What Individuals Want to Hear at the Point of Type 2 Diabetes Diagnosis

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Recent studies have shown that the time of diagnosis with type 2 diabetes is often not a teachable moment because of heightened emotions. Yet, research also shows that individuals who are newly diagnosed with type 2 diabetes need reassurance and a clear pathway to obtain the education and support needed to self-manage the condition. This article reports on qualitative research exploring the experiences of individuals with type 2 diabetes at the time of diagnosis, including information they wanted to hear and learn at diagnosis. The findings suggest that initial communication should offer reassurance and establish a partnership between the diagnosed individual and the health care provider to identify next steps toward self-management success.

The United States currently leads all countries in North America and the Caribbean in diabetes prevalence, with ~37.3 million people of all ages living with the disease (1,2). The vast majority (90–95%) of these individuals have type 2 diabetes, a chronic progressive condition characterized by elevated blood glucose levels resulting from the body's inability to make and/or properly use insulin (3). The increasing prevalence of diabetes is disturbing considering that it is one of the most expensive chronic conditions to manage and the seventh leading cause of death in the United States (4).

As with many chronic conditions, a diagnosis of diabetes can be a stressful life event, which makes effective communication at the time of diagnosis a top priority (5). An increasing body of evidence suggests that stress and traumatic experiences play a role in the development of type 2 diabetes (6,7). Hence, receiving a diabetes diagnosis may add to a person's existing elevated stress level, hindering the ability to process information (8) and making the time at diagnosis a challenging

moment for both health care providers (HCPs) and individuals receiving the diagnosis (9).

People who are newly diagnosed with diabetes require much information (10); however, survival-level skills education is recommended at the time of diagnosis. Focusing on survival-skills education aims to address individuals' safety concerns regarding what they can do within the next few days or weeks as they await their appointment with a diabetes care and education specialist (DCES) for more comprehensive education (11).

This recommendation presupposes that individuals are able to express their concerns and comprehend the information delivered by their HCPs at diagnosis. However, previous studies have reported that people are not mentally able to fully engage in discussions at diagnosis (12,13). A recent study showed that the time of type 2 diabetes diagnosis, which is characterized by strong emotions, may not be a teachable moment for many individuals (14). Yet, referrals for diabetes self-management education and support (DSMES), which is recommended to provide the needed information and ongoing support for optimal self-management, are often made at the initial diagnosis (11). However, despite the benefits of DSMES, which include improved self-management skills and clinical outcomes (11,15,16), less than 7% of individuals newly diagnosed with diabetes in the United States use this crucial service (17,18).

Nevertheless, the burden of successful diabetes management falls to individuals living with the disease, as self-management and team-based care are the greatest drivers of successful glycemic management (11,19). Thus, individuals who are newly diagnosed with type 2 diabetes should be engaged in such a way that they are psychologically prepared to be actively involved in

managing the condition. Hence, it is important to provide the right messages at the time of diagnosis and in the subsequent weeks to establish a partnership and facilitate participation in shared decision-making regarding how the condition will be managed (20,21).

Given the importance of facilitating engagement and promoting quality patient-provider communication processes at the diagnosis of a life-threatening condition, we undertook a qualitative study to examine the experiences of individuals who were newly diagnosed with type 2 diabetes at the time of their diagnosis. The study also explored individuals' perceptions regarding essential information they wanted to receive on the day of diagnosis or shortly thereafter that would have met their education needs and set them up to successfully self-manage diabetes. By exploring the experiences of individuals with type 2 diabetes, we aimed to enhance the support provided at diagnosis and identify new ways to effectively share information on diabetes services.

Design and Methods

This qualitative study focused on important information HCPs should provide at the time of diagnosis. It used individual interviews to explore the experiences and perceptions of people newly diagnosed with type 2 diabetes.

Sampling and Sample Size

A purposeful sampling technique was used to identify participants. The study sample included individuals who were diagnosed with type 2 diabetes within the past 12 months. A 12-month time frame was selected because participants would have had enough time to reflect on their initial diagnosis and to gain a distanced perspective of their experience at the moment of diagnosis. A sample size of 25 participants was estimated for this study based on past qualitative diabetes studies; yet, the critical determination for stopping data collection was data saturation, the point at which no new information was being added to already-identified themes (22).

