

# Exploring support needs of people living with diabetes during the coronavirus COVID-19 pandemic: insights from a UK survey

Sarah Sauchelli , Julia Bradley, Clare England , Aidan Searle, Alex Whitmarsh

**To cite:** Sauchelli S, Bradley J, England C, *et al*. Exploring support needs of people living with diabetes during the coronavirus COVID-19 pandemic: insights from a UK survey. *BMJ Open Diab Res Care* 2021;**9**:e002162. doi:10.1136/bmjdr-2021-002162

► Supplemental material is published online only. To view, please visit the journal online (<http://dx.doi.org/10.1136/bmjdr-2021-002162>).

Received 22 January 2021  
Accepted 11 May 2021



© Author(s) (or their employer(s)) 2021. Re-use permitted under CC BY. Published by BMJ.

National Institute for Health Research Bristol Biomedical Research Centre, University Hospitals of Bristol and Weston NHS Foundation Trust and University of Bristol, Bristol, UK

**Correspondence to**  
Dr Sarah Sauchelli;  
[sarah.sauchellitoran@bristol.ac.uk](mailto:sarah.sauchellitoran@bristol.ac.uk)

## ABSTRACT

**Introduction** The coronavirus COVID-19 pandemic has radically compromised healthcare for people living with chronic conditions such as diabetes. Government-imposed restrictions to contain the spread of the virus have forced people to suddenly adjust their lifestyle. This study aimed to capture the impact of the pandemic on people living with diabetes and the views of these individuals on ways in which the information, advice and support they are receiving could be improved.

**Research design and methods** An online anonymous survey was distributed across the UK during the first lockdown and initial easing. The survey comprised questions about confidence in diabetes self-management, resources used to obtain information, advice and support, and opinions on how these could be improved. Open-ended questions captured subjective experiences.

**Results** The survey was completed by 773 adults with diabetes (69.2% type 1, 28.5% type 2). There was notable variability in the impact of the pandemic on confidence in self-management, with confidence having deteriorated most commonly in the ability to take care of own mental well-being (37.0% respondents) and improved most commonly in maintaining a healthy weight (21.1% respondents). 41.2% of respondents living alone reported not receiving any outside support. The quality of information, advice and support received from the healthcare team was rated poorly by 37.2%. Respondents sought greater communication and tailored advice from their care team, clear and consistent information from the government and news channels, and improved understanding of diabetes and its challenges from their personal networks and employers.

**Conclusion** Adjusting to the COVID-19 pandemic has strained the mental health and well-being of people living with diabetes. Diabetes care teams must receive assistance to support these individuals without risking further inequalities in access to healthcare. Equipping personal networks and employers with knowledge on diabetes and skills to support self-management may reduce the burden on the National Health Service.

## INTRODUCTION

The coronavirus COVID-19 is a severe respiratory syndrome generated by infection by SARS-CoV-2. On January 30, 2020, the WHO Emergency Committee declared COVID-19 a

## Significance of this study

### What is already known about this subject?

- People living with diabetes mellitus, particularly those with poor blood glucose, are more vulnerable to developing the severe outcomes of COVID-19.
- National Health Service (NHS) prioritisation of COVID-19 has disrupted the availability of care for patients with chronic health conditions, including diabetes mellitus.

### What are the new findings?

- The pandemic generated a decrease in confidence in diabetes self-management, particularly regarding mental well-being (37.0%) and adhering to physical activity recommendations (32.0%) and a healthy eating pattern (29.6%). Greater access to the healthcare team and services, strategies to adjust self-care (with greater focus on mental health) and more external support are deemed as important to reinstate diabetes self-management.
- Quality of information, advice and support received from the government and healthcare teams were perceived most poorly (respondents giving a rating of poor or very poor: 39.0% and 37.2%, respectively). There is a request for greater transparency, higher quality information, improved contact, and an increased understanding of the condition by others.

### How might these results change the focus of research or clinical practice?

- A shift to remote consultations should include training practitioners to detect emotional distress in patients and the ability to refer patients to NHS or community-led mental health support. A collective effort is needed to produce more stratified and consistent guidance, with clear messaging to minimise uncertainty and distress.

global health emergency,<sup>1</sup> with approximately 41.77 million cases and 1.14 million deaths due to COVID-19 recorded worldwide within the first 10 months (<https://ourworldindata.org/coronavirus>). To contain the spread of the virus and protect the impact on the UK National Health Service (NHS), on March

23, 2020, the UK government imposed a national lockdown and the prioritisation of patients with COVID-19 across the NHS.<sup>2</sup> From June 1, 2020, a range of physical distancing measures were imposed at varying degrees across time. Though these measures were useful for flattening the rate of infection, they caused severe disruption in the lives of people across the population,<sup>3 4</sup> and in particular patient groups who rely on healthcare services.<sup>5</sup>

For people living with diabetes, COVID-19 prioritisation in the NHS caused severe disruptions to healthcare provision. This included the cancellation of routine check-up appointments (eg, glycated haemoglobin (HbA1c) and retinopathy checks), diabetes education sessions, and hospital services for non-urgent care. Additionally, support systems such as face-to-face peer support were suspended, while digitally delivered solutions were accelerated.<sup>6</sup> As the pandemic persisted, NHS England published new guidelines encouraging a shift towards remote consultations whenever possible, the use of a case-by-case approach to evaluate the need for face-to-face reviews, and the uptake of digital self-management tools.<sup>7</sup> In addition to practical challenges in rolling out these guidelines across the NHS, the success of these changes in care delivery relied on patients' ability to adapt and engage in technology-assisted self-care, as well as practitioners' ability to interpret data from technology and their confidence in delivering care via remote consultations.<sup>8–10</sup>

Given the nationally imposed restrictions and physical distancing policies, and the limited access to healthcare teams, we expected the pandemic would have a notable impact on everyday diabetes management and the mental health of people living with diabetes, their parents, carers, and partners. This study aimed to capture this impact and the views of these individuals on how to improve the information, advice and support they received during the pandemic.

## RESEARCH DESIGN AND METHODS

An online survey was developed by the National Institute for Health Research Bristol Biomedical Research Centre (NIHR Bristol BRC) in collaboration with the Diabetes UK South West team. The first draft of the survey was developed based on questions posted on the Diabetes UK forum, Facebook diabetes support groups, and discussions with diabetes support teams (eg, Diabetes UK, Brigstowe) between April 1, 2020 and April 15, 2020. The first draft was reviewed by Diabetes UK volunteers to ensure language, structure and question appropriateness.

The survey comprised a mixture of multiple-choice questions to quantify events and compare answers across groups, and open questions to gain insight on individual experiences and opinions. This mixed-methods approach served to provide stakeholders with an overview of the impact that the pandemic has had on people living with diabetes, and subsequently draw out avenues for action

guided by the people affected (ie, patient-led stakeholder decision-making). Responses were sought from people living with diabetes and their parents, carers and partners. Questions were adapted accordingly: parents, carers and partners were asked about their confidence in their ability to support diabetes self-management and their own experiences in obtaining information. The full survey, with all items and response options, can be seen in online supplemental file 1.

## Outcome measures

- Demographic characteristics of the respondents, including diabetes type, postcode (first part only), age, gender, ethnicity, living situation.
- Information regarding the pandemic included physical distancing measures being taken at the time of completion (eg, following stringent physical distancing or shielding), diagnosis of COVID-19 or presence of symptoms, and changes in living circumstances due to COVID-19.
- Confidence in diabetes self-management was rated (Likert scale 0–10) across several components of self-care, from 'could not do at all' to 10 'certain could do' before and during the pandemic.
- Impact of appointment cancellation and thoughts regarding what would help ameliorate diabetes self-management.
- Information was gathered on the resources used for guidance on physical distancing measures, general diabetes self-management, and support for emotional well-being.
- Respondents provided ratings (5-point Likert scales) on ease of access to information and support regarding the various aspects of diabetes self-management ('very difficult' to 'very easy'), as well as the quality ('very poor' to 'very good') of the information, advice and support received from several sources (eg, government, Diabetes UK, healthcare team). When participants gave a 'very poor' or 'poor' rating, they were asked to provide their opinions on how to improve it.
- A final set of questions focused on the support received from respondents' personal network.

Diabetes self-management was defined according to the National Institute for Health and Care Excellence recommendations<sup>11</sup> and further revisions by CL, a dietitian with clinical expertise in diabetes care, and Diabetes UK volunteers: checking blood sugar, correcting for blood sugar, good understanding of blood glucose levels and how to regulate them, ability to select the correct foods to eat, maintaining a healthy weight, adhering to dietary and physical activity recommendations, and looking after emotional well-being (mental health). A final domain was added for some of the items, to reflect the specific steps people with diabetes are recommended to take if they experience COVID-19 symptoms (eg, checking for ketones).

The survey was distributed across the UK, between April 24, 2020 and the August 31, 2020. A convenience

sample was recruited via dissemination of the survey by the networks of the NIHR Bristol BRC, the University of Bristol and Diabetes UK. Means of dissemination included research portals (eg, the Oxford University Hospitals NHS Foundation Trust), social media (eg, Facebook and Twitter), University of Bristol website, email contacts and monthly newsletters (eg, NIHR Bristol BRC and Diabetes UK). Participants were eligible for the study if they were aged 18 years or over, lived in the UK, and had either been diagnosed with diabetes or were the parent, carer, or partner of someone with diabetes.

Participants self-referred to the study by completing the survey and were not reimbursed for involvement. To ensure anonymity, participants were not asked to insert any identifiable personal information except for the first part of their postcode (to capture geographical area).

The data presented below reflect responses from people who identified themselves as living with diabetes. The number of respondents who were parents, carers, or partners of someone with diabetes was considered insufficiently large to draw conclusions ( $n=79$ ). Results are nonetheless visible in online supplemental file 2.

### Analysis

Summary statistics show participant responses to survey questions. Results are presented for all participants with diabetes and by the main diabetes types. For questions on confidence in diabetes self-management, data are presented using medians and IQRs. Differences in confidence scores before the pandemic and at survey completion were also calculated and participants were grouped by whether their scores decreased, were stable or increased.

Where multiple-choice questions included an 'Other' response, respondents were encouraged to expand on the answer. These were categorised by a single team researcher (JB) and agreement was sought with the principal investigator (SS). Where deemed more appropriate, a response was sorted into the pre-existing multiple-choice options (eg, 'leaving the house only for exercise' was classified as 'adhering to physical/social distancing guidelines').

Open-ended questions were analysed using an inductive thematic approach. The first 15 responses of open-ended items were reviewed independently by two researchers (SS and JB) to generate an initial codebook for each item. The codebook was further refined following discussion with AS and CE until consensus was reached. Code names were renamed to reflect data and identify themes. This approach led to the development of a definitive coding framework by which all responses were coded. Analysis was carried out using the NVivo V.12 software package. Given the required rapid turnaround of the work, the open-ended questions were split across the researchers (SS, JB, CE, AS), with two researchers independently reviewing a particular item. Coding and themes were then discussed as a group. For each theme,

examples were selected and reported as quotes in the Results section, with participant diabetes type.

## RESULTS

A total of 773 people living with diabetes responded (a further 79 participants were parents, partners, or carers of someone with diabetes). Though respondents were widely distributed across the UK, most came from the South East ( $n=193$ ) and South West ( $n=142$ ) regions of England.

Three peak response time points were identified in responses (June 24, July 20, and August 17). Response times matched ( $\pm 2$  days) major recruitment efforts but could not be linked to changes in government guidelines. Sample sizes were not sufficiently large to compare data across these time points, but the data can be seen in online supplemental file 3.

### Demographic characteristics

Table 1 presents a breakdown of the demographic characteristics of respondents. Most were women (67.1%) and of white British ethnicity (90.1%). Mean age was of 47.9 (SD=14.5, range 18–80) years. A total of 69.2% of respondents reported living with type 1 diabetes mellitus (T1DM), 28.5% with type 2 diabetes mellitus (T2DM). Most respondents had not experienced symptoms of COVID-19 since the start of the pandemic (80.6%). The most common symptoms reported were coughing, shortness of breath, and fever. A total of 66.8% of respondents were adhering to government social/physical distancing guidelines stipulated at the time of survey completion, 9.8% were voluntarily shielding despite not having received explicit instructions.

### Confidence in diabetes self-management

Change in self-reported confidence in diabetes self-management was examined by comparing current confidence across various aspects of self-care with retrospective recall of confidence prior to the pandemic. Confidence in self-management was impacted more notably in the lifestyle components of diabetes self-management (eg, regular physical activity, healthy eating and maintenance of a healthy weight), and mental well-being (figure 1). Change in confidence was mainly negative (poorer), particularly for mental well-being (37% showed a decrease), though a proportion of respondents displayed improvements. No patterns were observed in changed confidence in diabetes self-management when comparing diabetes types (online supplemental file 2 for details).

Qualitative data analysis highlighted three main approaches (themes) through which respondents believed their confidence could be augmented: increased accessibility, adjusting self-care, and receipt of external support.

**Table 1** Demographic characteristics, COVID-19 symptoms and measures adopted by respondents with diabetes

	All (n=773)	Type 1 (n=535)	Type 2 (n=220)
Gender, n (%)			
Female	516 (67.1)	365 (68.6)	139 (63.5)
Male	249 (32.4)	165 (31.0)	78 (35.6)
Other	4 (0.5)	2 (0.4)	2 (0.9)
Age, mean (SD)	47.9 (14.5)	44.4 (14.2)	56.5 (11.4)
Ethnicity, n (%)			
Arab	1 (0.1)	1 (0.2)	0 (0.0)
Asian or Asian British: Chinese	3 (0.4)	0 (0.0)	3 (1.4)
Asian or Asian British: Indian	8 (1.0)	2 (0.4)	6 (2.7)
Asian or Asian British: Pakistani	1 (0.1)	1 (0.2)	0 (0.0)
Black or black British: Caribbean	4 (0.5)	0 (0.0)	4 (1.8)
Mixed: white and Asian	5 (0.7)	3 (0.6)	2 (0.9)
Mixed: white and black African	1 (0.1)	1 (0.2)	0 (0.0)
Mixed: white and black Caribbean	1 (0.1)	1 (0.2)	0 (0.0)
Other ethnic group	1 (0.1)	0 (0.0)	1 (0.5)
Other mixed background	1 (0.1)	1 (0.2)	0 (0.0)
Other white background	31 (4.0)	26 (4.9)	5 (2.3)
Prefer not to answer	3 (0.4)	2 (0.4)	1 (0.5)
White: British	693 (90.1)	485 (91.2)	192 (87.7)
White: Irish	16 (2.1)	9 (1.7)	5 (2.3)
Living circumstances, n (%)			
Living with others	649 (84.1)	458 (85.6)	176 (80.4)
Living alone	123 (15.9)	77 (14.4)	43 (19.6)
Symptoms of COVID-19; n (%)			
No	623 (81.0)	434 (81.8)	176 (80.0)
Yes	70 (9.1)	47 (8.9)	21 (9.5)
Diagnosis	2 (0.3)	2 (0.4)	0 (0.0)
Not sure	74 (9.6)	48 (9.0)	23 (10.5)
Physical/social distancing measures taken; n (%)			
Following stringent physical/social/physical distancing	513 (66.8)	355 (66.9)	147 (67.1)
Self-isolating at home	16 (2.1)	9 (1.7)	7 (3.3)
Shielding group	59 (7.7)	37 (7.0)	19 (8.7)
Shielding (but not in shielding group)	75 (9.8)	49 (9.2)	22 (10.0)
Key worker/still leaving home to work	97 (12.6)	75 (14.1)	22 (10.1)
Other	4 (5.7)	3 (0.6)	1 (0.5)
Don't know	4 (0.5)	3 (0.6)	1 (0.5)

### Accessibility

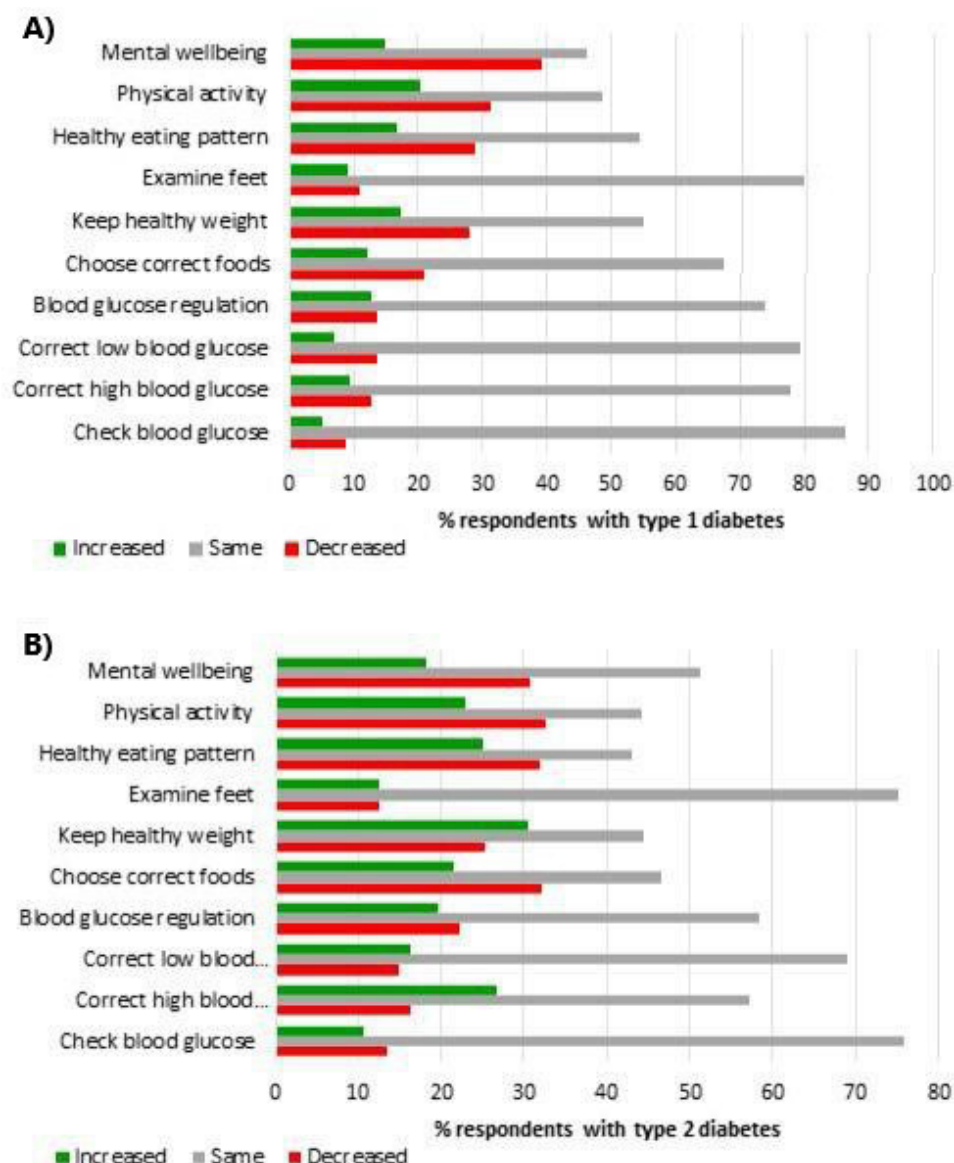
Respondents indicated needing greater access to their care team and the support provided for diabetes self-management, greater opportunities for physical activity, and easier access to the food they need to adhere to dietary recommendations:

Lockdown limited exercise which I rely on to control sugar levels. Readjustment of insulin due to my exercise is not straight forward. (T1DM)

Several respondents indicated that receipt of blood testing tools would have facilitated diabetes self-management:

As a type 2 being able to monitor my blood sugar levels would be great but I have to rely on a six monthly check to see how I am doing. I did better when I bought my own monitor and strips but cannot afford £30+ per month to continue to do so. (T2DM)





**Figure 1** Change in confidence in diabetes self-management, derived from confidence at time of survey completion minus recall of confidence before the pandemic (n=770), for respondents with (A) type 1 diabetes, and (B) type 2 diabetes. Positive score (green): increase. Negative score (red): decrease.

