SHARE *plus*: Delivering a Telehealth CGM Data-Sharing Intervention to Older Adults and Their Care Partners

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Care partners of older adults with type 1 diabetes often become part of the diabetes care team but lack knowledge of how to become involved with glucose management. This article describes a study confirming the feasibility of SHARE *plus*, a telehealth intervention involving continuous glucose monitoring and data-sharing to assist these individuals in working together on diabetes management. The intervention provides a strategy for increasing remote patient monitoring and facilitating care partner involvement in diabetes management.

Type 1 diabetes is on the rise, currently affecting an estimated 1.59 million individuals in the United States (1). Although life expectancy generally remains shorter among people with than among those without diabetes (2), the life expectancy of people with type 1 diabetes has increased up to an additional 15 years, resulting in a higher incidence of older adults living with the disease (3,4). As people with diabetes grow older, they experience age-related diabetes changes that may impede self-management (5), including increased hypoglycemia unawareness and changes in fine motor skills, visual acuity, dexterity, and cognitive function. The American Diabetes Association (ADA) recommends relaxed glycemic targets for older adults with multiple comorbidities to limit the incidence of hypoglycemia (6). Yet, higher A1C targets do not prevent hypoglycemia (7) and predispose older adults to the negative effects of hyperglycemia (8,9). Both hyper- and hypoglycemia increase the risk of complications such as myocardial infarction, cerebrovascular accidents, dementia, and sudden death (10,11). However, there is growing evidence that continuous glucose monitoring (CGM) in older adults may be effective at decreasing both hypo- and hyperglycemia (12,13). In addition, the ADA has published guidelines supporting CGM for older adults with diabetes (6) and Medicare coverage has made CGM more accessible (14).

A growing number of older adults have started using CGM to support diabetes management (14). CGM provides people with diabetes the ability to look at their own glucose data, trends, and patterns over time. Yet, there can be barriers to CGM use, including cognitive impairment, hearing or vision deficits, and limited dexterity. Often, families and friends, referred to here as care partners, become involved in diabetes care as their loved one with diabetes ages. However, these care partners may not have sufficient knowledge of when or how to become involved to correct the hypo- and hyperglycemia that can result from relaxed glycemic targets, which often causes them to experience anxiety and stress (15,16).

Several CGM systems have digital apps that allow care partners to see CGM data continuously and to receive predictive hypo- and hyperglycemia alarms on a receiver or smartphone (17,18). Both people with diabetes and their care partners find that using such apps to share glucose data enhances their sense of safety (19). However, barriers to using these data-sharing apps exist, including difficulty in setting up the technology independently, lack of willingness on the part of people with diabetes to share their glycemic data, and a lack of upfront communication around data-sharing that could cause relationship tension. To date, there is limited research focused on using CGM with care partner support and how it may affect older people with diabetes and their diabetes management.

Health care providers and other diabetes care team members are well poised to recognize the difficulties older adults with diabetes and their care partners may be experiencing with CGM, but they may not know how to effectively engage care partners in assisting with diabetes management or have time or capacity in the clinic setting to provide the instruction they would need to do so effectively. Telehealth has the potential to both augment the effectiveness of CGM and aid in engaging care partners through the use of data-sharing apps (17). Certified diabetes care and education specialists (CDCESs) can provide education and behavioral interventions to people with diabetes and their care partners around these issues. CGM

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technology is well suited to a telehealth approach because it allows diabetes care teams the opportunity to monitor the glucose levels of people with diabetes remotely, using internet-based platforms or apps (20). Despite the potential benefits of telehealth-delivered interventions, research has shown mixed results for the effectiveness of telehealth in people with type 2 diabetes, including modest reductions in A1C compared with usual care (21) and greater improvements in A1C with telehealth with real-time feedback compared with telemonitoring alone (22), and no improvement in outcomes for people with type 1 diabetes (23). To date, there has been a lack of research specifically addressing the use of telehealth services for older adults with type 1 diabetes and their care partners.