Participants

Recruitment was conducted via ResearchMatch, a national health volunteer registry that was created by several academic institutions and supported by the National Institutes of Health as part of the Clinical Translational Science Award program. ResearchMatch includes a large population of volunteers who consent to be contacted by researchers about health studies for which they may be eligible.

Review and approval of this study and all related procedures were obtained from the Pennsylvania State University (PSU) institutional review board.

Participants were adults ≥ 18 years of age with type 2 diabetes diagnosed in the past 12 months who had participated in a diabetes education program and were willing to participate in an audio-recorded individual interview. A total of 18 participants met these eligibility requirements and completed the study.

Procedures

Data were collected by conducting individual in-depth, semistructured interviews, which is a common diabetes research method for understanding individual experience (23). The researchers developed an interview guide that contained open-ended and probing questions, enabling participants to express themselves in their own words (24). A semistructured interview format was chosen because it provides instructions for the interviewer and helps other researchers provide reliable comparison data, yet is flexible enough to allow participants to introduce ideas or topics not considered by the researchers (23). During the study, the participants were asked questions that pertained to three areas of exploration: 1) circumstances of diagnosis, 2) concerns/needs at the point of diagnosis, and 3) perceptions and experiences of patient-provider communication about DSMES.

Interviews

The interviews were conducted between April and October 2020, with each interview lasting between 60 and 90 minutes. At the beginning of each interview, participants were informed of the purpose of the study and agreed to participate. Author M.D.S.B. conducted all of the interviews to avoid potential differences in data-collection style with multiple data collectors.

The individual in-depth interviews were conducted via Zoom conference call and audio-recorded on Zoom using an iPad. Interviews were sufficiently long to engage the participants to share their experiences of diagnosis. All data were kept confidential in a secured PSU digital file storage folder.

Data Analysis

The 18 digitally recorded interviews were transcribed verbatim, and transcripts were compared with the original recordings for accuracy. The transcripts were imported into MAXQDA 2020 (VERBI Software, Berlin,

Germany) to facilitate coding and organization of codes into themes and subthemes. Inductive thematic analysis was conducted by following six steps: *1)* reading and becoming familiar with data, *2)* generating initial codes, *3)* searching for themes, *4)* reviewing themes, *5)* defining themes, and *6)* writing the report (25).

M.D.S.B. carried out initial analysis by reading all 18 transcripts and then coding them line by line to organize the data into meaningful groups (26). Themes were identified related to individuals' experiences at diagnosis and their perceptions of important information to share at diagnosis.

Identified themes and supporting quotes were then shared with the other researchers, who independently reviewed them and then met for discussion. The data were revisited to realign some of the codes, which led to revision of some of the themes. The themes were discussed and revised in four separate meetings before being finalized. The researchers' long-term engagement with and reflexive analysis of the data ensured the credibility of the findings (27). The data and study findings were validated outside of the research team by three study participants living with diabetes, who confirmed them as an accurate reflection of what individuals experience at the time of diabetes diagnosis (28).

Results

Participant Characteristics

Demographic characteristics of the study participants (*n* = 18) are provided in Table 1. A majority (94%) were alone at the time of diagnosis. Only one participant had a relative (his wife) present.

Two major themes emerged after analysis: *1)* emotional surge at diagnosis inhibits action, and *2)* individuals want reassurance and a follow-up plan.

Theme 1: Emotional Surge at Diagnosis Inhibits Action

Study participants expressed experiencing strong emotions such as shock, denial, disappointment, and anger when they received their diagnosis of type 2 diabetes. The majority admitted to initially being in denial. The emotions expressed by participants are summarized in Table 2. Many participants indicated that these emotions left them feeling helpless and unable to articulate thoughts or participate in the important diagnosis conversation with their HCP.

TABLE 1 Demographic Characteristics of Participants

Variables	*n* (%)
Age, years	
<45	6 (33.3)
≥45	12 (66.6)
Sex	
Female	11 (61.1)
Male	7 (38.8)
Race	
African American/Black	5 (27.8)
Caucasian/White	10 (55.6)
Other	3 (16.7)
Educational level	
Some college	5 (27.8)
4-Year college degree/bachelor's degree	8 (44.4)
Post-baccalaureate/master's degree/doctorate degree	5 (27.8)
Marital status	
Divorced	5 (27.8)
Single	6 (33.3)
Married	7 (38.9)
Company at diagnosis	
Alone	17 (94.4)
With relative (spouse)	1 (5.56)