Further, access to clearer guidance on individual risk was deemed important to facilitate decision-making:

Preparation guides for how to manage sugar levels if you get coronavirus. Also guidelines on how to stay vigilant as a diabetic when carrying out daily activities. (T1DM)

### Adjusting self-care

Respondents were aware that unhealthy habits may be attributed to their new circumstances generated by the pandemic:

Not working from home. Too close to the kitchen. (T2DM)

Respondents recognized the need to increase focus on mental health to reduce stress-induced glucose alterations:

My blood sugars have been more erratic due to the stress and worry for myself and my family, and they have been harder to keep under control. (T1DM)

Further, respondents recognized that this might require changes in doses or type of medication:

Reminders about changing insulin doses (via pump) in response to lower levels of physical activity. (T1DM)

### External support

Need for assistance from personal network and wider community was deemed important to increase confidence. This included support from family and friends, greater adherence to physical distancing from others, and help in household tasks and childcare:

Lack of help with childcare means difficulty in exercising and more strain at home, so sugars are harder to look after. (T1DM)

Outside of these three factors, several respondents indicated that resumption of 'normal' life would be needed:

Once things get back to normal and I can get back to my routine. (T2DM)

### Consequences of canceled appointments

This domain explored the impact of disruption in healthcare provision; by capturing how many respondents were affected and how they were affected. A total of 53.3% of T1DM and 46.4% of T2DM respondents had at least one appointment canceled at the time of survey completion. Qualitative analysis revealed four themes reflecting the type of issues faced by respondents due to the cancellation of appointments: lack of knowledge and confidence, difficulties in switching treatment, mental health, and empowerment in self-management.

### Lack of knowledge and confidence

Cancellation of appointments resulted in uncertainty on glucose control, difficulties in interpreting information provided by monitoring devices, and lack of confidence in the actions to take to improve glucose control:

My self-confidence has plunged, and lack of follow-up hasn't helped. The clinic canceled appointments and I didn't know who else to consult. (T1DM)

I have given up. I just pretend I do not have diabetes. (T2DM)

### Difficulties in switching treatment

Respondents indicated struggling to switch to other medications or changing doses and receiving adequate support to do so. They have had difficulties in using remote medical care, and experienced delayed or canceled referrals to other services:

I was on a pathway of improving my treatment methods (a pump) but that has been paused. (T1DM)

### Mental health

Reduced support and advice regarding self-management or risk, and the cancellation of appointments were posing a strain on respondents' mental health and motivation to continue self-management:

Although I don't feel less able to self-manage, I have sometimes felt less motivated to manage my diabetes well. A result of general anxiety and poor sleep. (T1DM)

### Empowerment in self-management

A few respondents indicated that they had managed to adapt to circumstances to improve self-management:

I have had to learn to cope and have read more and joined a Facebook diabetes support group, run by other diabetics. (T2DM)

### Ease of access to information, advice and support

This domain captured the degree of difficulty respondents experienced, from their viewpoint, to receive information, advice, and support regarding diabetes management, particularly in the context of COVID-19. Overall, people with T2DM made less use of the range of external resources available for information, advice, and support (including websites, healthcare teams, personal network and employer). For both diabetes types, the resources rated as most used were news channels (T1DM: 46.1%, T2DM: 52.8%), the public health and government website (T1DM: 12.5%, T2DM: 13.9%), and Diabetes UK (T1DM: 15.7%, T2DM: 13%) (see online supplemental file 2 for details).

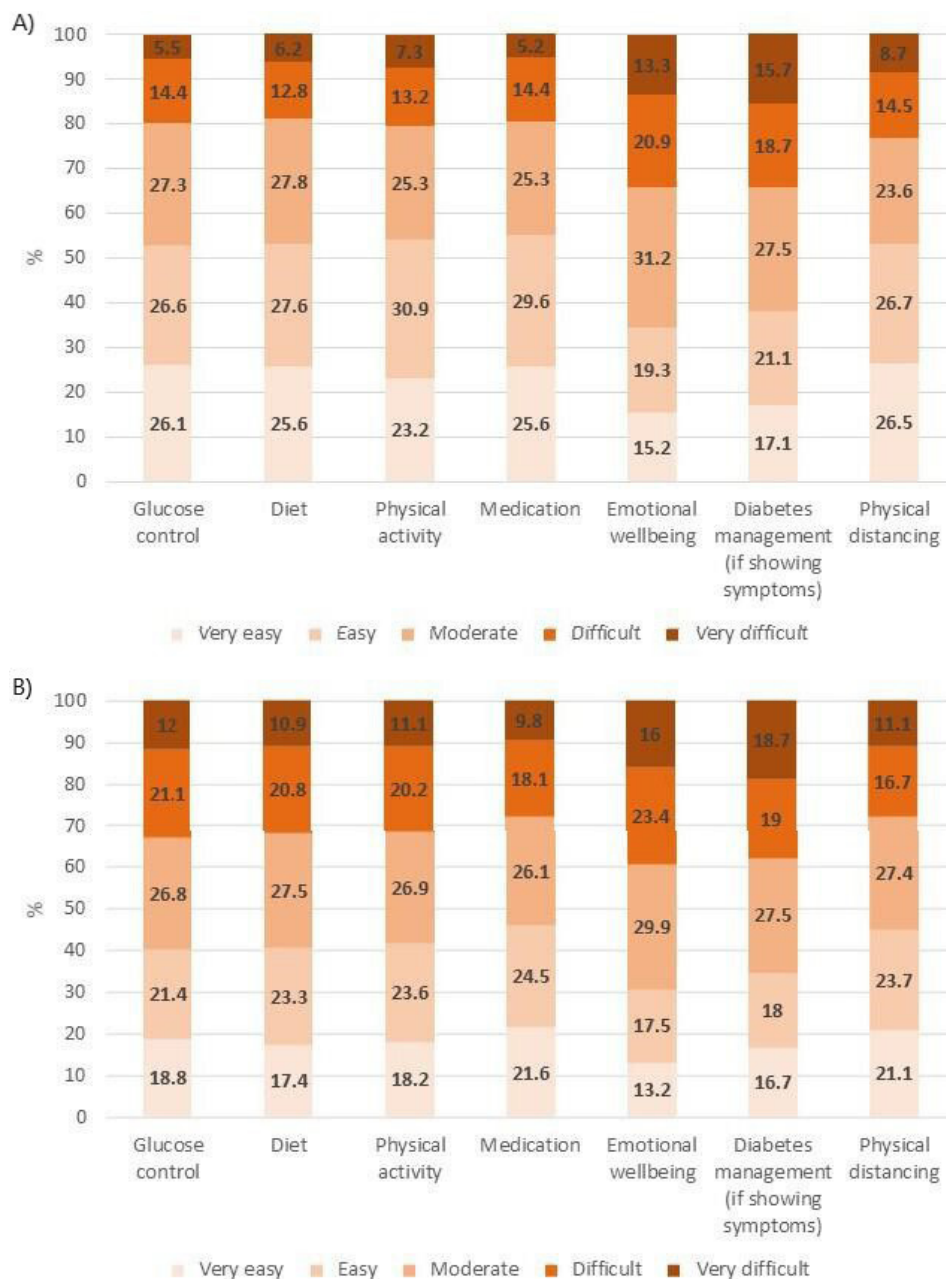
Respondents found it harder to receive support compared with information and advice. Access was more likely to be rated as 'difficult' or 'very difficult' in the domains 'emotional well-being' and 'diabetes management if showing symptoms of COVID-19' (figure 2). There were clear differences between diabetes types in access to support: 42.5% of respondents with T2DM reported 'difficult' or 'very difficult' access to support for glucose control, compared with 28.9% of respondents with T1DM. Among those respondents who reported living alone, 41.2% indicated that they were not receiving support from outside the household. External support was received primarily from the family (68.7%), friends (67.2%) and neighbors (28.4%).

### Perceived quality of information, advice and support

In this domain, respondents were asked to rate the quality (from 'very poor' to 'very good') of the information, advice and support received from various sources, ranging from social media to the healthcare team. Respondents who had provided 'poor' or 'very poor' scores were asked to suggest improvements that could be made. These qualitative data were purposely sought to assist stakeholders prioritize actions to be taken from the viewpoint of beneficiaries.

Figure 3 shows respondents' views on the quality of information, advice and support available across a wide range of sources. A total of 39.0% of respondents rated the quality of government guidance and support as 'poor' or 'very poor', with lower scores from T1DM (41.8%) than T2DM (31.7%) (online supplemental file 2). Perceived quality in the guidance and support received from healthcare teams was similar, with 37% of respondents considering it as 'poor' or 'very poor'. In this case, ratings were poorer from T2DM (43.2%) compared with T1DM respondents (35.2%). No other patterns were observed between diabetes types.

Figure 4 displays the main categories that emerged from the qualitative analysis, subdivided according to source queried. Four overarching themes were revealed: greater transparency, higher quality information and improved contact, and greater understanding of the condition.



**Figure 2** Rated difficulty in accessing (A) information and advice, and (B) support across diabetes self-management domains and adherence to physical distancing guidelines.

### Greater transparency

Respondents expressed concerns regarding bias and tendency towards sensationalism in the information from the government, news channels and social media:

They over emphasise the negatives and cause fear or anxiety. (T2DM, news channels)

They requested these sources be more transparent in the evidence behind information and decision-making, greater fact-checking, objective reporting, and pressure on politicians to provide accurate information:

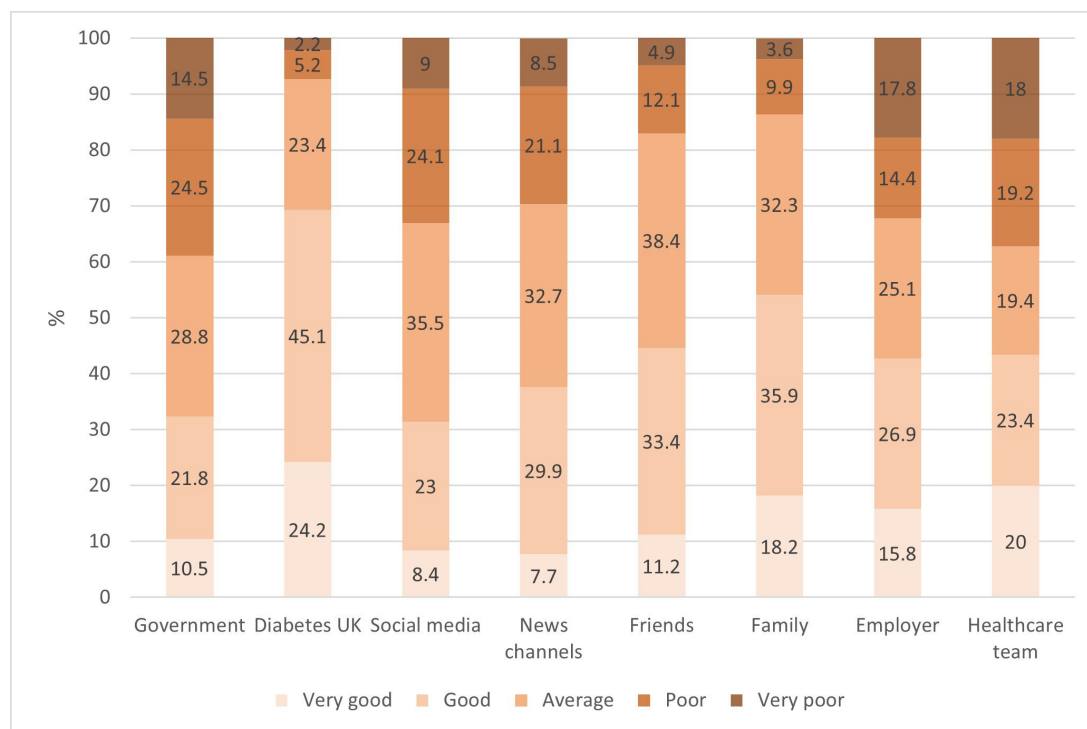
More challenge of government when information is inconsistent or ambiguous. (T1DM, news channels)

Fake news and anti-vac messaging to be removed promptly. (T1DM, social media)

It would be better if it came across as completely open and trustworthy. (T1DM, government)

### Higher quality information

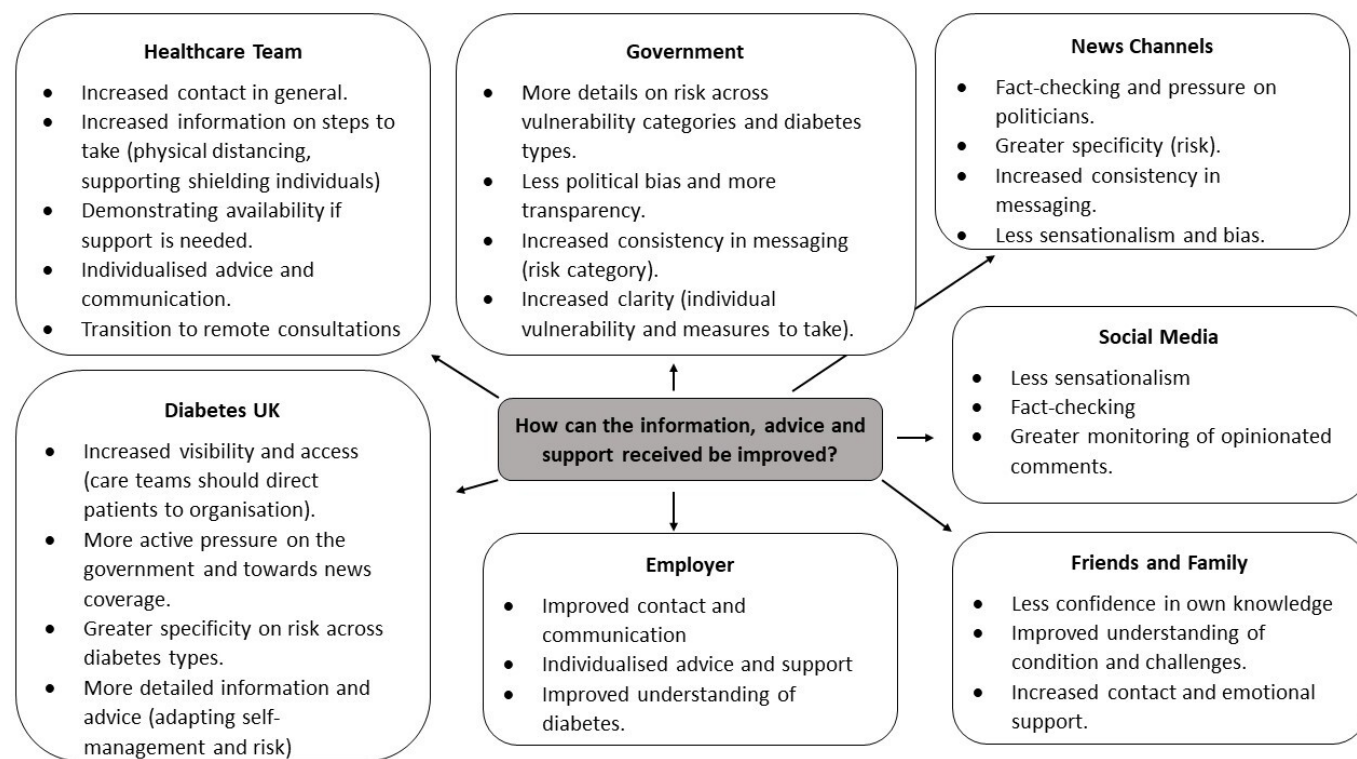
Respondents also communicated the need for improvement in information provided by healthcare teams, government, Diabetes UK, news channels and employers. They requested more information on precautionary measures to take in terms of shielding/physical distancing, how the personal network can help in emergencies, and diabetes self-management:



