


Engaging Payors and Primary Care Physicians Together in Improving Diabetes Prevention



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BACKGROUND: Type 2 diabetes can be prevented through lifestyle programs like the Diabetes Prevention Programs (DPP), but few people with prediabetes participate in them, in part because their insurance does not reliably cover DPPs. Prior studies have not focused on payor-level barriers.

OBJECTIVE: To understand barriers to DPP uptake that exist and intersect at different levels (patients, PCPs, and payors) to inform strategies to improve diabetes prevention in primary care settings through interviews with PCPs and payors.

DESIGN: From May 2020 to October 2021, we conducted remote, semi-structured interviews with PCPs and payors.

PARTICIPANTS: PCPs were from primary care practices affiliated with one mid-Atlantic academic system. Payor leaders were from regional commercial, Medicare, and Medicaid plans.

APPROACH: Using a standardized interview guide focused on barriers, facilitators, and potential intervention components, interviews were audio-recorded using Zoom and professionally transcribed. Two reviewers double-coded transcripts using the framework analytic approach.

KEY RESULTS: We interviewed 16 PCPs from 13 primary care clinics and 7 payor leaders representing 6 insurance plans. Two themes emerged from PCP reports of patient-level barriers: (1) lack of programs and insurance coverage of resources to address nutrition and exercise and (2) inadequate resources to address social determinants of health that impact diabetes prevention. Among barriers PCPs faced, we identified two themes: (1) low PCP knowledge about DPPs and misperceptions of insurance coverage of DPPs and (2) inadequate clinical staff to address diabetes prevention. Barriers common to PCPs and payors included (1) absence of prediabetes quality measures and (2) inadequate engagement of PCPs and patients with payors.

CONCLUSIONS: Discussions with PCPs and payors revealed systemic barriers that suggest important priorities to improve prediabetes clinical care, including universal coverage of DPPs, clarity about coverage benefits, data reporting and outreach by payors to PCPs, and adoption of appropriate prediabetes quality measures.

KEY WORDS: diabetes prevention; clinic intervention; primary care; barriers and facilitators; insurance.

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INTRODUCTION

Prediabetes affects 1 in 3 US adults¹ and increases the risk of type 2 diabetes with a 5-year risk of up to 50%.² Fortunately, type 2 diabetes can be prevented or delayed through intensive lifestyle programs like the Diabetes Prevention Program (DPP). The Centers for Disease Control developed the National DPP which recognizes yearlong programs meeting standards and demonstrating positive results.³ Current data suggest that <5% of eligible patients participate in a DPP.^{4,5} Barriers to DPP participation include limited insurance coverage which currently comprises Medicare, Medicaid, and some commercial payors.^{6,7} In addition to DPPs, informal approaches to addressing prediabetes are often taken, such as brief counseling by primary care physicians (PCPs) on lifestyle change.⁶⁻⁹ It is established that patient barriers to lifestyle change are common, including lack of time and motivation, financial limitations and limited resources for weight loss, exercise, or nutrition.^{6,7,10,11} To our knowledge, there have been no studies involving payors to understand payor-level barriers to PCPs and patients engaging in preventing diabetes.

Our objective is to understand the barriers that exist and intersect at different levels (patients, PCPs, and payors) to inform strategies for systematic interventions to improve diabetes prevention in the primary care clinic setting. We interviewed PCPs and payors to examine their perceived

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barriers and to provide a summary of strategic priorities for improving prediabetes clinical care from a systems level.

METHODS

PCP Interviews

From May 2020 to October 2020, we conducted 1-h remote, one-on-one semi-structured interviews with PCPs (defined as internal medicine and family medicine physicians) from primary care practices affiliated with one academic system in the mid-Atlantic region of the USA. We recruited PCPs via email using a purposive sampling approach to prioritize inclusion of PCPs from different clinics, including both urban and suburban sites. Our sample size was determined through a process of engaging in data analysis concurrently with data collection until we achieved thematic saturation, meaning we were not seeing distinct themes emerge from new interviews. We also interviewed physician practice leaders from the same network as we were interested in comparing their perspectives. Based on prior literature and our research questions, the interview guide focused on (1) PCP and patient-level barriers to diabetes prevention, (2) PCP and patient facilitators for diabetes prevention, and (3) potential intervention components for diabetes prevention. The interview guide was developed by the research team and evolved during data collection based on new topics or opinions that were raised during initial interviews. The guide was piloted among both non-clinicians and clinicians.