To address research gaps around strategies that can support older adults with type 1 diabetes, we developed a telehealth intervention called SHARE *plus*, which incorporates communication, problem-solving, and action-planning and is designed to increase the use of CGM plus a data-sharing app. This intervention addresses previously identified problems associated with the use of CGM and data-sharing that can limit its uptake and usefulness for older adult–care partner dyads. The purpose of this study was to assess the feasibility of the SHARE *plus* intervention using telehealth and to understand how dyads experienced the intervention.

Research Design and Methods Design

Study Design

This study using a mixed-methods design that included interview data from dyads, dyad-reported outcomes, and the glycemic metrics of people with diabetes was conducted to test the feasibility of the SHARE *plus* telehealth intervention. It encompassed three telehealth education sessions offered every 2 weeks over the course of 6 weeks. People with diabetes used CGM for 12 weeks while sharing glucose data with their care partner. Feasibility was assessed by examining the usability of the technology for each dyad, and qualitative interviews were conducted to determine perceived benefits of and barriers posed by the intervention and of its telehealth format, as well as dyad members' satisfaction. All study procedures were approved by the University of Utah Institutional Review Board.

Participants, Recruitment, and Setting

Participant dyads (n = 10) were recruited from an academic endocrinology specialty clinic and through social media posts. Eligibility criteria for people with diabetes were *1*) age ≥60 years, *2*) diagnosis of type 1 diabetes, *3*) naive to use of personal real-time CGM system with the Dexcom Follow App, *4*) A1C of 6.0–12% measured within the previous 6 months, *5*) ability to read and write English, *6*) possession of a smartphone compatible with the Dexcom G6 RT-CGM, and *6*) care partner willing to participate. Insulin pump use was not required for eligibility. Potential participants were screened using the Montreal Cognitive Assessment; they were excluded if *1*) their cognitive assessment score was <18, indicating moderate cognitive impairment; *2*) their estimated life expectancy was <1 year; *3*) they had unstable recent cardiovascular disease, significant malignancy, or other conditions resulting in physical decline; or *4*) they had a history of visual impairment that would hinder performing study procedures. Inclusion criteria for care partners were anyone ≥18 years of age who was identified by a potential participant with diabetes, was willing to use the Follow app and to attend SHARE *plus* education sessions, had no self-reported cognitive impairment, and owned a smartphone compatible with the Dexcom Follow app. This study was conducted by real-time video telehealth, and thus dyads were in their own homes.

Intervention Description

The SHARE *plus* intervention is a three-session program that provides training to dyads in CGM-related communication and problem-solving and results in the development of action plans. SHARE *plus* includes evidence-based communication strategies such as motivational interviewing, problem-solving, self-efficacy enhancement, and action-planning (6,24–26). Table 1 provides a detailed list of topics addressed in each SHARE *plus* session. The three sessions followed the same basic structure, with additional topics such as healthy eating, being physically active, and stress introduced in sessions two and three. Sessions two and three also focused on hypo- and hyperglycemia management using CGM data reports on retrospective glucose values, patterns, and trends over time, and the data reports were shared with the health care provider of the person with diabetes. Using a Health Insurance Portability and Accountability Act–compliant videoconferencing platform, a research assistant worked with each dyad to set up the CGM and data-sharing apps. At study week 2, a CDCES met with the dyad virtually for the first SHARE *plus* education session. The second and third sessions were conducted at weeks 4 and 6. There was no active intervention the last 6 weeks of the study to allow participants to implement the intervention techniques before completing the final surveys and interview.