Some participants reported that they were emotionally affected to the point that it took them weeks to months before reaching out to their HCP again about the diagnosis. As one participant said:

"I was in denial for the first 2 months before I got in touch with the hospital." (62-year-old White woman)

The reason some participants gave for their emotional reaction was that they did not perceive themselves to be susceptible to type 2 diabetes. As one participant explained:

"I was kind of surprised that I was diagnosed with type 2 diabetes. I thought I was doing the right things by eating right, exercising, walking, jogging, and taking my medication. But I didn't even know what type 2 diabetes was, so it took maybe like a good 14 days, and then I went back to my doctor the following 2 weeks to give me a little bit more information on type 2 diabetes." (55-year-old Black man)

For some, type 2 diabetes felt like a death sentence and a diagnosis they did not want to accept. As one participant described his thoughts at diagnosis:

TABLE 2 Emotional Reactions to the Type 2 Diabetes Diagnosis

Emotional Reactions	Representative Quotes
Shock	". . . it was shocking. I was short of words. It seem[ed], 'The whole world has come to an end.' I wasn't crying, but I was just short of words. I kept on holding my two hands, squeezing them together. I could remember that my wife was the one doing the talking, and even when we got home, I couldn't eat. I couldn't drink. Even at night, I couldn't sleep. I was just turning and turning. I wasn't myself until about a week or two weeks [later]." (36-year-old Black man)
Denial	"I was in denial. I thought that there was no way. I wasn't going to accept it, and I didn't . . . . I was just like, 'No, no, it will just go away. It's going to go away.' And I really didn't know a lot about diabetes at all . . . . and so, I just figured it would just go away. I didn't care to know anything about it, and that's how I felt at that time." (57-year-old White woman)
Disbelief	"At first, disbelief. Even though, in hindsight, my grandparents had it, my parents had it. I've got nine siblings, and all of us have it. So, even though, in hindsight, it just made sense that I did. But disbelief, at first and, I guess, sort of not believing it. For, I guess, a couple of weeks, even though I was still taking my medicine, I just didn't believe it. I had not come to terms with it." (55-year-old White man)
Disappointment	"I was a little disappointed, especially because I generally eat fairly healthy, to begin with, and I already have depression. So, that kind of played into that a little bit, and I was starting to feel a little depressed, and the doctor reassured me that it's not always what I eat, but [rather that] some of the health conditions that I already have made my body insulin resistant. And, having a family history of it made me more predisposed to it, so it wasn't even necessarily something that I did. So, it made me feel a little bit better about it, but it still weighs on me just because it's one more health condition to my whole list." (25-year-old American Indian/Alaska Native woman)
Fear	"It was so scary and a lot to take in." (33-year-old White woman)
Frustration	" . . . [I had a] sense of frustration because I had a sense of not being able to avoid the diagnosis . . . . I had been aware of my A1C . . . increasing . . . but not really properly dealing with the A1C going up. So, I think there was a sense of disappointment in that, with dietary changes, it could have been avoided. But I wasn't able to make those changes . . . . But, also, you could sense . . . there was a hope that it would have been avoided." (50-year-old White man)
Sadness	"I was kind of sad. It runs in my family, and I was hoping that I wouldn't get struck with it, basically that I would be on the other side of the genetics because there are [family] members [who] don't have it." (45-year-old White woman)
Heartbreak	"I was upset, and I was scared because . . . this is very prevalent in my family, and I had always said that's one thing I'll never get. I'll do everything in my power to keep from getting it. And so, I was scared because I know what it does to the body when it is not controlled. So, I was scared, and I was mad at myself. I was kind of disappointed at myself because I knew I hadn't done what I needed to do to prevent it. As far as being careful with my diet, and even though I exercise frequently, I wasn't very particular about what I ate. And so, it was just a culmination of a whole bunch of different feeling[s]. I was just heartbroken." (48-year-old Black woman)

"*Diabetes is such a terrible disease. I just thought I was going to die at an early age.*" (55-year-old White man)

Self-blame was a common feeling among participants who perceived themselves to be at risk for type 2 diabetes. Some felt that they did not do everything within their power to avoid diabetes. They blamed themselves for not living a healthier lifestyle to prevent the condition given that they knew they were at risk for developing it. These individuals were upset, frustrated, and disappointed about the diagnosis. As one participant with history of prediabetes shared:

"*[I was] disappointed, but not shocked. Like I said, my A1C had been steadily increasing, so it was not*

unexpected, but of course, still disappointing." (50-year-old White man)