Payor Interviews

From May 2021 to October 2021, we conducted 1-h remote, one-on-one semi-structured interviews with payors from regional commercial, Medicare, and Medicaid plans. As there is no central database of payors, we used convenience and snowball sampling methods for recruitment. We emailed contacts and used LinkedIn to identify potential individuals who then sometimes referred us to other people in their company. Payors were leaders in healthcare insurance plans who could speak about coverage benefits. Their titles included medical director, chief medical officer, director of clinical programs and product lead for consumer engagement. We did not receive a response from several commercial payors. Based on prior literature and our research questions, the interview guide concentrated on (1) covered resources for diabetes prevention, (2) coverage of Diabetes Prevention Programs, and (3) patient outreach and retention. The interview guide was developed by the research team and evolved during data collection based on new topics or opinions that were raised during initial interviews. The guide was piloted with two payor leaders who were not among the interviewees.

All participants provided verbal informed consent, and were offered a \$50 gift card for their participation. The Johns

Hopkins School of Medicine Institutional Review Board approved this study protocol.

In this analysis, we focus on the discussion of content related to barriers and solutions for diabetes prevention and payor coverage and outreach. Each interview was audio-recorded using Zoom and professionally transcribed. The study PI (E.T.), a primary care physician trained in qualitative methods, conducted and analyzed the interviews. The participants were not previously known to the interviewer and were told briefly the study objectives during the informed consent process.

Two reviewers (E.T. and K.M.) cleaned and double-coded the transcripts using the framework analytic approach.¹² The coding framework was generated based on the core questions from the interview guide and later refined by the reviewers through a consensus process. The two reviewers compared their coding from each interview to confirm the coding was applied consistently. Differences were resolved through consensus-focused discussion between reviewers. Interviews were organized and analyzed using MAXQDA 2020. We identified initial codes that were later grouped into focused codes and then into broad themes ([Appendix Table](#)).

RESULTS

We conducted in-depth interviews of 16 PCPs (56% female, 56% white, aged 35–67 years, in practice for 2–27 years) from 13 community-based primary care clinics. Five of the 16 participants held leadership positions in their clinic or within the larger network of clinics. The patient panel sizes ranged from 300 to 2100 patients. In general, the primary care clinics all have nurses, medical assistants, medical office coordinators, and care managers for patients with Medicare; some have pharmacists. We interviewed 7 payor leaders representing 6 insurance plans (commercial, Medicare, and Medicaid). Among the payors we interviewed, patient panel sizes ranged from 21,000 to 500,000.

PCP Perceived Patient-Level Barriers to Diabetes Prevention

We identified two themes around PCP-perceived *patient-level* barriers to diabetes prevention including the following: (1) lack of programs and insurance coverage of resources to address nutrition and exercise, (2) inadequate resources to address common social determinants of health impacting diabetes prevention.

PCP Perceived Patient-Level Barrier 1: Lack of Programs and Payor Coverage of Resources to Address Nutrition and Exercise. Lifestyle change, including weight loss through healthy eating and increased physical activity, is the main intervention for prediabetes. Unfortunately, a major barrier identified by PCPs was patients' lack of basic nutrition knowledge, which is critical for lifestyle changes to be implemented and maintained, and limited resources to address nutrition and

exercise needs. Providing patients with basic nutrition knowledge may not be sufficient as one PCP described, “I think that diet side is probably even harder than the exercise side because people just don’t know where to start. Even when you give them the basic outline of ‘these are good foods, these are bad foods.’—to take that information and then translate that [...] is almost impossible for most patients without incredibly high levels of motivation” (Male, PCP #1). PCPs also mentioned insufficient time for exercise and difficulties with accessing and affording gyms or exercise equipment as important barriers to engaging in lifestyle modification: “So you have that group who just don’t have time to properly exercise, let’s say get into a regular exercise routine. They’re on the road at 5am, they don’t get home until eight o’clock at night [...] Then you have the people with limited financial resources for whom going to McDonald’s is a lot less expensive than getting healthier foods” (Male, PCP#3).

PCPs collectively brought up challenges with lack of insurance coverage of medical nutrition therapy (MNT) for prediabetes. As one PCP summarized, “Medicare doesn’t cover a nutritionist unless you’re already diabetic and most of the private insurances don’t cover it” (Female, PCP #8). One PCP said he recommends his patients pay out-of-pocket for nutrition counseling if they can afford it given the benefits: “I tell patients, even if you just have one visit and pay out-of-pocket, it’s better than nothing. You can get some important educational materials” (Male, PCP #3). Due to challenges with insurance coverage of MNT, PCPs may be less likely to recommend it to patients, which may lead to clinical inertia, as one PCP described, “Standard primary care has found significant challenges with getting patients into lifestyle modification programs [...] I think that created a learned helplessness [...] So I think rarely do providers think about DPPs or even nutrition referrals unless patients specifically asked, simply because typically it’s been challenging to get the access to those” (Male, PCP #15).