Data Collection

A survey link (via REDCap [27]) was sent to all participants to obtain baseline and post-intervention measures. Table 2 provides detailed information on the measures collected (28–35). Individual exit interviews were conducted to understand dyads' experiences with the SHARE *plus* intervention. The

TABLE 1 Components of the SHARE *plus* Intervention

Session	Intervention Components
Session 1	
Communication strategies	• Discussion of communication strategies around using real-time CGM data sharing. The person with diabetes was asked about his or her willingness to talk about glucose numbers (hypo- and hyperglycemia). The objective of this discussion was to determine what glucose information the person was comfortable sharing.
Problem-solving strategies	• Identification and discussion of barriers to sharing glucose levels (e.g., glucose levels are private or the person with diabetes does not want to be judged). • Problem-solving around expectations and length of waiting time before the care partner should contact the person with diabetes about a concerning glucose level and identification of the preferred mode of care partner contact (e.g., phone call, text, or e-mail message). The dyad engaged in a discussion and problem-solving regarding setting alarms for the data-sharing app on their smartphones to determine an agreeable strategy. The objective of this step was to guide the dyad in managing CGM expectations and determining how best to incorporate data-sharing into their lives.
Action plan	• Discussion of how the person with diabetes wanted the care partner to be involved (e.g., when and how to respond, troubleshooting hypo- and hyperglycemia) and whether the care partner found this type of communication acceptable. The objective of this discussion was to explore supportive and unsupportive conversation strategies within the dyad. • Creation of a written communication plan that included how the care partner should give feedback, the length of time to wait before doing so, and the communication mode to be used • Setting of alarms for each dyad member (each could have different alarms) • Development of a written agreement outlining the responsibility for and frequency of glucose monitoring for dyad members • Review of actions to take in response to severe low blood glucose, chest pain, and symptoms of a heart attack or stroke
Session 2	• Assessment of what worked and did not work with regard to communication about glucose levels and diabetes management • Review of communication and problem-solving strategies based on the assessment • Content on positive and appreciated types of communication and actions and strategies to avoiding blaming and criticizing • Discussion of pattern management around healthy eating using data management software • Development of a new action plan for communicating and problem-solving about hypo- and hyperglycemia management, healthy eating, and glucose monitoring
Session 3	• Same review as in session 2 • Discussion of pattern management around physical activity, stress, and other factors that affect glucose levels • Development of a new action plan for communicating and problem-solving about hypo- and hyperglycemia management, stress, physical activity, and other topics that affect glucose levels

three SHARE *plus* education sessions and the interviews were audio-recorded. Ten percent of the SHARE *plus* education sessions were evaluated for intervention fidelity.

Quantitative data (Table 2) were collected at baseline and 3 months. Qualitative data were collected at week 12 using a semi-structured interview guide developed by the research team. Dyad members were interviewed separately using videoconferencing by a trained research assistant and focused on using CGM, the data sharing app, and the SHARE *plus* intervention. Interviews were transcribed verbatim and verified for accuracy.

Statistical Analysis

Quantitative data were analyzed using descriptive statistics only given the small sample size. Qualitative data were analyzed using qualitative description (36,37) and a constant comparison approach (38,39) using NVivo, v. 9 (40). First, the authors coded one interview with a person with diabetes and one interview with a care partner as a team to develop the initial codebook, which was then used to code the remaining interviews. To identify patterns at the person with diabetes, care partner, and dyad levels, authors N.A.A., A.B., and E.G.G. compared and contrasted codes across interviews with people with diabetes, across interviews with care partners, and within dyads. In the final step, codes were compared, contrasted, and collapsed to develop corresponding themes (41,42). Throughout the analysis period, disagreements were discussed to reach consensus.

Results

Demographics and Feasibility

Ten dyads met the recruitment criteria (Figure 1), and 100% completed the three SHARE *plus* sessions and quantitative