**Figure 3** Reported quality of information, advice and support received from various resources.

Needs more clarity for people like me who are 'vulnerable' but have not received the NHS letter. (T2DM, government)  
 Got told I had to return to work, no discussion about how worried that made me. (T1DM, employers)  
 When I had a hypo and was very mixed up and no one in the family intervened because of us being distanced inside the home. (T1DM, healthcare team)

Data revealed that specificity was a frequent priority for improving the quality of information, distinguishing people with diabetes from other vulnerable people and differentiating between diabetes types. Greater specificity was sought for information on risk and for guidance on diabetes self-management:



**Figure 4** Main categories that emerged in respondents' recommendations for improvement presented.



Most of the dietary advice seems more geared to type 1 and doesn't help me to lower my type 2 blood glucose. (T2DM, Diabetes UK)

Explain what the relevance of vulnerability to C-19 is in relation to what types of diabetics (type 1 or 2), those with complications etc, not just say 'diabetics'. (T1DM, news channels)

No specific policy for diabetics. Only general advice for people more vulnerable. (T1DM, employer)

Consistency in the information provided was also deemed important:

Changing risk category of Diabetes since the beginning. Caused lots of confusion. (T1DM, government)

Several respondents, however, communicated that they had noticed improvements with time:

The information was much more clear. Particularly as they spoke about T1 and T2 separately. (T1DM, Diabetes UK)

### Improved contact and communication

Respondents frequently reported absence of their healthcare teams and employers, which had a negative impact on their mental health:

No contact from manager at this time and waiting for information has made this time more stressful. (T2DM, employer)

I have not received any information at all from my diabetes health care team. (T2DM, healthcare team)

There was a request for individualized contact and for the healthcare team to demonstrate availability if urgent support was needed:

I do feel that a quick phone call or more personal email would have been good. (T1DM, healthcare team)

I have contacted my diabetic nurse several times, the only reply I have received is a text message suggesting I go to diabetes UK website. (T2DM, healthcare team)

Would be good to hear more of "please contact us if there is a problem" rather than always "stay away from the surgery." (T1DM, healthcare team)

Opinions regarding the support provided by healthcare teams varied across respondents, as some indicated that their care team was responsive:

Rang me to check I was ok as check-up delayed. Could ring if I wanted to. (T2DM, healthcare team)

Several respondents expressed an interest in remote consultations if this increased contact with their care team:

Improve access to diabetes team by telephone. (T2DM, healthcare team)

### Increased understanding of diabetes

Respondents expressed wanting their personal networks and employers to have a better understanding of their condition and the challenges faced:

Unless you have an illness and keep being told about having a underlying illness is harmful during this time, you just don't understand. (T2DM, friends and family)

It would be good if they were a little better informed, particularly, now, about the increased risks posed to people with diabetes by Covid-19. (T1DM, employer)

This was important to enhance experienced support:

Friends are a very important source of general support. (T1DM, friends and family)

### CONCLUSIONS

This study provides valuable insight in the ways people living with diabetes have been impacted by the coronavirus COVID-19 pandemic. As expected, NHS prioritisation of COVID-19 has had a negative impact on the access and level of support most people with diabetes have had during the pandemic, as experienced by people living with other chronic conditions.<sup>12</sup> Closure of sporting facilities and home confinement have contributed to a reduced exercise, adoption of unhealthy dietary habits and weight gain in people with diabetes.<sup>13</sup> This reflects respondents' decreased confidence in self-management in these domains.

Reported difficulties in diabetes self-management are concerning given widespread evidence that people with diabetes, particularly those with comorbid obesity and poor blood glucose control, are at increased likelihood of hospital admission and negative outcomes from COVID-19.<sup>14 15</sup> Research shows that a balanced diet can have a positive effect for prevention and management of COVID-19 in patients with diabetes.<sup>16</sup> Though, alike seen in the general population,<sup>17</sup> some respondents reported increased confidence in diabetes self-management, challenges to the ability to adhere to dietary and physical activity recommendations can worsen outcomes from COVID-19 through weight gain and glucose deregulation.

Initial results of steps taken to support self-management during the pandemic are emerging. A switch to remote consultations, delivered either via phone or video calls, during strict lockdowns has been linked with reduced HbA1c.<sup>18</sup> Similarly, pairing flash glucose monitoring with remote control has shown promising outcomes.<sup>19</sup> However, discrepancies among healthcare systems across countries must be taken into account. For example, in the UK the large majority (around 90%) of people with diabetes are managed by primary care,<sup>20</sup> enabling healthcare teams to be key players in the provision of information and support remotely, but people with T2DM are not normally prescribed continuous glucose monitoring kits. The lack of universal care coverage in the USA requires decisive action from the government and stakeholders to increase accessibility to self-management support and medication.<sup>20</sup>

The disparities across respondents of this survey in the contact they had with healthcare teams highlights another obstacle to be addressed by health

commissioners: ensuring equitable access to remote care. Negligible differences were found between diabetes types in ratings of quality of information, advice, and support from care teams, despite people with T1DM normally having considerably more contact with their care team than those with T2DM. Difficulties in accessing health-care teams may be linked to practice-level differences in availability and capacity to shift to remote care. A centralized effort is therefore required to provide adequate resources and training for care teams to successfully make this transition.

Professional organizations can additionally work collaboratively to generate alternative avenues through which people can receive advice and support. For example, the Italian Society of Diabetes and the Association of Italian Diabetologists have partnered to give people with diabetes and their relatives direct access to specialists via a social media platform.<sup>21</sup> These initiatives could help mitigate some of the impact of canceled appointments reported by respondents, for example, by providing expert advice regarding glucose monitoring, adjusting medication, and recommendations to improve glucose control.

Findings from this study also emphasise the need to augment opportunities for people with diabetes to obtain mental health support; respondents reported a loss of confidence in taking care of own mental well-being and difficulties accessing support in this domain. Findings resonate with research demonstrating an increase in psychiatric disorders and diabetes-related emotional distress during COVID-19.<sup>22</sup> This is concerning in light of evidence showing that people with poorer psychological well-being were more likely to show a reduction in HbA1c and body mass index during lockdown.<sup>23</sup>

Organizations representing people living with diabetes have already taken steps to facilitate access to ongoing support by assisting people shift to online solutions.<sup>6</sup> This may be an avenue to connect people living alone with the community for external support and reduce isolation, which is a primary contributor to mental health difficulties.<sup>24</sup> Further, equipping the personal network with an increased understanding of diabetes and its challenges was also seen as important to increase the quality of support received. This aligns with extensive work demonstrating the value of a supportive immediate environment for the management of diabetes and well-being.<sup>25</sup>

Respondents of this survey additionally called for the implementation of policies to minimize sensationalism, misinformation, and improved communication between stakeholders and people living with diabetes. A collective effort is therefore required, focusing on stratified and consistent guidance on individual vulnerability, on how to self-manage diabetes while minimizing risk, and ensuring that people feel they can trust the entity communicating the information. Though greater communication and transparency have been greatly demanded throughout the pandemic,<sup>26</sup> this study further shows how clear messaging is crucial to make vulnerable individuals feel safe in uncertain circumstances.

Some methodological limitations need to be taken into consideration. The survey was distributed online, meaning that participants would have a degree of digital literacy. The survey may not accurately capture the views of individuals who engage less with health-care teams or their community, and we did not reach people who are unable to access technology. Though multimodal steps were taken to raise awareness of the survey, ethnic minorities and men were under-represented. Alternative strategies should be adopted to target these groups, especially as the prevalence of diabetes is elevated in ethnic minority communities.<sup>27</sup> Further, though the healthcare environment did not change greatly from April until August 2020, this study was not powered to measure the individual impact of specific changes in guidance and messaging from the government and media during this period. These limitations were in part due to the urgency of distributing the survey for Diabetes UK to take timely action, and obstacles faced due to the pandemic in engaging with key people who could facilitate wider participation.

Despite its limitations, this study provides important insight into how the coronavirus COVID-19 pandemic has impacted people living with diabetes and their views on opportunities for improvement. As routine care is being canceled due to increased infection rates and the roll out of vaccines, it is essential that experiences and opinions from the initial wave of the pandemic are incorporated in stakeholder decision-making. As the pandemic has generated a transition to digital solutions to provide information, advice and support, efforts should also be made to ensure people less familiar with technology are not excluded. Development of these solutions should be adapted to the expected technology proficiency of the target group, available in multiple languages and accommodate for physical or mental disabilities.<sup>8</sup> Alternative solutions should be provided for those from lower economic backgrounds or with limited access to internet.

**Acknowledgements** We thank Diabetes UK for their contribution to the design of the survey and dissemination via its networks. We thank Professor Nicholas Timpson and research teams such as the Oxford Centre for Diabetes Endocrinology and Metabolism and the NIHR Oxford Biomedical Research Centre, Oxford University Hospitals NHS Foundation Trust for assisting in the distribution of the survey. Importantly, we thank the people living with diabetes and Diabetes UK volunteers who gave us feedback to ensure the survey was inclusive and appropriate for the diverse circumstances people living with diabetes may find themselves in during the COVID-19 pandemic.

**Contributors** SS received funding for the project, led the team, coordinated with external organizations, and drafted the manuscript. All other authors are listed alphabetically due to their equal degree of contribution to the design of the research, analysis and interpretation of the results, editing of the manuscript, approval of this manuscript for publication and accountability for all aspects of the work.

**Funding** This work was supported by the Elizabeth Blackwell Institute, University of Bristol, the Wellcome Trust ISSF3 grant 204813/Z/16/Z, and Research England's Quality-Related Strategic Priorities Fund (QR SPF). All authors are supported by the NIHR Biomedical Research Centre at University Hospitals of Bristol and Weston NHS Foundation Trust and the University of Bristol.

**Disclaimer** The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

**Competing interests** To enable Diabetes UK to take timely action from survey outcomes, three interim summary reports were produced for the Diabetes UK team, as well as a final one upon survey closure. Preparation of these reports did not impact the research project.

**Patient consent for publication** Not required.

**Ethics approval** Ethical approval was obtained from the University of Bristol faculty research ethics committee (ref: 103163).

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data availability statement** Anonymized data are available upon reasonable request.

**Supplemental material** This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

**Open access** This is an open access article distributed in accordance with the Creative Commons Attribution 4.0 Unported (CC BY 4.0) license, which permits others to copy, redistribute, remix, transform and build upon this work for any purpose, provided the original work is properly cited, a link to the licence is given, and indication of whether changes were made. See: <https://creativecommons.org/licenses/by/4.0/>.

## ORCID iDs

Sarah Sauchelli <http://orcid.org/0000-0003-3620-7671>

Clare England <http://orcid.org/0000-0003-0685-0690>

## REFERENCES

- Velavan TP, Meyer CG. The COVID-19 epidemic. *Trop Med Int Health* 2020;25:278–80.
- Public Health England. UK government coronavirus (COVID-19) guidance, 2020. Available: <https://www.gov.uk/government/collections/coronavirus-covid-19-list-of-guidance> [Accessed 12 Jun 2020].
- Ammar A, Chtourou H, Boukhris O, et al. Covid-19 home confinement negatively impacts social participation and life satisfaction: a worldwide multicenter study. *Int J Environ Res Public Health* 2020;17:6237–17.
- Ammar A, Brach M, Trabelsi K, et al. Effects of COVID-19 home confinement on eating behaviour and physical activity: results of the ECLB-COVID19 international online survey. *Nutrients* 2020;12. doi:10.3390/nu12061583. [Epub ahead of print: 28 May 2020].
- Maringe C, Spicer J, Morris M, et al. The impact of the COVID-19 pandemic on cancer deaths due to delays in diagnosis in England, UK: a national, population-based, modelling study. *Lancet Oncol* 2020;21:1023–34.
- Sauchelli S. Digitalising diabetes support groups in response to the coronavirus COVID-19 outbreak: a collaborative initiative. *Pract Diab* 2020;37:208–10.
- NHS England and NHS Improvement. Delivering Diabetes Care during the COVID-19 Pandemic – the 'new normal'. 2020. Available: <https://www.diabetes.org.uk/professionals/resources/coronavirus-clinical-guidance>
- Fleming GA, Petrie JR, Bergenstal RM, et al. Diabetes digital APP technology: benefits, challenges, and recommendations. A consensus report by the European association for the study of diabetes (EASD) and the American diabetes association (ADA) diabetes technology Working group. *Diabetes Care* 2020;43:250–60.
- Kilvert A, Wilmet EG, Davies M, et al. Virtual consultations: are we missing anything? *Pract Diab* 2020;37:143–6.
- Shaw K. The impact of diabetes on COVID-19 infection. *Pract Diabetes* 2020;37:79–81.
- National Institute for Health and Care Excellence. Type 2 diabetes in adults: management, NICE guideline NG28, Updated 2020. Available: <https://www.nice.org.uk/guidance/ng28> [Accessed 17 Jan 2021].
- Greenwood E, Swanton C. Consequences of COVID-19 for cancer care — a CRUK perspective. *Nat Rev Clin Oncol* 2020;18:2020–1.
- Ruissen MM, Regeer H, Landstra CP, et al. Increased stress, weight gain and less exercise in relation to glycemic control in people with type 1 and type 2 diabetes during the COVID-19 pandemic. *BMJ Open Diabetes Res Care* 2021;9:e002035.
- Holman N, Knighton P, Kar P, et al. Risk factors for COVID-19-related mortality in people with type 1 and type 2 diabetes in England: a population-based cohort study. *Lancet Diabetes Endocrinol* 2020;8:823–33.
- Barron E, Bakhai C, Kar P, et al. Associations of type 1 and type 2 diabetes with COVID-19-related mortality in England: a whole-population study. *Lancet Diabetes Endocrinol* 2020;8:813–22.
- Mahluji S, Jalili M, Ostadrahimi A, et al. Nutritional management of diabetes mellitus during the pandemic of COVID-19: a comprehensive narrative review. *J Diabetes Metab Disord* 2021:1–10.
- Di Renzo L, Gualtieri P, Pivari F, et al. Eating habits and lifestyle changes during COVID-19 lockdown: an Italian survey. *J Transl Med* 2020;18:229.
- Onishi Y, Yoshida Y, Takao T. Diabetes management by either telemedicine or clinic visit improved glycemic control during the coronavirus disease 2019 pandemic state of emergency in Japan. *J Diabetes Investig*.
- Luzi L, Carruba M, Cialesi R. Telemedicine and urban diabetes during COVID-19 pandemic in Milano, Italy during lock-down: epidemiological and sociodemographic picture. *Acta Diabetol* 2021;1:1–9.
- Hartmann-Boyce J, Morris E, Goyder C, et al. Diabetes and COVID-19: risks, management, and Learnings from other national disasters. *Diabetes Care* 2020;43:1695–703.
- SID - Società Italiana di Diabetologia. One hour with AMD, SID and SIEDPle, 2020. Available: <http://www.siditalia.it/progetto-un-ora-con-amd-sid-siedp> [Accessed 30 May 2020].
- Alessi J, de Oliveira GB, Franco DW, et al. Mental health in the era of COVID-19: prevalence of psychiatric disorders in a cohort of patients with type 1 and type 2 diabetes during the social distancing. *Diabetol Metab Syndr* 2020;12:76.
- D'Onofrio L, Pieralice S, Maddaloni E, et al. Effects of the COVID-19 lockdown on glycaemic control in subjects with type 2 diabetes: the glycalock study. *Diabetes Obes Metab* 2021;8. doi:10.1111/dom.14380. [Epub ahead of print: 25 Mar 2021].
- Usher K, Bhullar N, Jackson D. Life in the pandemic: social isolation and mental health. *J Clin Nurs* 2020;29:2756–7.
- Captieux M, Pearce G, Parke HL, et al. Supported self-management for people with type 2 diabetes: a meta-review of quantitative systematic reviews. *BMJ Open* 2018;8:e024262.
- Organisation for Economic Co-operation and Development. Transparency, Communication and Trust: The Role of Public Communication in Responding to the Wave of Disinformation about the New Coronavirus - OECD, 2020. Available: [https://read.oecd-ilibrary.org/view/?ref=135\\_135220-cvba4lq3ru&title=Transparency-communication-and-trust-The-role-of-public-communication-in-responding-to-the-wave-of-disinformation-about-the-new-coronavirus](https://read.oecd-ilibrary.org/view/?ref=135_135220-cvba4lq3ru&title=Transparency-communication-and-trust-The-role-of-public-communication-in-responding-to-the-wave-of-disinformation-about-the-new-coronavirus) [Accessed 29 Dec 2020].
- Goff LM. Ethnicity and type 2 diabetes in the UK. *Diabet Med* 2019;36:927–38.

## Supplementary file 1: support needs of people living with diabetes during COVID-19

**Supplementary File 1****Title: Addressing support needs of people living with diabetes during the coronavirus COVID-19 pandemic: insights from a UK survey.**

Sarah Sauchelli<sup>1</sup>, Julia Bradley<sup>1</sup>, Clare England<sup>1</sup>, Aidan Searle<sup>1</sup>, Alex Whitmarsh<sup>1</sup>

<sup>1</sup> National Institute for Health Research Bristol Biomedical Research Centre, University Hospitals of Bristol and Weston NHS Foundation Trust and University of Bristol.

**Participant Information Sheet**

A link to this sheet is provided in the first page of the online survey. This provides the respondent with further information on the purpose and their role in the study, confidentiality and use of data.

**PARTICIPANT INFORMATION SHEET**

**Survey title:** Identifying support needs of people with diabetes during the Coronavirus COVID-19 pandemic.

**Invitation paragraph**

We would like to invite you to take part in our research study. Before you decide whether to take part, it is important for you to understand why the research is being done and what it will involve. Please read through the following information carefully and discuss it with someone you trust if you wish. If there is anything that is unclear or you would like to receive more information, please do not hesitate to ask us by using the contact details provided.

**What is the purpose of the study?**

The purpose of this study is to help Diabetes UK to better understand and provide the type of support people with diabetes need during the coronavirus COVID-19 pandemic.

**Why have I been invited?**

You have been invited to take part in this study because you are over 18 years of age, have diabetes mellitus or a parent/carer/partner of someone with diabetes mellitus, and have expressed interest in taking part in this research by following the link on the study advertisement.