Contrasting Views from Payors Regarding PCP Perceived Patient-Level Barrier 1. Although most payors we interviewed do not cover MNT for people with prediabetes, payors often discussed other resources they offer like educational classes or health coaching for their members to help address weight loss and healthy nutrition. As one payor described, “We connect members with dietitians and diabetic educators. We also have – within our own care management strategies [...] toolkits and clinical pathways that we use to meet members where they are. So, they are evidence-based strategies and/or questions or areas of opportunities that we’ve customized. There’s a listing of those opportunities that we may engage members into” (Female, Payor #2). While payors frequently discussed these educational or coaching resources, only one PCP mentioned a patient who successfully found a health coach through his insurance, highlighting low awareness of these resources among PCPs, “He brought out his

phone and he was showing me his steps and his sleep and showing me pictures of his diet and how he has his health coach [...] from the time I’d seen him, which was six months ago, he had lost weight, his blood pressure was better, the numbers were awesome.”

PCP Perceived Patient Level Barrier 2: Inadequate Resources to Address Common Social Determinants of Health Impacting Diabetes Prevention, with Contrasting Views from Payors.

Most PCPs felt limited in their ability and the availability of resources to address common social determinants impacting diabetes prevention. For example, several PCPs discussed the affordability and accessibility of healthy foods as a common patient barrier: “[For] some people, accessing healthy food is a challenge. Not everyone can get fresh vegetables [...] healthy food can be more expensive or you have to buy it more often” (Female, PCP #11). In contrast, payors discussed that understanding and providing resources to address social determinants of health for their members are a priority. In fact, one payor mentioned a department that is available to help patients address these barriers and provide resources, “They [Medicaid plan] have their own wellness and health department that helps to connect members with community resources [...] If there’s a food desert, they help to organize or work with members in the community to make sure that people have access to nutritional food. So, they do a lot around social determinants of health, and they do a lot of their own outreach and making sure that members are connected with their programs” (Female, Payor #2).

PCP Barriers to Diabetes Prevention

Among PCP barriers, we identified two unique themes: (1) low PCP knowledge about DPPs and misperceptions of insurance coverage of DPPs, and (2) inadequate clinical staff to help address diabetes prevention.

PCP Barrier 1: Low Knowledge About DPPs and Misperceptions of Insurance Coverage. In general, many PCPs, including those in leadership roles, had little awareness of DPPs and how to access these programs for their patients. However, most PCPs were excited to share the program with their patients after hearing of them, as one PCP remarked, “I would be interested to know more about it (DPP), how to access it. Because we’re our patients’ number one cheerleader so we can help them access those resources” (Female, PCP #11).

Contrasting Views from Payors and PCPs Regarding PCP

Barrier 1. We confirmed with all interviewed payors that they cover DPPs, mainly online DPPs. However, two commercial payors clarified that DPP coverage varies based on the plan type and client, “For the larger plans, the midmarket and national clients, they have to effectively choose and tell [Commercial Plan] ‘I want to get this for my population.’ It’s not automatically given to them [...] So the small plans

automatically get it.” (Male, Payor #4). Payors acknowledged that these nuances in coverage is challenging for PCPs, “There’s no good way to get the physician to say, this is what’s available to this member under this account under the [Commercial] plan and you can refer them to this virtual diabetes clinic. That would be the ideal pathway if the person had a physician to go through the physician, but from a data perspective, it’s really challenging to get that level of granularity about coverage, benefits and programs” (Female, Payor #3).

These nuances in DPP coverage likely contribute to PCP misperceptions of a lack of insurance coverage of DPPs, which was a concern for some PCPs who described experiences with trying to get patients into other programs as confusing and time-consuming, “Nowadays is not just Medicare. It’s Medicare, Medicare Maryland Primary Care Program, [and] Medicare Advantage plan [...] What happens is you refer somebody to the program (DPP), you get 10 messages trying to clarify if they can go” (Male, PCP #7).

PCP Barrier 2: Inadequate Clinical Staff to Help Address Diabetes Prevention, with Contrasting Views from Payors.