TABLE 2 Study Measures

Measure	Details
Quantitative feasibility measures	Retention rate, reasons for study discontinuation, feasibility (i.e., appointment attendance, length of sessions, number of unscheduled appointments for extra assistance, number of telephone calls for person with diabetes or care partner support), and implementation data (i.e., percentage of protocol completion and barriers to completion of protocol)
Demographics and CGM-based glycemic metrics	Demographic data (i.e., age, sex, education, and diabetes duration), adherence data (wear time as obtained via the CGM data management software from the online platform [20]), and CGM data (20). CGM data included time in range (70–180 mg/dL), hypoglycemic range (<70 and <54 mg/dL), hyperglycemic range (>180 and >250 mg/dL), and glycemic variability coefficient value.
Psychosocial measures	
Hypoglycemia Confidence Scale	Measures the degree to which people with diabetes feel able, secure, and comfortable regarding their ability to stay safe from hypoglycemia-related problems. It is a nine-item scale with responses on a four-point Likert scale, with higher values indicating more hypoglycemia, lower well-being, and greater diabetes distress, depressive symptoms, and hypoglycemia fear. Reliability is α = 0.87 (28).
Hypoglycemia Confidence Scale for Partners of Adults With Type 1 Diabetes	Measures the degree to which care partners feel confident that their partner can stay safe from serious hypoglycemia problems and their confidence in their partner to manage different situations. A total of 12 items are rated on a four-point Likert scale, with lower values indicating less confidence. Reliability is α = 0.91 (29).
Type 1 Diabetes Distress Scale	Measures seven dimensions of distress: powerlessness, management distress, hypoglycemia distress, negative social perceptions, eating distress, physician distress, and friends/family distress. There are 28 items with responses rated on a six-point Likert scale from 1 = not a problem to 6 = a very serious problem (30). This scale has excellent internal reliability (α >0.91) and sound concurrent validity.
Partner Distress Scale	Measures four dimensions of partner-related distress: hypoglycemia distress, emotional distress, management distress, and role distress. A total of 21 items are rated on a five-point Likert scale from 0 = not worried at all to 4 = worried a great deal. This scale has excellent internal reliability (α = 0.95) (31).
Five-Item World Health Organization Well-Being Index	Measures overall well-being using a five-item scale. Item responses are summed and multiplied by 4, resulting in a score range of 0–100, with 100 representing the greatest well-being (32). Reliability in individuals with type 1 diabetes is α = 0.91, and this questionnaire has good concurrent validity.
Couples Satisfaction Index	Measures relationship satisfaction using a 16-item questionnaire. Responses are summed to yield for a total score range of 0–81, with higher scores indicating higher levels of relationship satisfaction. Scores <51.5 suggest notable relationship dissatisfaction. This scale has excellent reliability (α = 0.98) (33).
Social Support Scale	People with diabetes were asked to rate 15 items reflective of collaboration (e.g., "My care partner and I worked together to manage diabetes"), emotional support (e.g., "My care partner listens to me about my feelings"), instrumental support (e.g., "My care partner suggests things that might help me manage diabetes"), persuasion (e.g., "My care partner reminds me of the things I need to do for my diabetes"), unsupportive behavior (e.g., "My care partner criticizes how I take care of my diabetes"), and overprotective strategies (e.g., "My care partner thinks he or she needs to be around me to take care of my diabetes") that were based on measures of how partners are involved in illness management (34,35). People with diabetes indicated how often each type of behavior occurred during the past month on a scale ranging from 1 = not at all to 5 = very often. The items are part of a questionnaire examining both positive and negative ways a spouse can be involved in type 1 diabetes. This instrument has excellent reliability (α = 0.94).

measures pre- and post-intervention. One dyad did not complete the interview because of time constraints. Demographics of the participants with diabetes and their care partners are listed in Table 3. The participants with diabetes, on average, were 66 ± 4.78 years of age, and care partners were slightly younger (62.8 ± 11.82 years of age). The sample was 100% White, and the majority had college degrees. Only one dyad had a parent-child relationship.

