Study Flow and Components

Training
- 30 hours of peer leader and parish nurse DSMS training with formative and summative evaluation
- No diabetes content
- Activity-based
- Empowerment-based behavioral skills, communication, group facilitation

DSME
- 10 hours of content delivered by CDEs, peer leaders and parish nurses open and close each session
- Focus on the emotional experience of living with diabetes
- Patient-centered goal setting (5-step model) emphasizing problem solving
- Culturally specific

DSMS
- 12 months of monthly support groups facilitated by peer leaders and parish nurses
- Designed to sustain self-management gains achieved through DSME
- Fidelity checks built in

Ongoing Support
- 12 months
- The participants, PN, and PL will decide how they will continue to offer DSMS during this time.
- Initiatives may vary between churches and include support groups, classes, activities, etc.
- No study stipends to allow us to study whether DSMS is sustainable in real-world scenarios
AniMóvil: mHealth Support for Depression Management in a Low Income Country
An R21 Pilot Randomized Trial Funded by the US National Institutes of Health

Principal Investigator: John Piette, PhD; Professor of Public Health and Medicine; Director for the Center for Managing Chronic Disease, University of Michigan; jpiette@umich.edu

University of California-San Francisco: Adrian Aguilera, PhD and Ricardo Muñoz, PhD.

Ministerio de Salud, Estado Plurinacional de Bolivia: Juvenal Alejandro Aguilar Pacheco, MSc

University of Michigan: Patricia Abbot, PhD, School of Nursing; James Aikens, PhD, School of Medicine; Mary Janevic, PhD, School of Public Health

Universidad Andina Simón Bolivar, Sucre Bolivia: Dorian Gorena, PhD, Carolina Terán Calderón, MD, Roberto Flores, PhD,

Healthy Activity Program, Deli India: Neerja Chowdhary, MD, DNB, DPM, MSC

Abstract

Due to limited resources, low and middle-income countries (LMICs) have been unable to implement World Health Organization (WHO) models for improving depression outcomes, in which community health workers (CHWs) deliver cognitive behavioral therapy (CBT) and other psychological treatments. We will develop and evaluate an mHealth intervention that can increase the reach and effectiveness of mental health care in LMICs. Building on our established foundation of collaborative mHealth research in Bolivia, we will develop and test AniMóvil, a scalable mHealth service designed to monitor patients’ depressive symptoms and deliver tailored behavioral activation messages derived from CBT principles.

In Aim 1, we will collaborate with Bolivian mental health professionals, potential CHWs, and people with depression to develop AniMóvil’s mHealth components, including automated phone (IVR)- and text message (SMS)-based patient monitoring and psychoeducation, plus smartphone resources that will enable CHWs to deliver brief, structured CBT by telephone. Patients’ depressive symptoms and CBT skill-practice will be reported weekly via IVR, and patients will receive tailored behavioral activation messages during those calls. Patients will report their mood daily via SMS and receive reinforcement and follow-up based on those reports. Patients with severe depression will be “stepped up” to receive a minimum of 3 CHW-delivered telephone CBT sessions. CHWs will use smartphone tools to: access information about CBT training, manage appointments and clinical records, share information with one another and their supervisor regarding challenging cases, and request supervisory consults.

In Aim 2, we will conduct a randomized trial among 114 depressed patients to determine the impact of AniMóvil on depression-related outcomes. Patients will be randomized to the intervention or an enhanced control condition in which they receive written materials and report daily mood information via automated SMS. The primary outcome will be the proportion of patients with remitted depression at 3 months. SMS daily mood reports in both arms will be a key secondary outcome. The trial includes an evaluation of intervention processes such as use of mHealth tools by patients and CHWs, and program costs. By emphasizing collaborative engagement with Bolivian co-investigators, we will increase their capacity for independent mHealth scientific discovery. If effective, AniMóvil could improve population-based mental health care in LMICs, as well as the efficiency and quality of CHW training and supervision for delivering WHO-recommended treatments. Evidence from this study will directly inform decision-making by the Bolivian Ministry of Mental Health regarding national scale-up and financial sustainability. Results also will guide the design of larger effectiveness trials and international dissemination efforts. By combining SMS/IVR monitoring and patient activation with smartphone support for CHWs and supervisors, AniMóvil can serve as a prototype for mHealth services that increase access to care management for LMIC patients with other high priority non-communicable diseases.
Bolivia

ÁniMóvil
usted es importante para nosotros
Overall Structure of the Intervention

**CHW’s**
- Provide recorded reinforcements in IVR
- Provide “live” phone sessions for Step 2
- Identify and address high risk patients
- Provide technical support

**Daily SMS**
- Mood monitoring
- Skill reinforcement

**12 Weekly IVR Calls**
- PHQ Monitoring for Phase 2
- PHQ Self-Monitoring
- Skill teaching
- Goal setting and reinforcement
- Communication link with CHW
- Suicidality monitoring

**CHW Toolkit**
- Scheduling
- Tracking
- Manual
- Seeking consults

**Manual**
- HAP
- Muñoz
- Bolivia
- COPES

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**CHW Toolkit**
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- Tracking
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- Seeking consults

**Manual**
- HAP
- Muñoz
- Bolivia
- COPES
My work focuses on implementing the US DPP curriculum at the community level, primarily among South Asian populations. My most recent studies include: (1) the Diabetes Community Lifestyle Improvement Program in Chennai, India (D-CLIP), a large randomized controlled trial comparing expert recommended treatment for prediabetes (lifestyle intervention supplemented with metformin when needed) to standard of care for overweight South Asian adults with prediabetes (isolated impaired fasting glucose [iIGT], isolated impaired glucose tolerance [IFG] or both IFG and IGT) in Chennai, India; (2) the South Asian Health and Prevention Education (SHAPE) study, a formative research study and small pilot study to develop and test the feasibility of DPP-based lifestyle interventions among US South Asian adults with prediabetes in Atlanta; (3) The “INtegrating DIAbetes prevention in WORKplaces” study (INDIA-WORKS), a nine-center implementation study of peer-led diabetes prevention and education classes for adults with prediabetes or un-medicated diabetes at Indian worksites; and (4) a mHealth-based diabetes management program and smart phone application for South Asian immigrants with limited English proficiency in Atlanta. Each study is using peer education or support in some way to assist or educate participants on making and maintaining healthy lifestyle behaviors such as increasing physical activity, eating a healthy diet, losing weight, decreasing stress, and managing their diabetes.
Studies

- Diabetes Community Lifestyle Improvement Program (D-CLIP)
- South Asian Health and Prevention Education (SHAPE)
- INtegrating DIAbetes prevention in WORKplaceS (INDIA-WORKS)
- mHealth-based diabetes management program

Peers Educators or Support for:
- Improving Healthy Behaviors
- Increasing physical activity, eating a healthy diet, losing weight, decreasing stress, and managing their diabetes.

Challenges

- Didactic/hierarchal education
  - study staff
  - Participants
- Worksite-specific
  - Who to train
  - Concerns about injury
  - Keeping stress low for peers