PCPs mentioned the lack of clinical staff to assist in diabetes prevention efforts as being a major challenge. Some PCPs brought up systemic hiring shortages and competing priorities as the reason: “I don’t have a pharmacist and we have a nurse, but she can barely get through with the hospital follow ups [...] We’ve either hired or we were supposed to hire another nurse so that we could have more education take place on site” (Female, PCP #8). Others like this PCP cited insurance reimbursement as affecting their ability to hire: “We do not have any diabetes educators. I think part of the reason is reimbursement, since you don’t get reimbursed, and you have to put a person in there. Most of our sites, however, do have PharmDs so we are using our PharmDs for education purposes. And then we do refer for diabetes educator, but the access is so poor” (Female, PCP #16). In contrast, payors talked about personnel they have to provide education to members, like care managers, nurses, wellness coaches and community health workers, which could circumvent the lack of clinical staff that PCPs highlighted. For example, one payor said, “Our prevention and wellness coordinator is also available to do nutrition – some basic nutrition counseling. And we have a health education library that includes presentations on getting active and how to be active in an urban area, things that we think will be relatable to our members” (Female, Payor #8).

PCP and Payor Barriers to Diabetes Prevention

Among common *PCP and payor* barriers, we identified two themes: (1) absence of prediabetes quality measures and (2) inadequate payor engagement of PCPs and patients.

PCP and Payor Barrier 1: Absence of Prediabetes Quality Measures.

One payor we interviewed talked about the need for quality measures around prediabetes care that will incentivize payors and PCPs to deliver evidence-based, high-quality care, “If there is some kind of requirement by the state to report on our prediabetic members, let’s say [...] some kind of HEDIS measures or reportable thing, because once we start reporting on it – we pay attention to it. We start measuring it, and that’s how we get more serious about how we address it and how we prevent it” (Female, Payor #1). Several practice leaders also suggested that having prediabetes quality measures would be important because of downstream benefits on the practice’s finances and PCP behaviors: “There are real dollars being attached to getting certain reports and hitting certain targets, and not only does it matter for our patients and their well-being, but it matters for our financial health and the resources we can bring in” (Male, PCP #14) and, “Surely if this becomes a quality metric [...] it will drive behavior. People will turn on a dime and say, ‘oh, time to focus on this’” (Female, PCP #13).

PCP and Payor Barrier 2: Inadequate Payor Engagement of PCPs and Patients.

Payors discussed their efforts to identify members eligible for programs and benefits by using care managers, nurses, and marketing material, but admitted to a lack of communication with PCPs about eligible patients and a lack of follow-up to improve patient engagement and retention. While one payor talked about a team that they hired to collaborate with PCPs on practice transformation and about communicating with PCPs about offered benefits, others reported they do not directly contact PCPs about patients who could be eligible for a program like the DPP. Furthermore, once patients are enrolled in a program, patient engagement and retention is often the responsibility of the third party administering the program, “We pay based on those milestones. So we’ve put the financial incentives on the person providing the service. You’ve got to get [the participants] to the end of the program, [...] lose the weight and then you’ll get all of your money.” One payor admitted, “We do try letters, e-mails, and multiple ways to contact that member but ultimately, there’s not a lot of follow-up. If they’re participating, they’re participating. And their participation is really what they want to get out of their participation” (Female, Payor #2).

DISCUSSION

In this qualitative study, we identified several important perceived patient-, PCP-, and payor-level barriers to engaging in diabetes prevention. Physicians referenced several key perceived patient-level barriers including the inaccessibility and lack of insurance coverage of nutrition and exercise resources and inadequate means to address common social determinants of health impacting diabetes prevention. Notable PCP-specific

barriers included low knowledge and misperceptions of insurance coverage of DPPs and insufficient clinical staff to help address prediabetes. Finally, we perceived overlapping PCP and payor barriers to include the absence of prediabetes quality measures and inadequate efforts by payors to improve PCP and patient engagement and to improve patient retention after joining a program.

Some of the key patient- and PCP-level barriers raised by physicians were related to the lack of insurance coverage or transparency around coverage benefits, which leads to PCP uncertainty and clinical inertia. Although all payors we interviewed cover DPPs, the coverage varies based on the specific plan type and client, which is difficult for PCPs to know and to help their patient navigate. Furthermore, many payors do not cover MNT, but rather offer their own educational classes and health coaching programs. Few PCPs were aware of these resources, and although they are not evidence-based programs or interventions for prediabetes, they may offer some benefit when resources are limited. Payors acknowledged that the lack of transparency about coverage benefits can confuse PCPs. One practice leader felt that the uncertainty about coverage or actual lack of coverage may discourage PCPs and possibly contribute to clinical inertia as PCPs may not refer patients to a service or program again if other patients had access difficulties. Therefore, a strategic priority for improving prediabetes clinical care should be making coverage of DPPs and MNT universal, improving transparency of coverage benefits and changes, and increasing coverage of lifestyle change resources to support people unable to participate in DPPs. These priorities would rely on payor action.