One dyad did not complete the CGM/data-sharing equipment setup in one appointment because the care partner did not remember his or her e-mail passwords and needed access to a computer to accept the data-sharing invitation; this issue was resolved with a phone call later the same day. Three extra phone calls were needed to assist people with diabetes who experienced technology difficulties, and one extra phone call was needed to assist

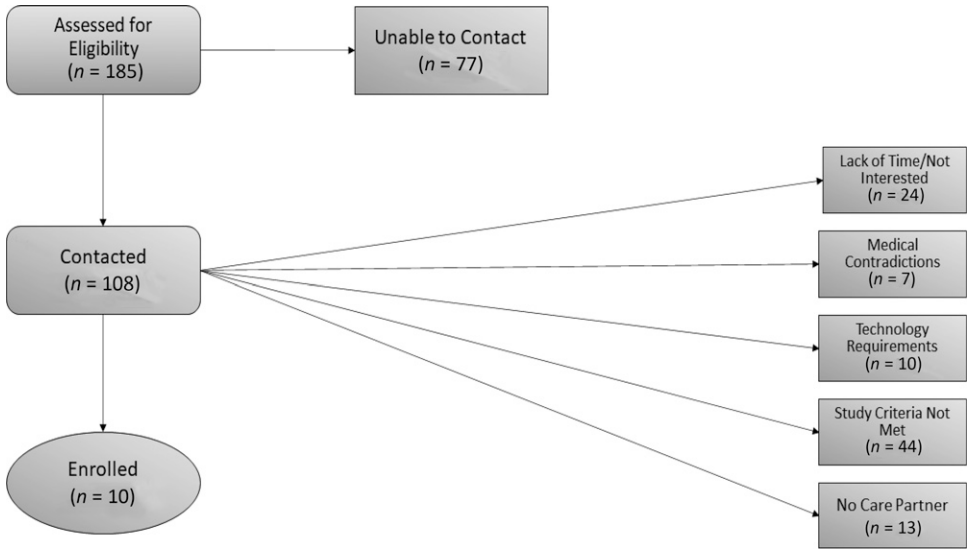

FIGURE 1 Consolidated Standards of Reporting Trials diagram.

a care partner in setting up the data-sharing app on a new phone. The baseline appointment for CGM education and app setup (CGM and data-sharing app) averaged 71 ± 41 minutes in length. The first SHARE *plus* session averaged 93 ± 36 minutes, the second session was 39 ± 15 minutes, and the third session was 39 ± 15 minutes.

CGM Use

Participants with diabetes had an average 96% CGM wear time. This study was underpowered to detect before-to-after statistically significant changes in glycemic metrics over the 3-month study period, and there were no significant changes in mean glucose, glycemic variability, glycemic time in range (70–180 mg/dL), or time spent in hyper- or hypoglycemic ranges.

Patient-Reported Outcomes

Although this study was underpowered to detect a change in patient-reported outcome measures over the 3-month study period, these data provide a description of the sample characteristics (Tables 4 and 5).

- Couples Satisfaction Index. The majority of participants with diabetes and their care partners expressed moderate satisfaction with their relationship both before and after the intervention.
- Five-Item World Health Organization Well-Being Index. Overall, participants with diabetes and their care partners rated their quality of life as moderately high before and after the intervention.
- Diabetes Distress Scale. Participants with diabetes and their care partners self-reported low diabetes distress levels before and after the intervention.
- Hypoglycemic Confidence Scare. Dyads rated their hypoglycemic confidence level in the moderate range before and after the intervention.
- Illness appraisal. The majority of participants with diabetes rated their diabetes as "my issue that affects my partner" at baseline, with only one rating it as "my issue to deal with." After the intervention, this response changed to "my issue that affects my partner." Most care partners rated that diabetes as being a "shared issue" both before and after the intervention.
- Social Support Scale. Participants with diabetes rated instrumental support and collaboration between "a little" and "neutral" but rated emotional support from "neutral" to "mostly." On the negative Social Support subscales, participants with diabetes rated overprotective, unsupportive, avoidance behaviors as occurring "not at all" to "a little." There were no significant changes from before to after the intervention.