Theme 2: Individuals Want Reassurance and a Follow-Up Plan

Type 2 Diabetes Is Manageable

Reflecting on what would have been helpful to them, participants discussed how and what they would have liked their HCP to share with them at diagnosis. Although participants believed there was not one single important piece of information, most suggested that HCPs should reassure individuals newly diagnosed with

type 2 diabetes that it is a manageable condition and not a death sentence. Participants commonly said HCPs should inform individuals that the diagnosis is not a moral failure, as that would help to both alleviate both the guilt that many experienced from self-blame and decrease their experience of feeling judged by the HCP that they were to blame for developing diabetes. According to the participants, such messages could help individuals overcome the shock and strong emotions commonly experienced at diagnosis and provide reassurance that there is a pathway for them to lead a healthy life. One participant with a long history of pre-diabetes suggested that HCPs give the following advice.

"That it's manageable, you can live with it. It's certainly not a death sentence by any stretch of the imagination. Unless you don't pay attention and you just let it go. But as long as you pay attention to it, you can live a normal life." (73-year-old White man)

Participants also emphasized that individuals should be told that they will be responsible for much of the work of managing diabetes and that their health care system will provide support by delivering the education they need to succeed with self-management. A participant who initially feared managing diabetes recommended that HCPs say:

". . . [You] can improve your life dramatically with time and effort . . . and the only one [who] can do it is you. Hopefully, [you'll have a] support network, both in medicine and in your personal life, but there's only one person who can manage your diabetes, and it's you." (41-year-old White man)

Learning Opportunities and Support Systems Are Available

Participants suggested that HCPs should treat type 2 diabetes like other serious medical conditions and provide essential information about how the condition will be managed. However, because of the stressful nature of the diagnosis and the short duration of a diagnosis appointment, many participants expressed the view that people should be informed that this is a lifestyle change that will require learning in stages. One participant shared his view on how HCPs should talk to individuals about lifestyle changes and how they can learn more about diabetes.

"This is something that is a big lifestyle change. And say to them that, 'Your life, your lifestyle, isn't going to change overnight. So, start one thing at a time, let this sink in for a little bit. Start looking around and

figuring out what you can do today to change.' And then, 'Here's information on where the classes are in the community. Please take the classes.' Strongly recommend it." (73-year-old White man)

Participants also said that people should be reassured about available resources that can help them master diabetes self-management and that doing so will provide comfort in the knowledge that they will not be alone in managing the condition. One participant highlighted the need to inform individuals about resources as follows.

". . . [I]f they could tell you more about the resources out there . . . . They didn't tell me [about] any of the resources that they have." (33-year-old White woman)

Again, others recommended providing reassurance as an ideal way of getting people to partner with their health care team and to learn how best to work with the team to achieve optimal health outcomes. One participant who reflected on the importance of reassurance said:

"That's the very foundation of how a person is going to approach the disease. That's the foundation. Anything you do after that foundation is already built, there's a more difficult climb." (55-year-old White man)

Follow-Up Visits Will Be Scheduled to Discuss Next Steps

Participants talked about the need for a follow-up appointment once they had time to process their diagnosis. Although few offered thoughts on the optimal timing of a subsequent appointment, many suggested that they would have been ready for this appointment within 2 weeks after diagnosis. One participant shared his thoughts on how HCPs could address the follow-up appointment and also considered variations on how this could be accomplished given HCP time constraints.

"Maybe, 'Hey, next week I'm going to be checking up on you every other day or every day . . . . Jot down some questions for me, so that, when I'm here, we can make better use of both our times.' It could have been just one sit-down for 30 to 45 minutes and that was it. It could be 20 minutes each time, or it could be, 'Okay, I'm going to be doing this just once, because I'm very busy.' And we do it for 45 minutes solid. It could be done in a number of ways." (55-year-old White man)

Some participants shared how comforting it was to hear from their HCP that the management of type 2 diabetes was going to occur in phases.