**Do I have to take part?**

It is up to you whether you would like to take part in this study. If you do decide to take part, you will be asked to give your consent by ticking the boxes on the web page. You are free to withdraw from the study at any time by exiting the survey and do not have to give a reason for doing so.

**What will happen to me if I take part and what will I have to do?**

Once you have read and understood the information about the study and have given your consent to take part on the survey page, by pressing Next you will be directed to the online survey. The survey will ask questions about a variety of topics related to the Coronavirus (COVID-19) outbreak. It should take around 15 minutes to complete. All the survey questions are optional. If you do not wish to answer a question, please leave it blank/do not press any of the response options and move on to the next question. The data collected during this survey will be anonymous.

**What are the possible disadvantages and risks of taking part?**

Taking part in this study is not expected to bring you any disadvantages. However, some of the survey questions will address issues that could be considered sensitive and responding to these questions may therefore cause some discomfort. For this reason, the survey questions are optional, allowing you to leave questions unanswered if you wish to avoid any sensitive topics.

**What are the possible benefits of taking part?**

Although we do not expect you to receive any immediate personal benefits from taking part in this study, the data collected could help improve the support provided to those with diabetes during the Coronavirus COVID-19 pandemic.

**Will my taking part in the study be kept confidential?**

All responses to the survey questions will be anonymous and not linked to any personal information that would identify you. The data collected as part of this study will be shared with Diabetes UK to guide how they provide support to people with diabetes. It may also be shared with other researchers in the future as part of the collective response to the Coronavirus COVID-19. However, no-one will be able to trace your individual responses.

The sponsor of this study is the University of Bristol, based in the United Kingdom. The university, and specifically the NIHR Bristol Biomedical Research Centre will act as the data controller for this study. We are therefore responsible for looking after any information you provide and using it properly. If you withdraw from the study, we will keep the information that we have already obtained. The



## Supplementary file 1: support needs of people living with diabetes during COVID-19

University of Bristol will keep your responses and identifiable information for 10 years after study completion in its secure, password-protected network. Subsequently, the information will be permanently removed in accordance with University of Bristol Policy.

Given the anonymity of the survey, it will be impossible for you to access your answers after completing the questionnaire. There is no route for us to trace your answers. As a university, we use identifiable information to conduct research to improve health, care and services. As a publicly funded organisation, we have to ensure that personally identifiable information about those who have agreed to take part in research is only utilised if it is in the public interest. This means that when you agree to complete the survey, we will use the demographic information you provide (e.g. gender, weight, height) in the ways needed to conduct and analyse the research.

### What will happen if I don't want to carry on with the study?

You are free to withdraw from the study at any time by exiting the survey web page. The answers you have already provided will be saved and may be used for analysis. However, these will be completely anonymous.

### What will happen to the results of the research study?

The results of this study will be shared with Diabetes UK and published in peer-reviewed journals. All data included in publications will be anonymous, hence it will not be possible to identify you from the data. Results obtained will only be used by organisations and researchers to conduct research in accordance with the [UK Policy Framework for Health and Social Care Research](#).

### Who is organising and funding the research?

This study is managed by Dr Sarah Sauchelli Toran, Dr Clare England, Dr Aidan Searle and Julia Bradley from the University of Bristol in collaboration with Diabetes UK. This work is supported by the Elizabeth Blackwell Institute for Health Research, University of Bristol.

### Who has reviewed the study

This study has been reviewed by the Faculty of Health Sciences Research Ethics Committee at the University of Bristol. For ethical enquiries about this study please contact [research-governance@bristol.ac.uk](mailto:research-governance@bristol.ac.uk).

### Further information and contact details

If you have any questions or require any further information, please contact Dr Sarah Sauchelli Toran by emailing [sarah.sauchellitoran@bristol.ac.uk](mailto:sarah.sauchellitoran@bristol.ac.uk).

## Online Survey

Please note that respondents are only presented answers relevant to them, not the entire survey.



### Identifying support needs among people with diabetes during the Coronavirus COVID-19 pandemic

Responsible researcher details: Dr Sarah Sauchelli Toran, NIHR Bristol Biomedical Research Centre-Nutrition, University of Bristol, [sarah.sauchellitoran@bristol.ac.uk](mailto:sarah.sauchellitoran@bristol.ac.uk)

The NIHR Bristol Biomedical Research Centre is working with Diabetes UK to better understand and provide the type of support people with diabetes need during the coronavirus COVID-19 pandemic. Please read the information below before taking part.

### Who can take part?

Adults aged 18 years or over who have a diagnosis of diabetes. Parents, carers or partners of people with diabetes can also take part.

### What will I be asked to do?

You will be asked to complete a survey with questions about your well-being, the sources you use to obtain information/advice/support, your opinions on the advice you are receiving, and any improvements you would like to see in relation to guidance/advice.

This survey is completely anonymous. You are free to withdraw at any point. Any responses you have provided up to that point will be kept. This is because once entered, responses are automatically stored. As the survey is anonymous, we will not be able to extract the responses you have already provided. As sponsor for this study, the University of Bristol will manage your data securely in compliance with the General Data Protection Regulation for health and care research, and in accordance to the Data Protection Act 1998.

The information collected from this survey will be used to help Diabetes UK and may be used to support other research in the future. As part of a collaborative research approach to tackle the effects of coronavirus COVID-19, the data may be shared anonymously with other researchers.

If you wish to learn more about how your data will be stored and shared, please [click here](#).

## Supplementary file 1: support needs of people living with diabetes during COVID-19

- ☐ I confirm that I am 18 years of age or older
- ☐ I confirm I have diabetes and / or am the parent/carer/partner of someone with diabetes
- ☐ I have read and understood the information on this page and give my consent to complete this survey

If you do not wish to complete the survey, please exit this page.

If you have any questions or concerns about the survey, please contact us by emailing [sarah.sauchellitoran@bristol.ac.uk](mailto:sarah.sauchellitoran@bristol.ac.uk). If you would like to make a complaint about this survey, please contact [research-governance@bristol.ac.uk](mailto:research-governance@bristol.ac.uk).

Introduction
<p>We will distribute this survey again in the future to see if people's experiences change over time. Please write in the box below a unique identifier that does not reveal your name (e.g. LEAF123) and remember it for the future. You can make a note of it. We will not be able to identify you through this but will be able to see changes across time.</p> <p>This is optional and you can continue without entering an ID.</p> <p>[free text]</p>

## Section A – Demographic characteristics

First, we would like to know a few things about you.

Questions	Notes
<b>What is your connection to diabetes?</b> <input type="checkbox"/> I have type 1 diabetes <input type="checkbox"/> I have type 2 diabetes <input type="checkbox"/> I have another type of diabetes <input type="checkbox"/> I am a parent or carer of someone with diabetes <input type="checkbox"/> I am the partner of someone with diabetes <input type="checkbox"/> I prefer not to say	ACTION: when 4 <sup>th</sup> or 5 <sup>th</sup> option selected, participants are directed to version of questions for parents/carers/partners
<b>Which part of the UK do you live in? Write down the first part of your postcode, the part before the space (e.g. SW14 for SW14 7QX).</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
<b>How old are you?</b> <input type="text"/> <input type="text"/> <input type="text"/>	Number 18 to 112
<b>What is your gender?</b> <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other	
<b>What is your ethnicity?</b> <input type="checkbox"/> White: British <input type="checkbox"/> White: Irish <input type="checkbox"/> White: Gypsy or Irish Traveller <input type="checkbox"/> Other White background <input type="checkbox"/> Mixed: White and Black Caribbean <input type="checkbox"/> Mixed: White and Black African <input type="checkbox"/> Mixed: White and Asian <input type="checkbox"/> Other Mixed background <input type="checkbox"/> Asian or Asian British: Indian <input type="checkbox"/> Asian or Asian British: Pakistani <input type="checkbox"/> Asian or Asian British: Bangladeshi <input type="checkbox"/> Asian or Asian British: Chinese	From ONS.

## Supplementary file 1: support needs of people living with diabetes during COVID-19

<input type="checkbox"/> Other Asian background <input type="checkbox"/> Black or Black British: African <input type="checkbox"/> Black or Black British: Caribbean <input type="checkbox"/> Other Black background <input type="checkbox"/> Arab <input type="checkbox"/> Other ethnic group <input type="checkbox"/> Prefer not to answer	
---	--

This page asks you a few more demographic questions related to Coronavirus

Questions	Notes
<b>Are you currently living alone?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>If No:</b> <b>How many other adults (over 18 years) are you living with?</b> <input type="checkbox"/> <input type="checkbox"/> <b>How many children (under 18 years) are you living with?</b> <input type="checkbox"/> <input type="checkbox"/>	
<b>Has the number of people you are living with changed as a result of the coronavirus pandemic?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	From symptom tracking surveys being released.
<b>Which of the following best describes your current circumstances?</b> <input type="checkbox"/> I am following stringent social/physical distancing (e.g. reducing social contact but leaving the house for shopping and other essentials). <input type="checkbox"/> I am self-isolating at home, either because I have symptoms of coronavirus or someone in my household does. I do not leave the house. <input type="checkbox"/> I am self-isolating at home to protect someone in my household who is shielding. I do not leave the house. <input type="checkbox"/> I am in the shielding group who are being told to stay at home at all times and avoid contact (e.g. not leaving the home even for shopping). <input type="checkbox"/> I am shielding but I have not been identified as required to shield. I do not leave the house and avoid all contact. <input type="checkbox"/> I am a key worker/still leaving home to work. <input type="checkbox"/> Don't know <input type="checkbox"/> Other. Please specify [free text]	From survey released by DUK for consistency.
<b>Have you been diagnosed with or displayed symptoms of coronavirus since the beginning of February?</b> <input type="checkbox"/> I have been diagnosed with coronavirus <input type="checkbox"/> I have shown symptoms <input type="checkbox"/> I have not shown symptoms <input type="checkbox"/> I am not sure	
If selected I have shown symptoms: <b>Please tick all of the symptoms that you have shown</b> <input type="checkbox"/> Fever (temperature) <input type="checkbox"/> Cough <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Headache <input type="checkbox"/> Runny nose/sneezing <input type="checkbox"/> Tiredness <input type="checkbox"/> Sore throat <input type="checkbox"/> Muscle aches <input type="checkbox"/> Diarrhoea <input type="checkbox"/> Vomiting <input type="checkbox"/> Loss of taste/smell	

### Section B: Diabetes management

This section asks questions about your diabetes management before and after the pandemic.

## Supplementary file 1: support needs of people living with diabetes during COVID-19

BEFORE the coronavirus pandemic and social/physical distancing guidance I was confident that...

Questions	Notes
<b>I was able to check my blood sugar if necessary. (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	Adapted from Confidence in Diabetes Self-Management Questionnaire following Patient and Public Involvement and Diabetes UK review
<b>I was able to correct my blood sugar when the sugar level was too high. (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I was able to correct my blood sugar when the sugar level was too low. (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I had a good understanding of my blood sugar levels and how to regulate these between HbA1c tests (if type 2 diabetes mellitus). (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I was able to choose the correct foods when necessary (e.g. when blood sugar level too low/high). (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I was able to keep my weight within a healthy range. (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I was able to examine my feet for cuts/ulcers or other changes. (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	
<b>I was able to follow a healthy eating pattern most of the time. (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	
<b>I was able to follow recommendations regarding physical activity. (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	
<b>I was able to take care of my mental wellbeing. (0-10)</b> Could not do at all      Certain could do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	

--- SEPARATION IN PRESENTATION---

AT PRESENT, I am confident that...

Questions	Notes
<b>I am able to check my blood sugar if necessary. (0-10)</b> Cannot do at all      Certain can do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	Adapted from Confidence in Diabetes Self-Management Questionnaire following Patient and Public Involvement and Diabetes UK review
<b>I am able to correct my blood sugar when the sugar level is too high. (0-10)</b> Cannot do at all      Certain can do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I am able to correct my blood sugar when the sugar level is too low. (0-10)</b> Cannot do at all      Certain can do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I have a good understanding of my blood sugar levels and how to regulate these between HbA1c tests (if type 2 diabetes mellitus). (0-10)</b> Cannot do at all      Certain can do <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	



## Supplementary file 1: support needs of people living with diabetes during COVID-19

<b>I am able to choose the correct foods when necessary (e.g. when blood sugar level too low/high). (0-10)</b> Cannot do at all <span style="float: right;">Certain can do</span> <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I am able to keep my weight within a healthy range. (0-10)</b> Cannot do at all <span style="float: right;">Certain can do</span> <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="checkbox"/> Not applicable to me	
<b>I am able to examine my feet for cuts/ulcers or other changes. (0-10)</b> Cannot do at all <span style="float: right;">Certain can do</span> <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	
<b>I am able to follow a healthy eating pattern most of the time. (0-10)</b> Cannot do at all <span style="float: right;">Certain can do</span> <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	
<b>I am able to follow recommendations regarding physical activity. (0-10)</b> Cannot do at all <span style="float: right;">Certain can do</span> <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	
<b>I am able to take care of my mental wellbeing. (0-10)</b> Cannot do at all <span style="float: right;">Certain can do</span> <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10	

Questions	Notes
<b>If you think your diabetes self-management has changed since the start of the pandemic, what do you think would help you get back on track?</b> [Free text...]	No limit on word input.
<b>Have you had to cancel diabetes appointments and check-ups because of the pandemic?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>If yes:</b> <b>What impact has this had on your confidence and ability to self-manage?</b> [Free text...]	

## Section C – Check-up

The questions below refer to how you are feeling as you complete this survey. If you answer “yes” to any of the questions, please consider whether you would like to continue with the survey. If you are experiencing stress, you can contact the Diabetes UK helpline by phone 0345 123 2399 or e-mail ([helpline@diabetes.org.uk](mailto:helpline@diabetes.org.uk)). Contact details for Diabetes UK Scotland are: 0141 212 8710 or e-mail ([helpline.scotland@diabetes.org.uk](mailto:helpline.scotland@diabetes.org.uk)). You can also visit their online forum [https://www.diabetes.org.uk/how\\_we\\_help/community/diabetes-support-forum](https://www.diabetes.org.uk/how_we_help/community/diabetes-support-forum).

Questions	Notes
<b>Has completion of this survey increased your levels of stress/anxiety/worry?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	Adapted from previous NHS distress protocols. Original version softened as these questions were the ones generating stress to the PPI group
<b>Has completion of this survey made you feel like crying?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Has completion of this survey made you fearful?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Right now, are you shaking?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	

## Section D – Sources used for information/advice/support during the pandemic.

In this section we want to find out what resources you have been using for advice/guidance/support during the pandemic.

Questions	Notes
<b>Which of these resources have you used for guidance on how you should behave regarding social/physical distancing measures? (Tick all that apply)</b> <input type="checkbox"/> News channels (e.g. newspaper, radio, TV, website) <input type="checkbox"/> Public Health England gov.uk website	

## Supplementary file 1: support needs of people living with diabetes during COVID-19

<input type="checkbox"/> Diabetes UK website <input type="checkbox"/> NHS website <input type="checkbox"/> Other website <input type="checkbox"/> Twitter <input type="checkbox"/> Facebook <input type="checkbox"/> GP, diabetes specialist nurse or other healthcare professional <input type="checkbox"/> Family <input type="checkbox"/> Friends <input type="checkbox"/> Employer <input type="checkbox"/> Diabetes support group/network (via telephone, WhatsApp, text messages) <input type="checkbox"/> Other. Please specify: [free text]	
If selected News channels: <b>Which news channel(s)?</b> [free text] If selected Diabetes UK website: <b>Which part(s) of the Diabetes UK website?</b> <input type="checkbox"/> Coronavirus webpage <input type="checkbox"/> Online forum <input type="checkbox"/> Other. Please specify [free text] If selected Other website: <b>Which other website(s)?</b> [free text] If selected Twitter: <b>Which part(s) of Twitter?</b> <input type="checkbox"/> Diabetes UK page <input type="checkbox"/> Other. Please specify: [free text] If selected Facebook: <b>Which part(s) of Facebook?</b> <input type="checkbox"/> Diabetes UK page <input type="checkbox"/> Diabetes support group <input type="checkbox"/> Other. Please specify: [free text]	
<b>Which one have you used the most? (Tick one)</b> <input type="checkbox"/> News channels (e.g. newspaper, radio, TV, website) <input type="checkbox"/> Public Health England gov.uk website <input type="checkbox"/> Diabetes UK website <input type="checkbox"/> NHS website <input type="checkbox"/> Other website <input type="checkbox"/> Twitter <input type="checkbox"/> Facebook <input type="checkbox"/> GP, diabetes specialist nurse or other healthcare professional <input type="checkbox"/> Family <input type="checkbox"/> Friends <input type="checkbox"/> Employer <input type="checkbox"/> Diabetes support group/network (via telephone, WhatsApp, text messages) <input type="checkbox"/> Other. Please specify: [free text]	
If selected News channels: <b>Which news channel?</b> [free text] If selected Diabetes UK website: <b>Which part of the Diabetes UK website?</b> <input type="checkbox"/> Coronavirus webpage <input type="checkbox"/> Online forum <input type="checkbox"/> Other. Please specify [free text] If selected Other website: <b>Which other website?</b> [free text] If selected Twitter: <b>Which part of Twitter?</b> <input type="checkbox"/> Diabetes UK page <input type="checkbox"/> Other. Please specify: [free text] If selected Facebook: <b>Which part of Facebook?</b>	