Qualitative Feasibility of the SHARE plus Intervention

Although we had anticipated difficulties delivering the intervention completely virtually, the dyads reported no difficulties learning to use the CGM or data-sharing app during the interview. Moreover, participants with diabetes and their care partners were comfortable sharing data, despite some initial hesitation. The majority of participants with diabetes and their care partners preferred using the virtual format for this education; however, one

TABLE 3 Demographics for Participants With Diabetes and Care Partners

	Participants With Diabetes (*N* = 10)	Care Partners (*N* = 10)
Age, years	66.8 ± 4.78	62.8 ± 11.82
Sex		
Male	4 (40)	4 (40)
Female	5 (50)	6 (60)
Prefer not to answer	1 (10)	0 (0)
White race	10 (100)	10 (100)
Marital status: married	10 (100)	10 (100)
Highest education level		
High school graduate/GED	1 (10)	0 (0)
Vocational/technical school	1 (10)	2 (20)
Associate's degree/some college	0 (0)	1 (10)
Bachelor's degree	3 (30)	2 (20)
Graduate degree	5 (50)	5 (50)
Employment status		
Full-time	3 (30)	6 (60)
Part-time	0 (0)	2 (20)
Retired	7 (70)	1 (10)
Disabled	0 (0)	1 (10)
Annual household income, $		
≤24,999	0 (0)	6 (60)
50,000–74,999	1 (10)	1 (10)
75,000–99,999	2 (20)	2 (20)
100,000–149,999	3 (30)	1 (10)
≥150,000	4 (40)	1 (10)
Declined to answer	1 (10)	4 (40)
Diabetes duration, years	24.9 ± 21.66	–
Relationship to participant with diabetes		
Spouse	–	9 (90)
Child	–	1 (10)

Data are *n* (%) or mean ± SD. GED, general education diploma.

care partner reported that she always prefers in-person appointments, although the virtual format was acceptable.

Ninety percent of participants with diabetes who were interviewed (*n* = 9) and care partners who were interviewed (*n* = 9) expressed a desire to continue using CGM plus data-sharing. Among those who were interviewed, the majority of participants with diabetes (*n* = 6, 66%) said they were not interested in adding more followers beyond their current designated care partner. Only two individuals had CGM sensor malfunctions during the first month of the study. Participants with diabetes reported that they looked at the data management software on their own or with their health care provider. However, care partners for the most part did not look at the data management software to determine the glucose trends.

Qualitative Usability Feedback

Improved Communication

Dyads shared specific examples of how the SHARE *plus* intervention was useful for the management of type 1 diabetes, including that the intervention facilitated communication, proactive actions, and teamwork and reduced hypoglycemia. One person with diabetes shared:

> *"I think because she was watching [the data-sharing app] and was part of it, I think I had a lot less lows, so part of the advantage was preventative. [She sent] a text or some kind of notification, and she would say, 'Are you okay? I see you're low or going low.' And then I would respond and then also respond to my low and sit. I remember, one time, I was driving home from work, and she texted and said, 'Hey, I notice you're getting low,' so I found a fast-food place and got a sugary drink and drank it, and so that was probably helpful for all the other people on the freeway that I didn't go any lower, because I didn't know that I was [low]."* (male person with diabetes, age 66 years)

Another stated, "I don't know it's through this, or just because she's mentioned it, of being a little more patient and kinder when dealing with this" (male person with diabetes, age 67 years). Another shared, "I'm a scolder . . . being demeaning anyway, so, yeah. I think the study was really helpful because it helped me