"She's very empathetic . . . . [S]he was like, 'Let's take it one step at a time. Now that we know that this is one of the issues that you have, we don't want to go down . . . really bad roads . . . . I want you in a class so you learn about the eating and the stuff like that.' She felt that it would calm me down and help me to get control of the sugar levels, in addition to making sure that I had the right medication." (45-year-old White woman)

Participants also talked about the need for HCPs to provide reading materials and a list of follow-up services needed after diagnosis to remind them of the things they need to do when the reality of the diagnosis sets in. As one participant said:

"Even just having a little checklist of, you know, 'Here's the pieces of the puzzle that you're going to need to get your arms around,' giving some kind of visual, things to hold on to that, when you get home, and you've had 5 hours, and you get to go to sleep, and you get up the next day, and you go, 'Okay, what truck hit me?' you can look at the material and go, 'Okay, wait a second. We got pieces here. These are manageable.' . . . [It would give] them something to hold on to." (53-year-old White woman)

Although participants noted that they had many pressing concerns about diabetes management, dietary issues were the most common one mentioned. Most participants were concerned about what they were going to eat after diagnosis. Therefore, participants added that HCPs should talk briefly about nutrition when discussing next steps. One participant described her perceptions at diagnosis as follows.

"Tell them about the nutrition part of it, so I think that will be a big deal. Because you automatically think you can't eat anything good anymore, and that's not the case. That was very important to me." (48-year-old Black woman)

Participants in this sample, having had diabetes education, knew about the complexity of dietary management of diabetes. Hence, they recommended that HCPs give some general guidance as people wait to talk to a dietitian or DCES. They said HCPs should encourage people to eat healthfully and cut down on carbohydrates, saturated fat, sugar-sweetened beverages, unhealthy fats, and sugary and salty meals. They said they believed individuals could absorb this guidance at the outset, may be successful at making a few initial changes, and will not feel overwhelmed by trying to make drastic and complicated changes in the way they eat. One participant shared an example of how individuals should be told to gradually make changes regarding their food choices to address concerns about what to eat after diagnosis.

"You can talk about the positives, like, give people options . . . like, this replaces this . . . like, choices. 'You have the ability to enjoy the stuff that you used to. It's just differently. You obviously can't keep going down the path you're going [on], because it's not good for your body.' . . . and talk about small goals to get yourself to a better lifestyle . . . . It is such a big change." (45-year-old White woman)

Participants mentioned that HCPs must explain to people the role of the dietitian and DCES as people on the diabetes team who are responsible for providing comprehensive diabetes education. That way, individuals will not feel that their HCPs are pushing their responsibilities of sharing information to other people. One participant who was expecting clear answers from the HCP shared her confusion about the lack of information.

"I didn't even know what the insulin was supposed to do for you. But, I mean, I didn't even know. I was just prescribed insulin injections, and I had no idea what it . . . was supposed to do. I did look up the information, a lot of it, myself." (57-year-old White woman)

Participants expressed having more confusion from the feeling of being passed on to a dietitian when they felt that their HCP should be able to provide all the answers they needed.