## Supplementary file 1: support needs of people living with diabetes during COVID-19

<input type="checkbox"/> Diabetes UK page <input type="checkbox"/> Diabetes support group Other. Please specify: [free text]	
<b>Which of these resources have you been using for guidance on general diabetes self-management since the start of the pandemic? (Tick all that apply)</b> <input type="checkbox"/> News channels (e.g. newspaper, radio, TV, website) <input type="checkbox"/> Public Health England gov.uk website <input type="checkbox"/> Diabetes UK website <input type="checkbox"/> NHS website <input type="checkbox"/> Other website <input type="checkbox"/> Twitter <input type="checkbox"/> Facebook <input type="checkbox"/> GP, diabetes specialist nurse or other healthcare professional <input type="checkbox"/> Family <input type="checkbox"/> Friends <input type="checkbox"/> Employer <input type="checkbox"/> Diabetes support group/network (via telephone, WhatsApp, text messages) <input type="checkbox"/> Other. Please specify: [free text]	
If selected News channels: <b>Which news channel(s)?</b> [free text] If selected Diabetes UK website: <b>Which part(s) of the Diabetes UK website?</b> <input type="checkbox"/> Coronavirus webpage <input type="checkbox"/> Online forum <input type="checkbox"/> Other. Please specify [free text] If selected Other website: <b>Which other website(s)?</b> [free text] If selected Twitter: <b>Which part(s) of Twitter?</b> <input type="checkbox"/> Diabetes UK page <input type="checkbox"/> Other. Please specify: [free text] If selected Facebook: <b>Which part(s) of Facebook?</b> <input type="checkbox"/> Diabetes UK page <input type="checkbox"/> Diabetes support group Other. Please specify: [free text]	
<b>Which of these resources do you use to obtain emotional support? (Tick all that apply)</b> <input type="checkbox"/> Diabetes UK website – online forum <input type="checkbox"/> Diabetes UK Helpline <input type="checkbox"/> Facebook groups <input type="checkbox"/> GP, diabetes specialist nurse or other healthcare professional <input type="checkbox"/> Family <input type="checkbox"/> Friends <input type="checkbox"/> Neighbour <input type="checkbox"/> Employer <input type="checkbox"/> Diabetes support group/network (via telephone, WhatsApp, text messages) <input type="checkbox"/> Other. Please specify: [free text]	
If selected Facebook groups: <b>Which Facebook group(s)?</b> [free text] If selected GP, diabetes specialist nurse or other healthcare professional: <b>Which healthcare professional(s)?</b> [free text]	
<b>If you are living alone, are you receiving support from people outside your household?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	
<b>If yes:</b> <b>Who are you receiving support from?</b> <input type="checkbox"/> Family	

## Supplementary file 1: support needs of people living with diabetes during COVID-19

<input type="checkbox"/> Friends <input type="checkbox"/> Neighbours <input type="checkbox"/> Other. Please specify: [free text]	
<b>How have the resources you use for guidance/support regarding diabetes self-management changed since the start of the pandemic?</b> [free text]	
<b>Which means do you use to obtain advice/guidance/support from outside your household? (tick all that apply)</b> <input type="checkbox"/> Not applicable <input type="checkbox"/> Telephone <input type="checkbox"/> Computer/laptop <input type="checkbox"/> Mobile phone (smartphone) <input type="checkbox"/> Someone in my household tells me about it <input type="checkbox"/> Other. Please specify [free text]	

**Section E – Opinions on information/advice/support received**

In this section we want your feedback on the information/advice/support you have received regarding diabetes management and social/physical distancing guidelines during the pandemic.

Questions	Notes
<b>In general, how difficult or easy has it been for you to obtain INFORMATION/ADVICE applicable to you on the following?</b> <input type="checkbox"/> Very difficult <input type="checkbox"/> Difficult <input type="checkbox"/> Moderate <input type="checkbox"/> Easy <input type="checkbox"/> Very easy <input type="checkbox"/> Not applicable to me. <input type="checkbox"/> Glucose control <input type="checkbox"/> Diet <input type="checkbox"/> Physical activity <input type="checkbox"/> Medication <input type="checkbox"/> Emotional well-being <input type="checkbox"/> Diabetes management if showing symptoms of coronavirus <input type="checkbox"/> Social/physical distancing actions to take	
<b>In general, how difficult or easy has it been for you to obtain SUPPORT applicable to you on the following?</b> <input type="checkbox"/> Very difficult <input type="checkbox"/> Difficult <input type="checkbox"/> Moderate <input type="checkbox"/> Easy <input type="checkbox"/> Very easy <input type="checkbox"/> Not applicable to me. <input type="checkbox"/> Glucose control <input type="checkbox"/> Diet <input type="checkbox"/> Physical activity <input type="checkbox"/> Medication <input type="checkbox"/> Emotional well-being <input type="checkbox"/> Diabetes management if showing symptoms of coronavirus <input type="checkbox"/> Social/physical distancing actions to take	
<b>How would you rate the QUALITY of the information/advice/support from the following sources or channels?</b> <input type="checkbox"/> Very Poor <input type="checkbox"/> Poor <input type="checkbox"/> Average <input type="checkbox"/> Good <input type="checkbox"/> Very good <input type="checkbox"/> Not applicable to me. <input type="checkbox"/> Government (e.g. webpage/daily briefs) <input type="checkbox"/> Diabetes UK <input type="checkbox"/> Social Media <input type="checkbox"/> News channels (e.g. newspapers/TV news) <input type="checkbox"/> Friends <input type="checkbox"/> Family <input type="checkbox"/> Employer <input type="checkbox"/> Healthcare team	
<b>If you have rated any of the above as very poor, poor or average, what improvements do you think should be made?</b> <b>Please describe the improvements that you think should be made (type 'NA' if not applicable)</b> [free text] <input type="checkbox"/> Government (e.g. webpage/daily briefs) <input type="checkbox"/> Diabetes UK <input type="checkbox"/> Social Media <input type="checkbox"/> News channels (e.g. newspapers/TV news) <input type="checkbox"/> Friends <input type="checkbox"/> Family	



## Supplementary file 1: support needs of people living with diabetes during COVID-19

<input type="checkbox"/> Employer	
<input type="checkbox"/> Healthcare team	

For the next questions, please consider your current network of family, friends, contacts.

Questions	Notes
<b>How would you rate their understanding of your CURRENT diabetes self-management needs?</b> <input type="checkbox"/> Very Poor <input type="checkbox"/> Poor <input type="checkbox"/> Average <input type="checkbox"/> Good <input type="checkbox"/> Very good <input type="checkbox"/> Not applicable to me	
<b>How would you rate their support in your diabetes self-management during the pandemic?</b> <input type="checkbox"/> Very Poor <input type="checkbox"/> Poor <input type="checkbox"/> Average <input type="checkbox"/> Good <input type="checkbox"/> Very good <input type="checkbox"/> Not applicable to me	
<b>How has the support you are receiving changed since before the pandemic? (0 = stayed the same)</b> Decreased <span style="float: right;">Increased</span> <input type="checkbox"/> -5 <input type="checkbox"/> -4 <input type="checkbox"/> -3 <input type="checkbox"/> -2 <input type="checkbox"/> -1 <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>In what ways do they CURRENTLY support your diabetes self-management? (Tick all that apply)</b> <input type="checkbox"/> Food shopping and/or preparation <input type="checkbox"/> Picking up medication <input type="checkbox"/> Essential travel <input type="checkbox"/> Monitoring blood glucose <input type="checkbox"/> Emotional support <input type="checkbox"/> Access to online resources (e.g. website, video meetings) <input type="checkbox"/> Prompting self-management behaviours (physical activity, foot checking etc.) <input type="checkbox"/> Other. Please specify [free text] <input type="checkbox"/> Not applicable to me	
<b>If you are living with others, please rate how much of the support you are receiving comes from the people in your household. (0-10)</b> None at all <span style="float: right;">All</span> <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Not applicable to me	

### Submit responses

Please press 'Finish' to submit your responses to this survey.

### Final page

Thank you for your completing the study. If you want support with issues related to any of the content in this survey, please contact the Diabetes UK helpline, visit their website or their online forum:

Diabetes UK main webpage: <https://www.diabetes.org.uk/>

Diabetes UK online forum: [https://www.diabetes.org.uk/how\\_we\\_help/community/diabetes-support-forum](https://www.diabetes.org.uk/how_we_help/community/diabetes-support-forum)

Diabetes UK helplines:

e-mail: [helpline@diabetes.org.uk](mailto:helpline@diabetes.org.uk) Tel: 0345 123 2399

e-mail: [helpline.scotland@diabetes.org.uk](mailto:helpline.scotland@diabetes.org.uk) Tel: 0141 212 8710

Diabetes UK coronavirus guidance: [https://www.diabetes.org.uk/about\\_us/news/coronavirus](https://www.diabetes.org.uk/about_us/news/coronavirus)

For government measures: [www.gov.uk/coronavirus](http://www.gov.uk/coronavirus)

If you have any questions or concerns about the survey, please contact us by emailing [sarah.sauchellitoran@bristol.ac.uk](mailto:sarah.sauchellitoran@bristol.ac.uk).

If you would like to make a complaint about this survey, please contact [research-governance@bristol.ac.uk](mailto:research-governance@bristol.ac.uk).

//

## Supplementary file 1: support needs of people living with diabetes during COVID-19

## VERSION FOR CARER/PARENT/PARTNER

Participants are led to this section if they have indicated that they are a parent, carer or partner of someone with diabetes.

## Section A

Questions	Notes
<b>Which part of the UK do you live in? Write down the first part of your postcode, the part before the space (e.g. SW14 for SW14 7QX)</b> [ ] [ ] [ ] [ ]	
<b>How old are you?</b> [ ] [ ] [ ]	Number 18 to 112
<b>What is your gender?</b> [ ] Male [ ] Female [ ] Other	
<b>What is your ethnicity?</b> [ ] White: British [ ] White: Irish [ ] White: Gypsy or Irish Traveller [ ] Other White background [ ] Mixed: White and Black Caribbean [ ] Mixed: White and Black African [ ] Mixed: White and Asian [ ] Other Mixed background [ ] Asian or Asian British: Indian [ ] Asian or Asian British: Pakistani [ ] Asian or Asian British: Bangladeshi [ ] Asian or Asian British: Chinese [ ] Other Asian background [ ] Black or Black British: African [ ] Black or Black British: Caribbean [ ] Other Black background [ ] Arab [ ] Other ethnic group [ ] Prefer not to answer	Adapted from the ONS.

This page asks you a few more demographic questions related to Coronavirus

Questions	Notes
<b>Are you currently living with the person who has diabetes?</b> [ ] Yes [ ] No	
<b>If yes,</b> <b>How many other adults (over 18 years) are you living with?</b> [ ] [ ] <b>How many children (under 18 years) are you living with?</b> [ ] [ ]	
<b>Has the number of people you are living with changed as a result of the coronavirus pandemic?</b> [ ] Yes [ ] No	From symptom tracking surveys being released.
<b>Which of the following best describes your current circumstances?</b> [ ] I am following stringent social/physical distancing (e.g. reducing social contact but leaving the house for shopping and other essentials). [ ] I am self-isolating at home, either because I have symptoms of coronavirus or someone in my household does. I do not leave the house. [ ] I am self-isolating at home to protect someone in my household who is shielding. I do not leave the house. [ ] I am in the shielding group who are being told to stay at home at all times and avoid contact (e.g. not leaving the home even for shopping). [ ] I am shielding but I have not been identified as required to shield. I do not leave the house and avoid all contact. [ ] I am a key worker/still leaving home to work. [ ] Don't know [ ] Other. Please specify [free text]	

<p><b>Have you been diagnosed with or displayed symptoms of coronavirus since the beginning of February?</b></p> <p><input type="checkbox"/> I have been diagnosed with coronavirus</p> <p><input type="checkbox"/> I have shown symptoms</p> <p><input type="checkbox"/> I have not shown symptoms</p> <p><input type="checkbox"/> I am not sure</p>	
<p>If selected I have shown symptoms:</p> <p><b>Please tick all of the symptoms that you have shown</b></p> <p><input type="checkbox"/> Fever (temperature)</p> <p><input type="checkbox"/> Cough</p> <p><input type="checkbox"/> Shortness of breath</p> <p><input type="checkbox"/> Headache</p> <p><input type="checkbox"/> Runny nose/sneezing</p> <p><input type="checkbox"/> Tiredness</p> <p><input type="checkbox"/> Sore throat</p> <p><input type="checkbox"/> Muscle aches</p> <p><input type="checkbox"/> Diarrhoea</p> <p><input type="checkbox"/> Vomiting</p> <p><input type="checkbox"/> Loss of taste/smell</p>	
<p><b>Has the person with diabetes been diagnosed with or displayed symptoms of coronavirus since the beginning of February?</b></p> <p><input type="checkbox"/> They have been diagnosed with coronavirus</p> <p><input type="checkbox"/> They have shown symptoms</p> <p><input type="checkbox"/> They have not shown symptoms</p> <p><input type="checkbox"/> I am not sure</p>	
<p>If selected They have shown symptoms:</p> <p><b>Please tick all of the symptoms that they have shown</b></p> <p><input type="checkbox"/> Fever (temperature)</p> <p><input type="checkbox"/> Cough</p> <p><input type="checkbox"/> Shortness of breath</p> <p><input type="checkbox"/> Headache</p> <p><input type="checkbox"/> Runny nose/sneezing</p> <p><input type="checkbox"/> Tiredness</p> <p><input type="checkbox"/> Sore throat</p> <p><input type="checkbox"/> Muscle aches</p> <p><input type="checkbox"/> Diarrhoea</p> <p><input type="checkbox"/> Vomiting</p> <p><input type="checkbox"/> Loss of taste/smell</p>	

**BEFORE** the coronavirus pandemic and social/physical distancing guidance I was confident that...

Questions	Notes
<p><b>I was able to help them check their blood sugar if necessary. (0-10)</b></p> <p>Could not do at all <span style="float: right;">Certain could do</span></p> <p><input type="radio"/>0 <input type="radio"/>1 <input type="radio"/>2 <input type="radio"/>3 <input type="radio"/>4 <input type="radio"/>5 <input type="radio"/>6 <input type="radio"/>7 <input type="radio"/>8 <input type="radio"/>9 <input type="radio"/>10</p> <p><input type="checkbox"/> Not applicable</p>	<p>Adapted from previous NHS distress protocols. Original version softened as these questions were the ones generating stress to the PPI group</p>
<p><b>I was able to help them correct their blood sugar when the sugar level was too high. (0-10)</b></p> <p>Could not do at all <span style="float: right;">Certain could do</span></p> <p><input type="radio"/>0 <input type="radio"/>1 <input type="radio"/>2 <input type="radio"/>3 <input type="radio"/>4 <input type="radio"/>5 <input type="radio"/>6 <input type="radio"/>7 <input type="radio"/>8 <input type="radio"/>9 <input type="radio"/>10</p> <p><input type="checkbox"/> Not applicable</p>	
<p><b>I was able to help them correct their blood sugar when the sugar level was too low. (0-10)</b></p> <p>Could not do at all <span style="float: right;">Certain could do</span></p> <p><input type="radio"/>0 <input type="radio"/>1 <input type="radio"/>2 <input type="radio"/>3 <input type="radio"/>4 <input type="radio"/>5 <input type="radio"/>6 <input type="radio"/>7 <input type="radio"/>8 <input type="radio"/>9 <input type="radio"/>10</p> <p><input type="checkbox"/> Not applicable</p>	
<p><b>I had a good understanding of blood sugar levels and how to help them regulate these between HbA1c tests (if type 2 diabetes mellitus). (0-10)</b></p> <p>Could not do at all <span style="float: right;">Certain could do</span></p> <p><input type="radio"/>0 <input type="radio"/>1 <input type="radio"/>2 <input type="radio"/>3 <input type="radio"/>4 <input type="radio"/>5 <input type="radio"/>6 <input type="radio"/>7 <input type="radio"/>8 <input type="radio"/>9 <input type="radio"/>10</p>	

## Supplementary file 1: support needs of people living with diabetes during COVID-19

<input type="checkbox"/> Not applicable	
<b>I was able to help them choose the correct foods when necessary (e.g. when blood sugar level too low/high). (0-10)</b> Could not do at all <span style="float:right">Certain could do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10 <input type="checkbox"/> Not applicable	
<b>I was able to help them keep their weight within a healthy range. (0-10)</b> Could not do at all <span style="float:right">Certain could do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10 <input type="checkbox"/> Not applicable	
<b>I was able to help them examine their feet for cuts/ulcers or other changes. (0-10)</b> Could not do at all <span style="float:right">Certain could do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	
<b>I was able to help them follow a healthy eating pattern most of the time. (0-10)</b> Could not do at all <span style="float:right">Certain could do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	
<b>I was able to help them follow recommendations regarding physical activity. (0-10)</b> Could not do at all <span style="float:right">Certain could do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	
<b>I was able to help them take care of their mental wellbeing. (0-10)</b> Could not do at all <span style="float:right">Certain could do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	

--- SEPARATION IN PRESENTATION---

AT PRESENT, I am confident that...

Questions	Notes
<b>I am able to help them check their blood sugar if necessary. (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10 <input type="checkbox"/> Not applicable	Adapted from previous NHS distress protocols. Original version softened as these questions were the ones generating stress to the PPI group
<b>I am able to help them correct their blood sugar when the sugar level is too high. (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10 <input type="checkbox"/> Not applicable	
<b>I am able to help them correct their blood sugar when the sugar level is too low. (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10 <input type="checkbox"/> Not applicable	
<b>I have a good understanding of blood sugar levels and how to help them regulate these between HbA1c tests (if type 2 diabetes mellitus). (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10 <input type="checkbox"/> Not applicable	
<b>I am able to help them choose the correct foods when necessary (e.g. when blood sugar level too low/high). (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10 <input type="checkbox"/> Not applicable	
<b>I am able to help them keep their weight within a healthy range. (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	
<b>I am able to help them examine their feet for cuts/ulcers or other changes. (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	
<b>I am able to help them follow a healthy eating pattern most of the time. (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	
<b>I am able to help them follow recommendations regarding physical activity. (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span> [ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	
<b>I am able to help them take care of their mental wellbeing. (0-10)</b> Cannot do at all <span style="float:right">Certain can do</span>	

## Supplementary file 1: support needs of people living with diabetes during COVID-19

[ ]0 [ ]1 [ ]2 [ ]3 [ ]4 [ ]5 [ ]6 [ ]7 [ ]8 [ ]9 [ ]10	
---	--

Questions	Notes
<b>If you think your ability to provide support in diabetes self-management has changed since the start of the pandemic, what do you think would help you improve the support you can provide?</b> [Free text...]	No limit on word input.