TABLE 4 Psychological and Behavioral Measures of Participants With Diabetes

Measure	Pre-Intervention (*N* = 10)	Post-Intervention (*N* = 10)
Couples Satisfaction Index	56.30 ± 4.40	56.20 ± 4.92
Five-Item World Health Organization Well-Being Index	72.00 ± 19.50	68.80 ± 19.85
Diabetes Distress Scale	1.90 ± 0.81	1.69 ± 0.56
Powerlessness	2.48 ± 1.35	2.08 ± 0.69
Management distress	2.03 ± 0.89	1.68 ± 0.53
Hypoglycemia distress	2.00 ± 0.80	1.88 ± 0.78
Negative social perception distress	1.48 ± 0.75	1.38 ± 0.40
Eating distress	1.97 ± 0.74	1.73 ± 0.44
Physical distress	1.70 ± 1.05	1.45 ± 0.89
Friend/family distress	1.73 ± 0.97	1.50 ± 0.65
Social Support Scale		
Emotional	3.36 ± 0.72	3.92 ± 0.71
Instrumental	2.79 ± 1.30	2.87 ± 1.13
Overprotective	1.70 ± 0.69	1.53 ± 0.67
Avoidance	1.48 ± 0.86	1.63 ± 0.78
Unsupportive/controlling	1.23 ± 0.45	1.03 ± 0.11
Collaboration	2.60 ± 1.23	2.80 ± 1.19
Hypoglycemia Confidence Scale, item mean	3.19 ± 0.40	3.27 ± 0.52
Hypoglycemia Confidence Scale, item sum	28.70 ± 3.59	29.40 ± 4.72
Illness appraisal		
It is my issue, but I know it affects my care partner	7 (70)	7 (70)
It is a shared issue	2 (20)	3 (30)
It is my issue to deal with	1 (10)	0 (0)

Data are mean ± SD or *n* (%).

realize that, and it helped him realize that, too, that it is a partnership (female care partner, age 60 years).

Feelings of Safety

Importantly, dyads said the SHARE *plus* intervention also provided a feeling of safety. One person with diabetes shared, "Well, what worked well was that it gave her [care partner] peace of mind to know that she could have a window on things, so to speak. And that made me feel good" (female person with diabetes, age 63 years). A care partner described a sense of relief that hypo- and hyperglycemia were being prevented, saying "I was more aware because of the alarms, and his [the person with diabetes] alarms. So, I could go in and look at him and talk to him and see where he actually was" (female care partner, age 71 years).

This new awareness was extremely important for hypoglycemia recognition and the dyads' relationships. One care partner shared that "having circumstances [in the past] where the only way I knew [the person with diabetes] had a low blood sugar was to feel her skin, I realized that's never going to happen again with the [data-sharing] app. I'm never going to have to wait to get to that point again, because I'll always know well ahead of that time . . . . It's actually very reassuring" (male care partner, age 68 years). Overall, participants with diabetes and their care partners reported that the SHARE *plus* intervention promoted teamwork and was useful in improving their ability to prevent hypoglycemia and potentially dangerous situations.

Discussion

This mixed-methods study provides evidence that telehealth can be effectively used to deliver a technology and behavioral education intervention to older adults with type 1 diabetes and their care partners. Participants found the SHARE *plus* intervention to be usable and acceptable and reported more frequent and better-quality communication that supported a sense of partnership. Despite some care partners engaging in communication that was specifically discouraged, they realized that their communication style was ineffective after the SHARE *plus* intervention. Both participants with diabetes and their care partners need to have their feelings acknowledged and to be given time to practice supportive communication strategies over time, with assistance from their diabetes team. Generally, care partners increased the types of support they provided to their partners with diabetes. This telehealth format produced similar benefits to the in-person version of the SHARE *plus* intervention (43,44).

TABLE 5 Care Partner Psychological and Behavioral Measures

Measure	Pre-Intervention (*N* = 10)	Post-Intervention (*N* = 10)
Couples Satisfaction Index	56.20 ± 6.63	57.10 ± 6.67
Five-Item World Health Organization Well-Being Index	70.00 ± 21.77	74.80 ± 5.67
Diabetes Distress Scale	1.72 ± 0.57	1.30 ± 0.22
Management distress	1.69 ± 0.63	1.24 ± 0.24
Role distress	1.62 ± 0.62	1.18 ± 0.27
Emotional distress	1.58 ± 0.64	1.18 ± 0.38
Hypoglycemia distress	2.23 ± 0.71	1.85 ± 0.58
Hypoglycemia Confidence Scale, item mean	3.22 ± 0.55	3.44 ± 0.28
Hypoglycemia Confidence Scale, item sum	38.60 ± 6.60	41.30 ± 3.40
Illness appraisal		
It is my issue, but I know it affects my care partner	1 (10)	0 (0)
It is a shared issue	9 (10)	10 (100)
It is my issue to deal with	0 (0)	0 (0)

Data are mean ± SD or *n* (%).