The data from our interviews highlight a clear lack of communication between PCPs and payors about insurance resources and patients' enrollment in services and programs through their insurance. For example, payors commonly talked about how understanding and addressing social determinants of health is a priority to them because of their impact on cost and conditions like diabetes. However, PCPs were largely unaware of resources and how to support patients in addressing these barriers. Increasing payor outreach to patients and improving communication between PCPs and payors may be mutually beneficial. For example, payors can use their data to identify patients eligible for DPPs and share this information with PCPs. Given that many payors described that they already conduct this type of patient outreach, extending it to PCPs would not require much additional effort. PCPs could learn about available programs and resources for their patients, and PCPs may talk to their patient about their participation and progress in payor programs, thereby improving outcomes¹³ and retention. Therefore, another strategic priority for improving prediabetes clinical care should be data reporting and outreach by payors to PCPs.

Compounding the low DPP uptake^{4,5} is the systemic issue that PCP awareness of these programs and of guidelines recommending the DPP is still lagging.^{6,7} Low PCP

knowledge about these diabetes prevention interventions needs to be addressed through continuing education efforts from a systems-level. A DPP referral workflow was implemented at our institution in March 2020 when the DPP referral order in the electronic health record went live, only a few months prior to the PCP interviews took place. DPP uptake was slow initially until a large grant, the Baltimore Metropolitan Diabetes Regional Partnership, expanded education to PCPs and program capacity to enroll patients starting in November 2021. Other institutions have also successfully initiated systems-wide efforts to increase referral of patients to the DPP.^{14,15} Unfortunately, community-based clinics may not have a DPP referral workflow so uptake may continue to be low. Therefore, another strategic priority for improving prediabetes clinical care should be continuing education efforts from a systems-level.

Additional solutions to addressing PCP awareness and referrals and encouraging payors to invest resources in improving diabetes prevention include establishing prediabetes quality measures. In 2019, the American Medical Association proposed quality measures around diabetes prevention including follow-up glycemic testing and referral to MNT or DPPs.¹⁶ However, no quality measures have been adopted yet, and our study demonstrates that this is a potential barrier to payors investing adequate money and resources in prediabetes clinical care and a barrier to clinicians changing their practice behaviors. Formalizing the DPP referral process may be necessary if quality metrics are adopted since many DPPs are community-based and may not have formal referral processes which are needed to capture data for meeting metrics. Therefore, another strategic priority for improving prediabetes clinical care should be seeking review and endorsement of prediabetes quality measures by organizations like the National Committee for Quality Assurance.

To our knowledge, no prior studies comparing patient-, PCP-, and payor-level barriers to diabetes prevention in the primary care setting exist. Our work builds on a prior study interviewing PCPs, which found that PCPs cited time limitations with giving lifestyle counseling during brief primary care visits, and the lack of both additional resources to support patient behavior change and of available programs as important barriers.¹⁷ Prior studies surveying PCPs have demonstrated similar findings, particularly the need for increased availability and insurance coverage of DPPs, improved nutrition resources and increased access to weight loss programs.^{6,7,9} However, no study directly assessed barriers by talking to payors, which are a key stakeholder in diabetes prevention efforts.

There are several limitations to note. Interviews occurred during the COVID-19 pandemic which impacted PCPs' ability to refer patients to the DPP or other resources. The DPP at our institution, similar to other places, was forced to change to remote delivery via video platform. These findings are most readily transferred to PCPs working in community-based clinics affiliated with a large academic center. There are also possible applications for PCPs working in other types of settings.

Strengths of this study include appropriate use of qualitative research methods to address an exploratory research question, and allow for the prioritization of participants' experiences and perspectives. We conducted semi-structured interviews and this format allowed for the emergence of unanticipated barriers and solutions that would otherwise be difficult to capture in surveys. We attempted to recruit the largest payors insuring most of our patient population, but some payors did not respond. We plan to include patient perspectives on challenges and solutions in future work, recognizing that their input is invaluable for implementing clinic-based diabetes prevention interventions.

In conclusion, we found several important patient-, PCP-, and payor-level barriers to addressing diabetes prevention. Systems-level interventions are key to addressing these barriers, including universal insurance coverage of DPPs and MNT, data reporting and outreach by payors to patients and PCPs, continuing PCP education, and establishing and adopting prediabetes quality measures. Through implementation of these strategic priorities, we may be able to move the needle for diabetes prevention.

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