"Just kind of explaining to me what I was going to need to do, how I was going to need to be able to control it, and what foods I could eat. And she just sort of passed it on to the nutritionist or the dietitian. I'm not sure which one she is, but she just sort of put that off on her to explain everything. And, really, I mean, her job as a dietitian or nutritionist, that's her job? It's not about having to explain insulin to me and explain to me how to give myself insulin and what the insulin does? And, I mean, she explained all that to me. She, the dietitian, did . . . ." (57-year-old White woman)
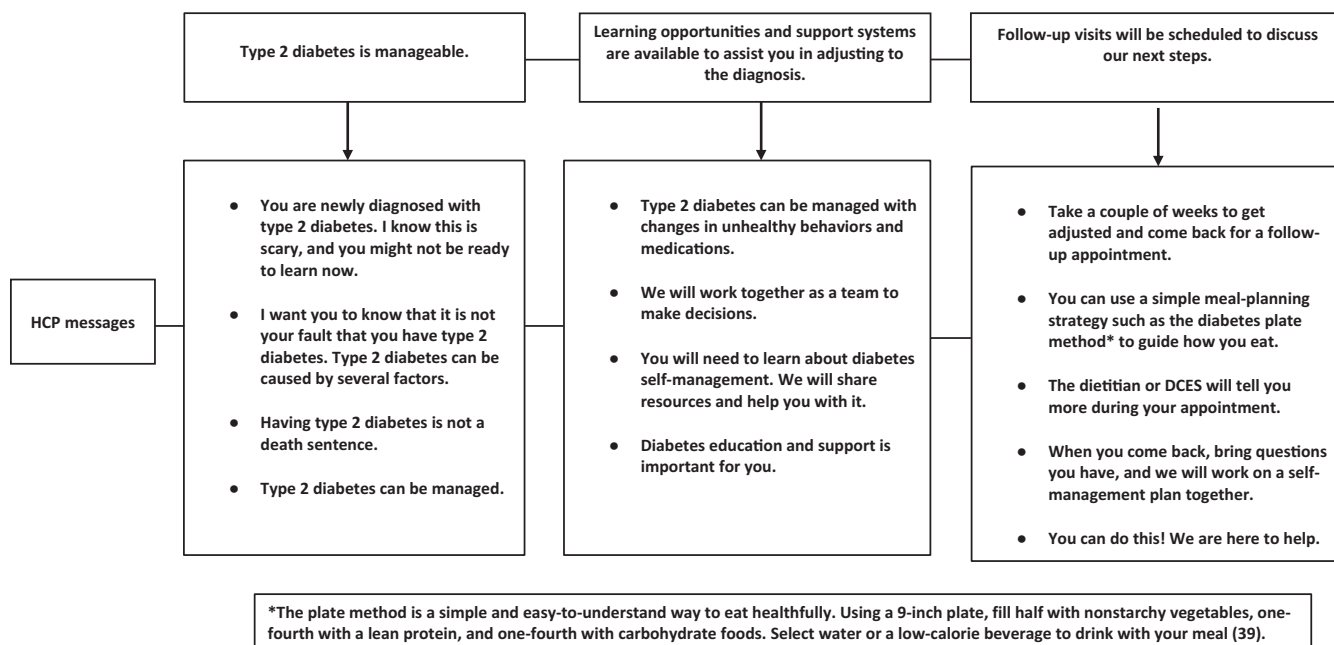
FIGURE 1 Key information to share at the time of type 2 diabetes diagnosis.

Figure 1 offers a summary of the key information participants said they wanted to hear from HCPs at the time of diagnosis.

Discussion

The aim of this study was to explore the experiences of individuals who were newly diagnosed with type 2 diabetes and their perceptions about important information HCPs need to share at the time of diagnosis. The study's main findings indicate the presence of strong emotions at diagnosis irrespective of a person's perceived risk of developing type 2 diabetes and the need to provide immediate reassurance, key diabetes information, and a plan for ongoing support at diagnosis to alleviate fears and distress.

Strong emotional reactions are common when individuals receive life-threatening diagnoses (29,30). These reactions are not only stressful, but also are known to affect individuals' ability to process information (12,13).

Based on interviews in this study, it appears that the time of diagnosis is not the ideal time for discussion for some people. Some participants said they were not ready to listen or were speechless at the time of diagnosis. This finding is consistent with a study in which emotions experienced at diagnosis elicited different behavior changes among people with type 2 diabetes, with more negative emotions leading to avoidance and

discouragement about needed lifestyle modifications (14). Another study reported that 42% of the participants indicated their inability to make a treatment decision on the day they received a cancer diagnosis. In two similar studies, half of the participants shared the need for a two-step process with individuals receiving the diagnosis as the first step and having a planned timely follow-up as the second step, preferably with a relative or loved one present to hear treatment recommendations and ask questions (5,31). This process would likely equally benefit individuals who are newly diagnosed with type 2 diabetes, given that 94% of the participants in this study were alone at diagnosis and reported an emotional surge and inability to act that was similar to that reported by people diagnosed with cancer.

HCPs can reassure individuals about having a long-term partnership in which they will work together with the health care team through a series of visits to determine what will work best for managing their diabetes. Providing follow-up appointments—perhaps 2 weeks after the diagnosis, as recommended by the participants—can offer an opportunity for more thorough discussion about the diagnosis and a forum in which individuals can ask questions once they are better able to engage. This strategy also provides an opportunity for the HCP to further cement a partnership that includes shared decision-making, a core component of effective diabetes management through which the HCP and individual can explore clinical factors and preferences and

reach mutually acceptable treatment and management decisions (32,33).

Although participants had several pressing concerns at diagnosis, they deemed some information especially important to share with newly diagnosed people on the first day. Participants' emphasis on the importance of receiving reassurance from HCPs underscores the need to provide emotional and psychological support at the time of diagnosis. Participants in this study who benefited from diabetes education felt it was important for HCPs to inform newly diagnosed individuals that, although the condition is lifelong and progressive, it can still be managed. Participants believed that this messaging will ease the fears of many individuals at the time of diagnosis and empower them to engage in self-management behaviors. Another point participants raised that was related to diabetes being manageable was the idea of making individuals understand that they are going to be the primary managers of their condition, with the support of their health care team. Getting this message across may increase the likelihood of people being engaged in working with their HCP to make decisions about their health (20).