**Section C – Check-up**

The questions below refer to how you are feeling as you complete this survey. If you answer “yes” to any of the questions, please consider whether you would like to continue with the survey. If you are experiencing stress, you can contact the Diabetes UK helpline by phone 0345 123 2399 or e-mail ([helpline@diabetes.org.uk](mailto:helpline@diabetes.org.uk)). Contact details for Diabetes UK Scotland are: 0141 212 8710 or e-mail ([helpline.scotland@diabetes.org.uk](mailto:helpline.scotland@diabetes.org.uk)). You can also visit their online forum [https://www.diabetes.org.uk/how\\_we\\_help/community/diabetes-support-forum](https://www.diabetes.org.uk/how_we_help/community/diabetes-support-forum).

Questions	Notes
<b>Has completion of this survey increased your levels of stress/anxiety/worry?</b> [ ] Yes [ ] No	Adapted from previous NHS distress protocols. Original version softened as these questions were the ones generating stress to the PPI group.
<b>Has completion of this survey made you feel like crying?</b> [ ] Yes [ ] No	
<b>Has completion of this survey made you fearful?</b> [ ] Yes [ ] No	
<b>Right now, are you shaking?</b> [ ] Yes [ ] No	

**Section D – Sources used for information/advice/support during the pandemic.**

In this section we want to find out what resources you have been using for advice/guidance/support during the pandemic.

Questions	Notes
<b>Which of these resources have you used for guidance on how you should behave regarding social/physical distancing measures in relation to the person with diabetes? (Tick all that apply)</b> [ ] News channels (e.g. newspaper, radio, TV, website) [ ] Public Health England gov.uk website [ ] Diabetes UK website [ ] NHS website [ ] Other website [ ] Twitter [ ] Facebook [ ] GP, diabetes specialist nurse or other healthcare professional [ ] Family [ ] Friends [ ] Employer [ ] Diabetes support group/network (via telephone, WhatsApp, text messages) [ ] Other. Please specify: [free text]	
If selected News channels: <b>Which news channel(s)?</b> [free text] If selected Diabetes UK website: <b>Which part(s) of the Diabetes UK website?</b> <input type="checkbox"/> Coronavirus webpage <input type="checkbox"/> Online forum <input type="checkbox"/> Other. Please specify [free text] If selected Other website: <b>Which other website(s)?</b> [free text] If selected Twitter:	



## Supplementary file 1: support needs of people living with diabetes during COVID-19

<p><b>Which part(s) of Twitter?</b></p> <p><input type="checkbox"/> Diabetes UK page</p> <p><input type="checkbox"/> Other. Please specify: [free text]</p> <p>If selected Facebook:</p> <p><b>Which part(s) of Facebook?</b></p> <p><input type="checkbox"/> Diabetes UK page</p> <p><input type="checkbox"/> Diabetes support group</p> <p><input type="checkbox"/> Other. Please specify: [free text]</p>	
<p><b>Which one have you use the most? (Tick one)</b></p> <p><input type="checkbox"/> News channels (e.g. newspaper, radio, TV, website)</p> <p><input type="checkbox"/> Public Health England gov.uk website</p> <p><input type="checkbox"/> Diabetes UK website</p> <p><input type="checkbox"/> NHS website</p> <p><input type="checkbox"/> Other website</p> <p><input type="checkbox"/> Twitter</p> <p><input type="checkbox"/> Facebook</p> <p><input type="checkbox"/> GP, diabetes specialist nurse or other healthcare professional</p> <p><input type="checkbox"/> Family</p> <p><input type="checkbox"/> Friends</p> <p><input type="checkbox"/> Employer</p> <p><input type="checkbox"/> Diabetes support group/network (via telephone, WhatsApp, text messages)</p> <p><input type="checkbox"/> Other. Please specify: [free text]</p>	
<p>If selected News channels:</p> <p><b>Which news channel?</b></p> <p>[free text]</p> <p>If selected Diabetes UK website:</p> <p><b>Which part of the Diabetes UK website?</b></p> <p><input type="checkbox"/> Coronavirus webpage</p> <p><input type="checkbox"/> Online forum</p> <p><input type="checkbox"/> Other. Please specify [free text]</p> <p>If selected Other website:</p> <p><b>Which other website?</b></p> <p>[free text]</p> <p>If selected Twitter:</p> <p><b>Which part of Twitter?</b></p> <p><input type="checkbox"/> Diabetes UK page</p> <p><input type="checkbox"/> Other. Please specify: [free text]</p> <p>If selected Facebook:</p> <p><b>Which part of Facebook?</b></p> <p><input type="checkbox"/> Diabetes UK page</p> <p><input type="checkbox"/> Diabetes support group</p> <p><input type="checkbox"/> Other. Please specify: [free text]</p>	
<p><b>Which of these resources have you been using for guidance on general diabetes management since the start of the pandemic? (Tick all that apply)</b></p> <p><input type="checkbox"/> News channels (e.g. newspaper, radio, TV, website)</p> <p><input type="checkbox"/> Public Health England gov.uk website</p> <p><input type="checkbox"/> Diabetes UK website</p> <p><input type="checkbox"/> NHS website</p> <p><input type="checkbox"/> Other website</p> <p><input type="checkbox"/> Twitter</p> <p><input type="checkbox"/> Facebook</p> <p><input type="checkbox"/> GP, diabetes specialist nurse or other healthcare professional</p> <p><input type="checkbox"/> Family</p> <p><input type="checkbox"/> Friends</p> <p><input type="checkbox"/> Employer</p> <p><input type="checkbox"/> Diabetes support group/network (via telephone, WhatsApp, text messages)</p> <p><input type="checkbox"/> Other. Please specify: [free text]</p>	
<p>If selected News channels:</p> <p><b>Which news channel(s)?</b></p> <p>[free text]</p> <p>If selected Diabetes UK website:</p> <p><b>Which part(s) of the Diabetes UK website?</b></p>	

## Supplementary file 1: support needs of people living with diabetes during COVID-19

<input type="checkbox"/> Coronavirus webpage <input type="checkbox"/> Online forum <input type="checkbox"/> Other. Please specify [free text] If selected Other website: <b>Which other website(s)?</b> [free text] If selected Twitter: <b>Which part(s) of Twitter?</b> <input type="checkbox"/> Diabetes UK page <input type="checkbox"/> Other. Please specify: [free text] If selected Facebook: <b>Which part(s) of Facebook?</b> <input type="checkbox"/> Diabetes UK page <input type="checkbox"/> Diabetes support group <input type="checkbox"/> Other. Please specify: [free text]	
<b>Which of these resources do you use to obtain emotional support? (Tick all that apply)</b> <input type="checkbox"/> Diabetes UK website – online forum <input type="checkbox"/> Diabetes UK Helpline <input type="checkbox"/> Facebook groups <input type="checkbox"/> GP, diabetes specialist nurse or other healthcare professional <input type="checkbox"/> Family <input type="checkbox"/> Friends <input type="checkbox"/> Employer <input type="checkbox"/> Diabetes support group/network (via telephone, WhatsApp, text messages) <input type="checkbox"/> Other. Please specify: [free text]	
If selected Facebook groups: <b>Which Facebook group(s)?</b> [free text] If selected GP, diabetes specialist nurse or other healthcare professional: <b>Which healthcare professional(s)?</b> [free text]	
<b>How have the resources you use for guidance/support on how to help in diabetes management changed since the start of the pandemic?</b> [free text]	
<b>Which means do you use to obtain advice/guidance/support from outside your household? (tick all that apply)</b> <input type="checkbox"/> Not applicable <input type="checkbox"/> Telephone <input type="checkbox"/> Computer/laptop <input type="checkbox"/> Mobile phone (smartphone) <input type="checkbox"/> Someone in my household tells me about it <input type="checkbox"/> Other. Please specify [free text]	

**Section E – Opinions on information/advice/support received**

In this section we want your feedback on the information/advice/support you have received regarding diabetes management and social/physical distancing guidelines during the pandemic.

Questions	Notes
<b>In general, how difficult or easy has it been for you to obtain INFORMATION/ADVICE applicable to the person you are helping on the following?</b> <input type="checkbox"/> Very difficult <input type="checkbox"/> Difficult <input type="checkbox"/> Moderate <input type="checkbox"/> Easy <input type="checkbox"/> Very easy <input type="checkbox"/> Not applicable to me. <input type="checkbox"/> Glucose control <input type="checkbox"/> Diet <input type="checkbox"/> Physical activity <input type="checkbox"/> Medication <input type="checkbox"/> Emotional well-being <input type="checkbox"/> Diabetes management if showing symptoms of coronavirus <input type="checkbox"/> Social/physical distancing actions to take	
<b>In general, how difficult or easy has it been for you to obtain SUPPORT applicable to the person you are helping on the following?</b> <input type="checkbox"/> Very difficult <input type="checkbox"/> Difficult <input type="checkbox"/> Moderate <input type="checkbox"/> Easy <input type="checkbox"/> Very easy <input type="checkbox"/> Not applicable to me. <input type="checkbox"/> Glucose control <input type="checkbox"/> Diet	

## Supplementary file 1: support needs of people living with diabetes during COVID-19

<input type="checkbox"/> Physical activity <input type="checkbox"/> Medication <input type="checkbox"/> Emotional well-being <input type="checkbox"/> Diabetes management if showing symptoms of coronavirus <input type="checkbox"/> Social/physical distancing actions to take	
<b>How would you rate the QUALITY of the information/advice/support from the following sources or channels?</b> <input type="checkbox"/> Very Poor <input type="checkbox"/> Poor <input type="checkbox"/> Average <input type="checkbox"/> Good <input type="checkbox"/> Very good <input type="checkbox"/> Not applicable to me. <input type="checkbox"/> Government (e.g. webpage/daily briefs) <input type="checkbox"/> Diabetes UK <input type="checkbox"/> Social Media <input type="checkbox"/> News channels (e.g. newspapers/TV news) <input type="checkbox"/> Friends <input type="checkbox"/> Family <input type="checkbox"/> Employer <input type="checkbox"/> Healthcare team	
<b>If you have rated any of the above as very poor, poor or average, what improvements do you think should be made?</b> <b>Please describe the improvements that you think should be made (type 'NA' if not applicable)</b> [free text] <input type="checkbox"/> Government (e.g. webpage/daily briefs) <input type="checkbox"/> Diabetes UK <input type="checkbox"/> Social Media <input type="checkbox"/> News channels (e.g. newspapers/TV news) <input type="checkbox"/> Friends <input type="checkbox"/> Family <input type="checkbox"/> Employer <input type="checkbox"/> Healthcare team	

For the next questions, please reflect on your role as someone helping an individual with diabetes.

Questions	Notes
<b>How would you rate your understanding of their CURRENT diabetes self-management needs?</b> <input type="checkbox"/> Very Poor <input type="checkbox"/> Poor <input type="checkbox"/> Average <input type="checkbox"/> Good <input type="checkbox"/> Very good <input type="checkbox"/> Not applicable to me	
<b>In what ways do you CURRENTLY support the individual in their diabetes self-management? (Tick all that apply)</b> <input type="checkbox"/> Food shopping and/or preparation <input type="checkbox"/> Picking up medication <input type="checkbox"/> Essential travel <input type="checkbox"/> Monitoring blood glucose <input type="checkbox"/> Emotional support <input type="checkbox"/> Access to online resources (e.g. website, video meetings) <input type="checkbox"/> Prompting self-management behaviours (physical activity, foot checking etc.) <input type="checkbox"/> Other. Please specify [free text] <input type="checkbox"/> Not applicable to me	Feel free to add any other response.

#### Submit responses

Please press 'Finish' to submit your responses to this survey.

#### Final page

Thank you for your completing the study. If you want support with issues related to any of the content in this survey, please contact the Diabetes UK helpline, visit their website or their online forum:

Diabetes UK main webpage: <https://www.diabetes.org.uk/>

Diabetes UK online forum: [https://www.diabetes.org.uk/how\\_we\\_help/community/diabetes-support-forum](https://www.diabetes.org.uk/how_we_help/community/diabetes-support-forum)

Diabetes UK helplines:

e-mail: [helpline@diabetes.org.uk](mailto:helpline@diabetes.org.uk) Tel: 0345 123 2399

## Supplementary file 1: support needs of people living with diabetes during COVID-19

e-mail: [helpline.scotland@diabetes.org.uk](mailto:helpline.scotland@diabetes.org.uk) Tel: 0141 212 8710

Diabetes UK coronavirus guidance: [https://www.diabetes.org.uk/about\\_us/news/coronavirus](https://www.diabetes.org.uk/about_us/news/coronavirus)

For government measures: [www.gov.uk/coronavirus](http://www.gov.uk/coronavirus)

If you have any questions or concerns about the survey, please contact us by emailing [sarah.sauchellitoran@bristol.ac.uk](mailto:sarah.sauchellitoran@bristol.ac.uk).

If you would like to make a complaint about this survey, please contact [research-governance@bristol.ac.uk](mailto:research-governance@bristol.ac.uk)

Supplementary file 2: support needs of people living with diabetes during COVID-19

## **Supplementary File 2**

**Title: Addressing support needs of people living with diabetes during the coronavirus COVID-19 pandemic: insights from a UK survey.**

Sarah Sauchelli<sup>\*1</sup>, Julia Bradley<sup>1</sup>, Clare England<sup>1</sup>, Aidan Searle<sup>1</sup>, Alex Whitmarsh<sup>1</sup>

<sup>1</sup> *National Institute for Health Research Bristol Biomedical Research Centre, University Hospitals of Bristol and Weston NHS Foundation Trust and University of Bristol.*

### **Responses to the survey**

#### **1. Responses from people living with diabetes**

##### *1.1. Geographical distribution of responses*

<b>Region/Nation</b>	<b>n</b>	<b>%</b>
Scotland	89	11.6
Wales	32	4.18
East Midlands	31	4.05
East of England	52	6.8
Greater London	65	8.5
North East	14	1.83
North West	55	7.19
Northern Ireland	14	1.83
South East	193	25.2
South West	142	18.6
West Midlands	57	7.45
Yorkshire & Humber	21	2.75
<b>Total</b>	<b>765</b>	

##### *1.2. Demographic characteristics.*

<b>Diabetes group</b>	<b>n</b>	<b>%</b>
Type 1 diabetes	535	69.2
Type 2 diabetes	220	28.5
Another type of diabetes	18	2.3
	773	100.0



## Supplementary file 2: support needs of people living with diabetes during COVID-19

	All (n=773)	Type 1 (n=535)	Type 2 (n=220)
<b>Gender, n (%)</b>			
Female	516 (67.1%)	365 (68.6%)	139 (63.5%)
Male	249 (32.4%)	165 (31.0%)	78 (35.6%)
Other	4 (0.5%)	2 (0.4%)	2 (0.9%)
<b>Age, mean (SD)</b>	47.9 (14.5)	44.4 (14.2)	56.5 (11.4)
<b>Ethnicity, n (%)</b>			
Arab	1 (0.1%)	1 (0.2%)	0 (0.0%)
Asian or Asian British: Chinese	3 (0.4%)	0 (0.0%)	3 (1.4%)
Asian or Asian British: Indian	8 (1.0%)	2 (0.4%)	6 (2.7%)
Asian or Asian British: Pakistani	1 (0.1%)	1 (0.2%)	0 (0.0%)
Black or Black British: Caribbean	4 (0.5%)	0 (0.0%)	4 (1.8%)
Mixed: White and Asian	5 (0.7%)	3 (0.6%)	2 (0.9%)
Mixed: White and Black African	1 (0.1%)	1 (0.2%)	0 (0.0%)
Mixed: White and Black Caribbean	1 (0.1%)	1 (0.2%)	0 (0.0%)
Other ethnic group	1 (0.1%)	0 (0.0%)	1 (0.5%)
Other Mixed background	1 (0.1%)	1 (0.2%)	0 (0.0%)
Other White background	31 (4.0%)	26 (4.9%)	5 (2.3%)
Prefer not to answer	3 (0.4%)	2 (0.4%)	1 (0.5%)
White: British	693 (90.1%)	485 (91.2%)	192 (87.7%)
White: Irish	16 (2.1%)	9 (1.7%)	5 (2.3%)

**Living circumstances**

Are you currently living alone?	All	Type 1	Type 2
No	649 (84.1%)	458 (85.6%)	176 (80.4%)
Yes	123 (15.9%)	77 (14.4%)	43 (19.6%)
	772 (100.0%)	535 (100.0%)	219 (100.0%)

Has the number of people you are living with changed as a result of the coronavirus pandemic?	All	Type 1	Type 2
No	684 (88.9%)	467 (87.6%)	200 (91.7%)
Yes	85 (11.1%)	66 (12.4%)	18 (8.3%)
	769 (100.0%)	533 (100.0%)	218 (100.0%)

## Supplementary file 2: support needs of people living with diabetes during COVID-19

**Circumstances in relation to COVID-19**

Have you been diagnosed with or displayed symptoms of coronavirus since the beginning of February?	All	Type 1	Type 2
No	623 (81.0%)	434 (81.8%)	176 (80.0%)
Yes	70 (9.1%)	47 (8.9%)	21 (9.5%)
Diagnosed with coronavirus	2 (0.3%)	2 (0.4%)	0 (0.0%)
Not sure	74 (9.6%)	48 (9.0%)	23 (10.5%)
	769 (100.0%)	531 (100.0%)	220 (100.0%)

Which of the following best describes your current circumstances?	All	Type 1	Type 2
Following stringent Physical/social/physical distancing	513 (66.8%)	355 (66.9%)	147 (67.1%)
Self-isolating at home	16 (2.1%)	9 (1.7%)	7 (3.3%)
Shielding group	59 (7.7%)	37 (7.0%)	19 (8.7%)
Shielding (but not in shielding group)	75 (9.8%)	49 (9.2%)	22 (10.0%)
Key worker/still leaving home to work	97 (12.6%)	75 (14.1%)	22 (10.1%)
Other	4 (5.7%)	3 (0.6%)	1 (0.5%)
Don't know	4 (0.5%)	3 (0.6%)	1 (0.5%)
	768 (100.0%)	531 (100.0%)	219 (100.0%)

*1.3. Confidence in diabetes self-management*

BEFORE the coronavirus pandemic and social/physical distancing guidance I was confident that I was able to...	All		Type 1		Type 2	
	n	Median (IQR)	n	Median (IQR)	n	Median (IQR)
Check blood glucose	720	10 (10, 10)	528	10 (10, 10)	174	10 (9, 10)
Correct high blood glucose	703	10 (8, 10)	530	10 (9, 10)	156	7 (3, 10)
Correct low blood glucose	680	10 (9, 10)	526	10 (10, 10)	136	10 (7, 10)
Good blood glucose regulation	571	9 (7, 10)	363	10 (8, 10)	197	8 (5, 10)
Choose correct foods	729	10 (8, 10)	519	10 (9, 10)	192	8 (5, 10)
Keep healthy weight	755	7 (4, 10)	525	8 (5, 10)	212	5 (2, 8)
Examine feet	769	10 (8, 10)	533	10 (8, 10)	218	10 (7, 10)
Healthy eating pattern	770	8 (6, 10)	534	9 (7, 10)	218	7 (5, 9)
Physical activity	770	8 (5, 10)	534	8 (6, 10)	218	6 (4, 9)
Mental wellbeing	770	8 (5, 10)	534	8 (6, 10)	218	7 (5, 10)

Note: score given on a Likert scale ranging from 0 (Could not do at all) to 10 (Certain could do). Not applicable was also an option to account inter-individual variability in condition and self-management requirements.