Dyads tended to focus care partner support in a reactive manner, such as for treatment of hypoglycemia events. Most proactive discussions occurred before bedtime, when dyads sought congruence on where glucose levels should be to avoid hypoglycemia. Care partners tended to avoid involvement in response to hyperglycemia. In parallel, people with diabetes did not overtly want care providers to be involved during hyperglycemia events. Care partners may have a positive influence on hyperglycemia; however, dyads might not be able to recognize it when it is happening. Future SHARE *plus* intervention iterations that focus on pattern management with dyads and their diabetes team may be helpful, especially as it relates to conversations around hyperglycemia.

When using telehealth, it is important to proactively plan for appointments and to limit challenges. For telehealth interventions to be effective, processes such as equipment setup need to be outlined. Although only two participants with diabetes were naive to CGM, these individuals had no difficulties learning to use CGM in a virtual format. However, some care partners did not know their e-mail passwords, which is required for setting up the data-sharing app. Thus, the care partners had to be coached on the process for resetting their password, and this process was challenging in a virtual format. Before starting telehealth visits, clinicians may find that creating a brief set of instructions that includes such requirements and/or having the dyads come into the clinic for help with technology setup may be easier and less frustrating, especially for older adults. Other strategies include having dyads view the CGM company's online training video for setting up and using CGM before their appointment. Such proactive organization can limit anxiety and unwillingness to try technology-related interventions.

Although the ADA recommends involving care partners in the care of older adults with diabetes (6), there is limited formal training available for diabetes care teams addressing how to conduct educational or clinical visits with care partners. The SHARE *plus* intervention offered a curriculum using CGM with a data-sharing app and was designed to improve communication and support about diabetes management using an engaging discussion format. In this feasibility study, we excluded older adults with moderate to severe cognitive deficits or visual deficits. Older adults may also have age-related changes in literacy skills, physical disabilities, and motivation (45). Yet, many older adults are able to negotiate telehealth individually or with the help of a care partner. Some strategies that clinicians and diabetes educators may consider when using telehealth with older adults and their care partners include: *1*) contacting dyads before the appointment to assess their ability to connect, *2*) developing written materials and screenshots with instructions for using telehealth, *3*) using a headset with a microphone to optimize audio quality during virtual sessions, *4*) using closed captioning with hearing-impaired individuals, and *5*) using a teach-back method to confirm that participants understand the materials and information provided (46). Our next steps for refining the SHARE *plus* intervention will include providing participants with a written summary of telehealth sessions to reinforce the main points. Our team will use best practices for developing these written materials for older adults (47).

Limitations

The sample size for this study was small, and all participants were highly educated and White. Sample sizes are

generally small in intervention development and feasibility studies to determine interest in and adherence to the intervention and identify which components of the intervention may need refinement. However, the small sample size did not allow for a fully powered statistical analysis of the results. In addition, few technology studies have been conducted in racially and ethnically diverse individuals, and future SHARE *plus* studies should test the feasibility of the intervention in more diverse populations. The next logical step is to conduct a larger pilot study with a two-group randomized controlled study design.

Conclusion

The SHARE *plus* intervention is novel in that it leverages the promise of telehealth, care partner networks, and diabetes education. Interventions such as SHARE *plus* provide a strategy for increasing patient telemonitoring, as well as data-sharing between people with diabetes and their care partners. The results of this study may be useful in guiding future behavioral and educational interventions using telehealth.

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DUALITY OF INTEREST

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AUTHOR CONTRIBUTIONS

All authors researched the data and contributed to the writing, review, and editing of the manuscript. N.A.A. is the guarantor of this work and, as such, had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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