Poor patient-provider communication has been shown to be a barrier to diabetes education attendance (34). Although diagnosis is one of the critical points at which to refer individuals for DSMES, that moment may not be an ideal time for some people to hear about DSMES and receive a referral because they may be temporarily incapable of absorbing or understanding the information shared. HCPs should take the time to listen and communicate about needed services in a manner that meets individuals' readiness to receive information and act on it. Reiterating the importance of forming a partnership with the care team in subsequent discussions is essential because people do not retain all of the information shared at the time of diagnosis. However, participants suggested that information about seeing other members of the health care team such as a dietitian or DCES and explaining their roles in concert with that of the HCP is important to impart at diagnosis.

Communication about diabetes care should not be simply prescriptive, in which individuals are informed about what they are expected to do without actively involving them in discussions concerning their health. Ideally, HCPs' communication should be focused on ensuring that individuals are engaged and well informed about their care and activated to partner with their HCP and larger care team to achieve optimal health outcomes (35).

The primary concern of most newly diagnosed participants was wanting to know which foods to eat and which to avoid in the management of diabetes. Before the current understanding of the genetic factors involved in type 2 diabetes, its cause was often oversimplified, and high blood glucose was incorrectly explained as resulting simply from high sugar intake or unhealthy eating habits (36). This oversimplification created a misconception that simply changing the diet to reduce sugar or carbohydrate intake could be all that was needed to manage the condition. However, changing the way people eat is complex, and knowing what foods work best for people takes time (37). The Association of Diabetes Care and Education Specialists now recommends that HCPs should inform people that they do not need special foods, but rather healthful foods to manage diabetes (38). One method HCPs can suggest is the diabetes plate method, which allows individuals to readily visualize the components and portion sizes of a healthful meal (39).

Although this study did not identify an ideal time for having post-diagnosis conversations, we suggest that HCPs only deliver key diabetes information on the first day and set the expectation for a short-term follow-up visit within 2 weeks. This two-step plan would help to alleviate the emotional surge and information overload some participants described feeling during a one-step process in which everything is handled at the initial diagnosis visit.

Strengths and Limitations

The rigorous data analysis in this study provided insight into key information that individuals with newly diagnosed diabetes wanted to hear on the first day and what information they deemed most appropriate to impart to a newly diagnosed individual. Our findings were consistent with other studies suggesting that the time of type 2 diabetes diagnosis may not be a teachable moment for some individuals. Other notable strengths of the study included its recruitment of participants from different geographical areas of the United States and the use of open-ended questions to allow participants to better express themselves. The findings of this study are limited in their applicability because of the small sample size and sampling technique used. Participants in this study had high levels of education; thus, their insights might not be generalizable to populations with different levels of educational attainment.

Implications and Relevance for HCPs

This qualitative study gave individuals living with type 2 diabetes the opportunity to share their

experiences of diagnosis and their perception regarding important information that should be shared at the time of diagnosis. It draws attention to unmet information needs at and immediately after diagnosis. Following are key ways in which the information obtained through this study can be used in health care facilities.

- HCPs can use Figure 1 as a tool to plan their communication at type 2 diabetes diagnosis. This tool can be used as a starting point to communicate with newly diagnosed individuals.
- HCPs can acknowledge that people have differences in perception at the time of diagnosis. Be empathetic and use therapeutic communication skills to allay fears.
- Reassure individuals that type 2 diabetes is manageable and that, with diabetes education, they will be able to carry out self-management activities successfully.
- Recommend subsequent visits to address concerns and provide more information on working in partnership with the health care team on type 2 diabetes management.

Conclusion

This study demonstrates that individuals experience many emotional reactions when diagnosed with type 2 diabetes that may hinder their ability to process information about how to manage the condition. Given these strong emotional reactions and the limited time available during appointments, HCPs may find it helpful to provide key diabetes information at diagnosis and then schedule a follow-up visit to discuss concerns and develop diabetes management plans. Given the increasing evidence that people experience strong emotions at the time of diagnosis, HCPs should focus on making the time of diabetes diagnosis a reassuring moment and establishing a partnership for managing diabetes moving forward.

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