AT PRESENT, I am confident that...	All		Type 1		Type 2	
	n	Median (IQR)	N	Median (IQR)	n	Median (IQR)
Check blood glucose	727	10 (10, 10)	530	10 (10, 10)	179	10 (9, 10)
Correct high blood glucose	718	10 (8, 10)	531	10 (9, 10)	170	7 (4, 10)
Correct low blood glucose	697	10 (9, 10)	526	10 (9, 10)	153	9 (6, 10)
Good blood glucose	578	9 (7, 10)	367	10 (8, 10)	200	8 (5, 10)

## Supplementary file 2: support needs of people living with diabetes during COVID-19

regulation						
Choose correct foods	744	9 (7, 10)	524	10 (8, 10)	202	8 (5, 10)
Keep healthy weight	759	7 (4, 9)	524	7 (5, 10)	217	5 (2, 7)
Examine feet	764	10 (8, 10)	527	10 (8, 10)	219	10 (7, 10)
Healthy eating pattern	766	8 (6, 10)	530	8 (6, 10)	218	7 (5, 9)
Physical activity	768	7 (5, 10)	531	8 (5, 10)	219	6 (4, 8)
Mental wellbeing	765	7 (5, 9)	530	7 (5, 9)	217	7 (4, 9)

Note: score given on a Likert scale ranging from 0 (Could not do at all) to 10 (Certain could do). Not applicable was also an option to account inter-individual variability in condition and self-management requirements.

Change in score	All	Type 1	Type 2
<b>Check blood glucose</b>			
Decreased	68 (9.6%)	45 (8.6%)	23 (13.5%)
Same	600 (84.3%)	453 (86.5%)	129 (75.9%)
Increased	44 (6.2%)	26 (5.0%)	18 (10.6%)
<b>Correct high blood glucose</b>			
Decreased	95 (13.6%)	67 (12.7%)	25 (16.2%)
Same	510 (73.1%)	410 (77.8%)	88 (57.1%)
Increased	93 (13.3%)	50 (9.5%)	41 (26.6%)
<b>Correct low blood glucose</b>			
Decreased	92 (13.7%)	71 (13.7%)	20 (14.8%)
Same	522 (77.7%)	412 (79.4%)	93 (68.9%)
Increased	58 (8.6%)	36 (6.9%)	22 (16.3%)
<b>Good blood glucose regulation</b>			
Decreased	92 (16.6%)	48 (13.5%)	42 (22.1%)
Same	380 (68.5%)	262 (73.8%)	111 (58.4%)
Increased	83 (15.0%)	45 (12.7%)	37 (19.5%)
<b>Choose correct foods</b>			
Decreased	173 (24.1%)	107 (20.8%)	60 (32.1%)
Same	440 (61.2%)	345 (67.1%)	87 (46.5%)
Increased	106 (14.7%)	62 (12.1%)	40 (21.4%)
<b>Keep healthy weight</b>			
Decreased	202 (27.1%)	144 (27.9%)	53 (25.2%)
Same	386 (51.8%)	284 (54.9%)	93 (44.3%)
Increased	157 (21.1%)	89 (17.2%)	64 (30.5%)
<b>Examine feet</b>			
Decreased	87 (11.4%)	58 (11.0%)	27 (12.4%)
Same	598 (78.7%)	419 (79.8%)	163 (75.1%)
Increased	75 (9.9%)	48 (9.1%)	27 (12.4%)
<b>Healthy eating pattern</b>			
Decreased	226 (29.6%)	153 (28.9%)	69 (31.9%)
Same	393 (51.5%)	287 (54.3%)	93 (43.1%)
Increased	144 (18.9%)	89 (16.8%)	54 (25.0%)
<b>Physical activity</b>			
Decreased	245 (32.0%)	166 (31.3%)	71 (32.7%)
Same	361 (47.2%)	257 (48.5%)	96 (44.2%)
Increased	159 (20.8%)	107 (20.2%)	50 (23.0%)
<b>Mental wellbeing</b>			

## Supplementary file 2: support needs of people living with diabetes during COVID-19

Decreased	282 (37.0%)	207 (39.1%)	66 (30.7%)
Same	362 (47.5%)	244 (46.1%)	110 (51.2%)
Increased	118 (15.5%)	78 (14.7%)	39 (18.1%)

**Difference between respondents living alone and those living with others**

Change in score	Not living alone	Living alone
<b>Check blood glucose</b>		
Decreased	55 (9.0%)	13 (12.6%)
Same	516 (84.9%)	84 (81.6%)
Increased	37 (6.1%)	6 (5.8%)
<b>Correct high blood glucose</b>		
Decreased	71 (11.9%)	24 (23.3%)
Same	445 (74.8%)	65 (63.1%)
Increased	79 (13.3%)	14 (13.6%)
<b>Correct low blood glucose</b>		
Decreased	70 (12.3%)	22 (21.8%)
Same	451 (79.0%)	71 (70.3%)
Increased	50 (8.8%)	8 (7.9%)
<b>Good blood glucose regulation</b>		
Decreased	74 (15.6%)	18 (22.0%)
Same	327 (69.1%)	53 (64.6%)
Increased	72 (15.2%)	11 (13.4%)
<b>Choose correct foods</b>		
Decreased	150 (24.6%)	23 (20.9%)
Same	373 (61.2%)	67 (60.9%)
Increased	86 (14.1%)	20 (18.2%)
<b>Keep healthy weight</b>		
Decreased	166 (26.3%)	36 (31.6%)
Same	329 (52.2%)	57 (50.0%)
Increased	135 (21.4%)	21 (18.4%)
<b>Examine feet</b>		
Decreased	68 (10.6%)	19 (16.1%)
Same	508 (79.3%)	90 (76.3%)
Increased	65 (10.1%)	9 (7.6%)
<b>Healthy eating pattern</b>		
Decreased	185 (28.7%)	41 (35.0%)
Same	335 (51.9%)	57 (48.7%)
Increased	125 (19.4%)	19 (16.2%)
<b>Physical activity</b>		
Decreased	190 (29.5%)	55 (46.2%)
Same	309 (47.9%)	51 (42.9%)
Increased	146 (22.6%)	13 (10.9%)
<b>Mental wellbeing</b>		
Decreased	235 (36.6%)	47 (39.5%)
Same	301 (46.9%)	60 (50.4%)
Increased	106 (16.5%)	12 (10.1%)

## Supplementary file 2: support needs of people living with diabetes during COVID-19

**Differences between individuals living alone that were not receiving outside support and those that were.**

Change in score	Not receiving outside support	Receiving outside support
<b>Check blood glucose</b>		
Decreased	7 (17%)	5 (9%)
Same	30 (73%)	51 (89%)
Increased	4 (10%)	1 (2%)
<b>Correct high blood glucose</b>		
Decreased	10 (25%)	14 (24%)
Same	23 (57%)	39 (66%)
Increased	7 (18%)	6 (10%)
<b>Correct low blood glucose</b>		
Decreased	6 (16%)	15 (26%)
Same	30 (79%)	38 (66%)
Increased	2 (5%)	5 (9%)
<b>Good blood glucose regulation</b>		
Decreased	7 (22%)	10 (22%)
Same	19 (59%)	33 (72%)
Increased	6 (19%)	3 (7%)
<b>Choose correct foods</b>		
Decreased	8 (19%)	15 (24%)
Same	24 (56%)	40 (63%)
Increased	11 (26%)	8 (13%)
<b>Keep healthy weight</b>		
Decreased	10 (23%)	24 (37%)
Same	21 (49%)	33 (51%)
Increased	12 (28%)	8 (12%)
<b>Examine feet</b>		
Decreased	5 (11%)	13 (19%)
Same	33 (75%)	52 (78%)
Increased	6 (14%)	2 (3%)
<b>Healthy eating pattern</b>		
Decreased	15 (34%)	23 (35%)
Same	21 (48%)	32 (48%)
Increased	8 (18%)	11 (17%)
<b>Physical activity</b>		
Decreased	18 (40%)	34 (51%)
Same	23 (51%)	24 (36%)
Increased	4 (9%)	9 (13%)
<b>Mental wellbeing</b>		
Decreased	18 (40%)	27 (40%)
Same	25 (56%)	31 (46%)
Increased	2 (4%)	9 (13%)

Note: This table is restricted to participants who reported living alone for the question on living circumstances.

Qualitative responses regarding what respondents perceive they need to improve their diabetes self-management are summarised in the main manuscript.



## Supplementary file 2: support needs of people living with diabetes during COVID-19

*1.4. Cancellation of clinical appointments*

Have you had to cancel diabetes appointments and check-ups because of the pandemic?	All	Type 1	Type 2
No	372 (48.2%)	249 (46.7%)	118 (53.6%)
Yes	399 (51.8%)	284 (53.3%)	102 (46.4%)
	771 (100.0%)	533 (100.0%)	220 (100.0%)

Qualitative responses regarding the impact of the cancellation of appointments are summarised in the appendices.

*1.5. Sources used for information, advice and support*

Which of these resources have you used for guidance on how you should behave regarding social/physical distancing measures? (Tick all that apply)	All (n = 770)	%	Type 1 (n = 535)	%	Type 2 (n = 217)	%
News channels	557	72.3	384	71.8	158	72.8
Public Health and government website	386	50.1	286	53.5	91	41.9
Diabetes UK website	461	59.9	340	63.6	110	50.7
NHS website	386	50.1	282	52.7	100	46.1
Other website	52	6.8	36	6.7	12	5.5
Social media	219	28.4	156	29.2	56	25.8
GP, diabetes nurse, healthcare professional	261	33.9	185	34.6	68	31.3
Family	174	22.6	125	23.4	41	18.9
Friends	111	14.4	79	14.8	28	12.9
Employer	113	14.7	85	15.9	23	10.6
Diabetes support group	67	8.7	52	9.7	11	5.1
Other	12	1.6	7	1.3	4	1.8

Which one have you used the most? (Tick one)	All	%	Type 1	%	Type 2	%
News channels	352	46.1	229	43.2	114	52.8
Public Health and government website	96	12.6	66	12.5	30	13.9
Diabetes UK website	113	14.8	83	15.7	28	13.0
NHS website	51	6.7	35	6.6	15	6.9
Other website	11	1.4	7	1.3	3	1.4
Social media	30	3.9	26	4.9	3	1.4
Facebook	31	4.1	24	4.5	7	3.2
GP, diabetes nurse, healthcare professional	33	4.3	22	4.2	8	3.7
Family	22	2.9	17	3.2	4	1.9
Friends	3	0.4	2	0.4	1	0.5
Employer	13	1.7	11	2.1	2	0.9
Diabetes support group	3	0.4	3	0.6	0	0.0
Other	5	0.7	4	0.8	1	0.5
Not applicable	1	0.1	1	0.2	0	0.0

Which of these resources have you been using for guidance on general diabetes self-management since the start of the	All (n = 713)	%	Type 1 (n = 487)	%	Type 2 (n = 208)	%
--	------------------	---	---------------------	---	---------------------	---

## Supplementary file 2: support needs of people living with diabetes during COVID-19

<b>pandemic? (Tick all that apply)</b>						
News channels	101	14.2	64	13.1	34	16.4
Public Health and government website	76	10.7	48	9.9	24	11.5
Diabetes UK website	347	48.7	240	49.3	99	47.6
NHS website	153	21.5	99	20.3	53	25.5
Other website	28	3.9	19	3.9	8	3.9
Twitter	37	5.2	33	6.8	3	1.4
Facebook	63	8.8	46	9.5	17	8.2
GP, diabetes nurse, healthcare professional	207	29.0	148	30.4	51	24.5
Family	57	8.0	42	8.6	14	6.7
Friends	26	3.7	20	4.1	6	2.9
Employer	9	1.3	6	1.2	3	1.4
Diabetes support group	48	6.7	43	8.8	4	1.9
Other	15	2.1	9	1.9	6	2.9

<b>Which of these resources do you use to obtain emotional support? (Tick all that apply)</b>	<b>All (n = 687)</b>	<b>%</b>	<b>Type 1 (n = 474)</b>	<b>%</b>	<b>Type 2 (n = 196)</b>	<b>%</b>
Diabetes UK website – online forum	55	8.0	31	6.5	23	11.7
Diabetes UK helpline	15	2.2	7	1.5	7	3.6
Social media communities	71	10.3	54	11.4	16	8.2
GP, diabetes nurse, healthcare professional	86	12.5	61	12.9	23	11.7
Family	473	68.9	326	68.8	134	68.4
Friends	350	51.0	256	54.0	86	43.9
Employer	39	5.7	23	4.9	16	8.2
Diabetes support group	32	4.7	28	5.9	3	1.5
Other	10	1.5	8	1.7	2	1.0

<b>Which means do you use to obtain advice/guidance/support from outside your household? (tick all that apply)</b>	<b>All (n = 638*)</b>	<b>Type 1 (n = 442)</b>	<b>Type 2 (n = 179)</b>
Telephone	124 (19.4%)	80 (18.1%)	43 (24.0%)
Computer	467 (73.2%)	319 (72.2%)	133 (74.3%)
Mobile phone	429 (67.2%)	315 (71.3%)	102 (57.0%)
Someone in the house	41 (6.4%)	25 (5.7%)	15 (8.4%)
Other	3 (0.5%)	2 (0.5%)	1 (0.6%)

\*113 people said not applicable

**Questions specific to those respondents living alone**

<b>If you are living alone, are you receiving support from people outside your household?</b>	<b>All*</b>	<b>Type 1</b>	<b>Type 2</b>
No	83 (50.6%)	51 (47.2%)	30 (58.8%)
Yes	81 (49.4%)	57 (52.8%)	21 (41.2%)
	164 (100.0%)	108 (100.0%)	51 (100.0%)

\*588 people said NA

This table is restricted to participants who reported living alone for the question on living circumstances.

<b>If yes, who from?</b>	<b>All</b>
--------------------------	------------

## Supplementary file 2: support needs of people living with diabetes during COVID-19

	(n = 81)
Family	55 (67.9%)
Friends	54 (66.7%)
Neighbours	22 (27.2%)
Other	4 (4.9%)

**Opinions on information, advice, and support received**

In general, how difficult or easy has it been for you to obtain INFORMATION/ADVICE applicable to you on the following?	All	Type 1	Type 2
<b>Glucose control</b>			
Very difficult	34 (5.5%)	15 (3.5%)	17 (10.2%)
Difficult	89 (14.4%)	52 (12.0%)	34 (20.4%)
Moderate	168 (27.3%)	123 (28.3%)	41 (24.6%)
Easy	164 (26.6%)	125 (28.8%)	34 (20.4%)
Very easy	161 (26.1%)	119 (27.4%)	41 (24.6%)
<b>Diet</b>			
Very difficult	39 (6.2%)	18 (4.3%)	21 (10.7%)
Difficult	80 (12.8%)	46 (11.0%)	32 (16.3%)
Moderate	174 (27.8%)	121 (29.0%)	51 (26.0%)
Easy	173 (27.6%)	120 (28.8%)	45 (23.0%)
Very easy	160 (25.6%)	112 (26.9%)	47 (24.0%)
<b>Physical activity</b>			
Very difficult	47 (7.3%)	28 (6.4%)	19 (9.8%)
Difficult	85 (13.2%)	55 (12.6%)	27 (13.9%)
Moderate	163 (25.3%)	109 (25.1%)	50 (25.8%)
Easy	199 (30.9%)	133 (30.6%)	60 (30.9%)
Very easy	149 (23.2%)	110 (25.3%)	38 (19.6%)
<b>Medication</b>			
Very difficult	34 (5.2%)	21 (4.7%)	11 (5.8%)
Difficult	94 (14.4%)	57 (12.8%)	35 (18.3%)
Moderate	165 (25.3%)	110 (24.6%)	50 (26.2%)
Easy	193 (29.6%)	139 (31.1%)	51 (26.7%)
Very easy	167 (25.6%)	120 (26.8%)	44 (23.0%)
<b>Emotional wellbeing</b>			
Very difficult	84 (13.3%)	58 (13.5%)	25 (13.3%)
Difficult	132 (20.9%)	89 (20.7%)	40 (21.3%)
Moderate	197 (31.2%)	136 (31.7%)	58 (30.9%)
Easy	122 (19.3%)	79 (18.4%)	37 (19.7%)
Very easy	96 (15.2%)	67 (15.6%)	28 (14.9%)
<b>Diabetes management (if showing symptoms)</b>			
Very difficult	59 (15.7%)	40 (14.5%)	19 (20.2%)
Difficult	70 (18.7%)	47 (17.1%)	21 (22.3%)
Moderate	103 (27.5%)	77 (28.0%)	26 (27.7%)
Easy	79 (21.1%)	62 (22.5%)	15 (16.0%)
Very easy	64 (17.1%)	49 (17.8%)	13 (13.8%)
<b>Physical/social/physical distancing</b>			
Very difficult	62 (8.7%)	48 (9.7%)	13 (6.5%)
Difficult	104 (14.5%)	81 (16.3%)	20 (10.0%)

## Supplementary file 2: support needs of people living with diabetes during COVID-19

Moderate	169 (23.6%)	117 (23.5%)	48 (23.9%)
Easy	191 (26.7%)	126 (25.4%)	59 (29.4%)
Very easy	190 (26.5%)	125 (25.2%)	61 (30.3%)

In general, how difficult or easy has it been for you to obtain SUPPORT applicable to you on the following?	All	Type 1	Type 2
<b>Glucose control</b>			
Very difficult	63 (12.0%)	37 (10.1%)	23 (15.8%)
Difficult	111 (21.1%)	69 (18.8%)	39 (26.7%)
Moderate	141 (26.8%)	102 (27.7%)	36 (24.7%)
Easy	113 (21.4%)	86 (23.4%)	25 (17.1%)
Very easy	99 (18.8%)	74 (20.1%)	23 (15.8%)
<b>Diet</b>			
Very difficult	57 (10.9%)	32 (9.3%)	24 (14.1%)
Difficult	109 (20.8%)	67 (19.5%)	40 (23.5%)
Moderate	144 (27.5%)	98 (28.6%)	42 (24.7%)
Easy	122 (23.3%)	80 (23.3%)	40 (23.5%)
Very easy	91 (17.4%)	66 (19.2%)	24 (14.1%)
<b>Physical activity</b>			
Very difficult	60 (11.1%)	40 (11.1%)	19 (11.3%)
Difficult	109 (20.2%)	67 (18.7%)	40 (23.8%)
Moderate	145 (26.9%)	96 (26.7%)	44 (26.2%)
Easy	127 (23.6%)	83 (23.1%)	41 (24.4%)
Very easy	98 (18.2%)	73 (20.3%)	24 (14.3%)
<b>Medication</b>			
Very difficult	55 (9.8%)	34 (9.0%)	19 (11.0%)
Difficult	102 (18.1%)	66 (17.5%)	35 (20.3%)
Moderate	147 (26.1%)	94 (24.9%)	48 (27.9%)
Easy	138 (24.5%)	100 (26.5%)	33 (19.2%)
Very easy	122 (21.6%)	83 (22.0%)	37 (21.5%)
<b>Emotional wellbeing</b>			
Very difficult	89 (16.0%)	61 (16.2%)	26 (15.5%)
Difficult	130 (23.4%)	96 (25.5%)	32 (19.0%)
Moderate	166 (29.9%)	103 (27.4%)	58 (34.5%)
Easy	97 (17.5%)	66 (17.6%)	30 (17.9%)
Very easy	73 (13.2%)	50 (13.3%)	22 (13.1%)
<b>Diabetes management (if showing symptoms)</b>			
Very difficult	57 (18.7%)	40 (18.1%)	16 (20.0%)
Difficult	58 (19.0%)	43 (19.5%)	13 (16.3%)
Moderate	84 (27.5%)	55 (24.9%)	29 (36.3%)
Easy	55 (18.0%)	47 (21.3%)	8 (10.0%)
Very easy	51 (16.7%)	36 (16.3%)	14 (17.5%)
<b>Physical/social distancing</b>			
Very difficult	67 (11.1%)	47 (11.5%)	17 (9.5%)
Difficult	101 (16.7%)	77 (18.8%)	21 (11.7%)
Moderate	165 (27.4%)	114 (27.9%)	48 (26.8%)
Easy	143 (23.7%)	98 (24.0%)	41 (22.9%)
Very easy	127 (21.1%)	73 (17.8%)	52 (29.1%)
<b>How would you rate the QUALITY of the information/advice/support from the following sources or</b>	<b>All</b>	<b>Type 1</b>	<b>Type 2</b>

## Supplementary file 2: support needs of people living with diabetes during COVID-19

<b>channels?</b>			
<b>Government</b>			
Very poor	105 (14.5%)	73 (14.3%)	28 (14.1%)
Poor	178 (24.5%)	140 (27.5%)	35 (17.6%)
Average	209 (28.8%)	137 (26.9%)	67 (33.7%)
Good	158 (21.8%)	109 (21.4%)	46 (23.1%)
Very good	76 (10.5%)	50 (9.8%)	23 (11.6%)
<b>Diabetes UK</b>			
Very poor	14 (2.2%)	10 (2.2%)	4 (2.2%)
Poor	34 (5.2%)	23 (5.0%)	10 (5.6%)
Average	152 (23.4%)	110 (24.0%)	38 (21.3%)
Good	293 (45.1%)	212 (46.3%)	76 (42.7%)
Very good	157 (24.2%)	103 (22.5%)	50 (28.1%)
<b>Social media</b>			
Very poor	56 (9.0%)	41 (9.5%)	15 (8.6%)
Poor	150 (24.1%)	101 (23.3%)	43 (24.7%)
Average	221 (35.5%)	152 (35.1%)	63 (36.2%)
Good	143 (23.0%)	101 (23.3%)	40 (23.0%)
Very good	52 (8.4%)	38 (8.8%)	13 (7.5%)
<b>News channels</b>			
Very poor	61 (8.5%)	41 (8.2%)	18 (9.0%)
Poor	151 (21.1%)	111 (22.3%)	38 (19.1%)
Average	234 (32.7%)	162 (32.5%)	65 (32.7%)
Good	214 (29.9%)	147 (29.5%)	61 (30.7%)
Very good	55 (7.7%)	37 (7.4%)	17 (8.5%)
<b>Friends</b>			
Very poor	29 (4.9%)	19 (4.5%)	10 (6.3%)
Poor	72 (12.1%)	49 (11.6%)	21 (13.3%)
Average	229 (38.4%)	160 (38.0%)	63 (39.9%)
Good	199 (33.4%)	145 (34.4%)	46 (29.1%)
Very good	67 (11.2%)	48 (11.4%)	18 (11.4%)
<b>Family</b>			
Very poor	23 (3.6%)	14 (3.1%)	8 (4.6%)
Poor	63 (9.9%)	43 (9.7%)	18 (10.3%)
Average	206 (32.3%)	146 (32.8%)	54 (31.0%)
Good	229 (35.9%)	162 (36.4%)	60 (34.5%)
Very good	116 (18.2%)	80 (18.0%)	34 (19.5%)
<b>Employer</b>			
Very poor	80 (17.8%)	56 (16.5%)	22 (22.4%)
Poor	65 (14.4%)	48 (14.1%)	15 (15.3%)
Average	113 (25.1%)	79 (23.2%)	30 (30.6%)
Good	121 (26.9%)	99 (29.1%)	19 (19.4%)
Very good	71 (15.8%)	58 (17.1%)	12 (12.2%)
<b>Healthcare team</b>			
Very poor	108 (18.0%)	71 (16.9%)	36 (22.2%)
Poor	115 (19.2%)	77 (18.3%)	34 (21.0%)
Average	116 (19.4%)	83 (19.7%)	30 (18.5%)
Good	140 (23.4%)	101 (24.0%)	35 (21.6%)
Very good	120 (20.0%)	89 (21.1%)	27 (16.7%)



## Supplementary file 2: support needs of people living with diabetes during COVID-19

Nation/Region of England	n	Healthcare rating good or very good	%
Scotland	65	26	40.0
Wales	28	13	46.4
East England	45	20	44.4
East Midlands	32	13	40.6
Greater London	47	20	42.6
North East	19	4	21.1
North West	51	21	41.2
Northern Ireland	13	5	38.5
South East	132	68	51.5
South West	114	55	48.3
West Midlands	47	14	29.8

Qualitative responses regarding respondents' views on way to improve the information, advice and support from the sources above are summarised in the manuscript appendices.

**Personal support networks**

For the next questions, please consider your current network of family, friends, contacts.	All	Living with others	Living alone
How would you rate their understanding of your CURRENT diabetes self-management needs?			
Very poor	34 (4.5%)	25 (3.9%)	9 (7.9%)
Poor	98 (13.0%)	82 (12.8%)	16 (14.0%)
Average	243 (32.1%)	198 (30.8%)	45 (39.5%)
Good	225 (29.7%)	196 (30.5%)	29 (25.4%)
Very good	157 (20.7%)	142 (22.1%)	15 (13.2%)
How would you rate their support in your diabetes self-management during the pandemic?			
Very poor	37 (5.1%)	29 (4.6%)	8 (7.5%)
Poor	76 (10.4%)	64 (10.2%)	12 (11.2%)
Average	181 (24.7%)	148 (23.6%)	33 (30.8%)
Good	240 (32.7%)	204 (32.6%)	36 (33.6%)
Very good	199 (27.2%)	181 (28.9%)	18 (16.8%)

How has the support you are receiving changed since before the pandemic? (0 = stayed the same)	All	Type 1	Type 2
Decreased	144 (18.8%)	92 (17.4%)	49 (22.6%)
Same	405 (53.0%)	284 (53.7%)	116 (53.5%)
Increased	215 (28.1%)	153 (28.9%)	52 (24.0%)
	764 (100.0%)	529 (100.0%)	217 (100.0%)

Note: score given on a Likert scale ranging from -5 (Decreased) to 5 (Increased).

In what ways do they CURRENTLY support	All	%	Type 1	%	Type 2	%
--	-----	---	--------	---	--------	---

## Supplementary file 2: support needs of people living with diabetes during COVID-19

your diabetes self-management? (Tick all that apply)	(n = 603*)		(n = 309)		(n = 119)	
Food shopping/preparation	305	50.6	212	50.1	85	52.2
Picking up medication	292	48.4	215	50.8	69	42.3
Essential travel	84	13.9	61	14.4	19	11.7
Monitoring blood glucose	82	13.6	59	14.0	21	12.9
Emotional support	374	62.0	267	63.1	98	60.1
Access to online resources	65	10.8	42	9.9	21	12.9
Prompting self-management behaviours	174	28.9	121	28.6	48	29.5
Other	26	4.3	17	4.0	4	2.5

\* 141 people said not applicable

## 2. Responses from parents, carers and partners of people living with diabetes

### 2.1. Geographical distribution of responses

Region/nation	n	%
Scotland	24	30.4
Wales	1	1.3
Channel Islands	1	1.3
East Midlands	1	1.3
East of England	6	7.6
Greater London	7	8.9
North East	4	5.1
North West	10	12.7
Northern Ireland	2	2.5
South East	5	6.3
South West	15	19.0
West Midlands	3	3.8

### 2.2. Demographic characteristics

	All (n=79)
<b>Gender, n (%)</b>	
Female	72 (91%)
Male	7 (9%)
<b>Age, mean (SD)</b>	45.2 (10.1)
<b>Ethnicity, n (%)</b>	
Asian or Asian British: Pakistani	1 (1%)
Black or Black British: Caribbean	1 (1%)
Other Black background	1 (1%)
Other ethnic group	1 (1%)
Other White background	2 (3%)
White: British	69 (87%)
White: Irish	4 (5%)

### Living Circumstances

## Supplementary file 2: support needs of people living with diabetes during COVID-19

Are you currently living with the person who has diabetes?	n (%)
No	7 (9%)
Yes	72 (91%)
	79 (100%)

Has the number of people you are living with changed as a result of the coronavirus pandemic?	n (%)
No	74 (94%)
Yes	5 (6%)
	79 (100%)

**Circumstances in relation to COVID-19**

Have you been diagnosed with or displayed symptoms of coronavirus since the beginning of February?	n (%)
No	67 (85%)
Yes	6 (8%)
Not sure	6 (8%)
	79 (100%)

Which of the following best describes your current circumstances?	n (%)
Following stringent Physical/social/physical distancing	51 (65%)
Self-isolating at home	3 (4%)
Shielding group	4 (5%)
Shielding (but not in shielding group)	0 (0%)
Key worker/still leaving home to work	19 (24%)
Minimising interactions to protect someone in household	2 (3%)
	79 (100%)

*2.3. Confidence in the ability to support diabetes self-management*

BEFORE the coronavirus pandemic and social/physical distancing guidance I was confident that...	N	Median (IQR)
Check blood glucose	64	10 (10, 10)
Correct high blood glucose	68	10 (8, 10)
Correct low blood glucose	66	10 (10, 10)
Good blood glucose regulation	58	10 (8, 10)
Choose correct foods	75	10 (7, 10)
Keep healthy weight	72	8 (5, 10)
Examine feet	78	10 (5, 10)

## Supplementary file 2: support needs of people living with diabetes during COVID-19

Healthy eating pattern	78	8 (6, 10)
Physical activity	78	8 (6, 10)
Mental wellbeing	78	8 (6, 9)

Note: score given on a Likert scale ranging from 0 (Could not do at all) to 10 (Certain could do). Not applicable was also an option to account inter-individual variability in condition and self-management requirements.

AT PRESENT, I am confident that...	N	Median (IQR)
Check blood glucose	68	10 (10, 10)
Correct high blood glucose	70	10 (8, 10)
Correct low blood glucose	67	10 (9, 10)
Good blood glucose regulation	57	10 (8, 10)
Choose correct foods	75	10 (8, 10)
Keep healthy weight	72	8 (5, 10)
Examine feet	78	10 (5, 10)
Healthy eating pattern	78	8 (6, 10)
Physical activity	78	8 (4, 10)
Mental wellbeing	78	8 (6, 9)

Note: score given on a Likert scale ranging from 0 (Could not do at all) to 10 (Certain could do). Not applicable was also an option to account inter-individual variability in condition and self-management requirements.

Change in score	All
<b>Check blood glucose</b>	
Decreased	4 (6%)
Same	55 (87%)
Increased	4 (6%)
<b>Correct high blood glucose</b>	
Decreased	6 (9%)
Same	50 (76%)
Increased	10 (15%)
<b>Correct low blood glucose</b>	
Decreased	9 (14%)
Same	51 (78%)
Increased	5 (8%)
<b>Good blood glucose regulation</b>	
Decreased	7 (13%)
Same	38 (68%)
Increased	11 (20%)
<b>Choose correct foods</b>	
Decreased	16 (22%)
Same	40 (54%)
Increased	18 (24%)
<b>Keep healthy weight</b>	
Decreased	15 (22%)
Same	39 (57%)
Increased	15 (22%)
<b>Examine feet</b>	

## Supplementary file 2: support needs of people living with diabetes during COVID-19

Decreased	7 (9%)
Same	63 (82%)
Increased	7 (9%)
<b>Healthy eating pattern</b>	
Decreased	20 (26%)
Same	45 (58%)
Increased	12 (16%)
<b>Physical activity</b>	
Decreased	21 (27%)
Same	49 (64%)
Increased	7 (9%)
<b>Mental wellbeing</b>	
Decreased	20 (26%)
Same	48 (62%)
Increased	9 (12%)

## 2.4. Sources used for information, advice and support

Which of these resources have you used for guidance on how you should behave regarding social/physical distancing measures in relation to the person with diabetes? (Tick all that apply)	n (All = 78)	%
News channels	47	60
Public Health and government website	33	42
Diabetes UK website	47	60
NHS website	47	60
Other website	3	4
Twitter	8	10
Facebook	19	24
GP, diabetes nurse, healthcare professional	31	40
Family	19	24
Friends	8	10
Employer	5	6
Diabetes support group	12	15
Other	5	6

Which one have you use the most? (Tick one)	n	%
News channels	26	34
Public Health and government website	9	12
Diabetes UK website	8	10
NHS website	10	13
Other website	0	0
Twitter	2	3
Facebook	4	5
GP, diabetes nurse, healthcare professional	9	12
Family	3	4
Friends	0	0
Employer	1	1
Diabetes support group	4	5
Other	0	0

## Supplementary file 2: support needs of people living with diabetes during COVID-19

	77	100
--	----	-----

Which of these resources have you been using for guidance on general diabetes management since the start of the pandemic? (Tick all that apply)	n (All = 75)	%
News channels	19	25
Public Health and government website	11	15
Diabetes UK website	37	49
NHS website	26	35
Other website	3	4
Twitter	2	3
Facebook	12	16
GP, diabetes nurse, healthcare professional	24	32
Family	5	7
Friends	1	1
Employer	1	1
Diabetes support group	11	15
Other	1	1

Which of these resources do you use to obtain emotional support? (Tick all that apply)	n (All = 70)	%
Diabetes UK website – online forum	6	9
Diabetes UK helpline	1	1
Facebook groups	12	17
GP, diabetes nurse, healthcare professional	12	17
Family	42	60
Friends	25	36
Neighbour	0	0
Employer	1	1
Diabetes support group	7	10
Other	2	3

Which means do you use to obtain advice/guidance/support from outside your household? (tick all that apply)	All (n = 70*)	%
Telephone	23	33
Computer	39	56
Mobile phone	50	71
Someone in the house	8	11
Other	0	0

\*7 people said not applicable



## Supplementary file 2: support needs of people living with diabetes during COVID-19

*2.5. Opinions on information, advice, and support received*

In general, how difficult or easy has it been for you to obtain INFORMATION/ADVICE applicable to the person you are helping on the following?	n (%)
<b>Glucose control</b>	
Very difficult	4 (6%)
Difficult	12 (18%)
Moderate	17 (25%)
Easy	21 (31%)
Very easy	14 (21%)
<b>Diet</b>	
Very difficult	4 (6%)
Difficult	13 (19%)
Moderate	11 (16%)
Easy	24 (35%)
Very easy	16 (24%)
<b>Physical activity</b>	
Very difficult	2 (3%)
Difficult	13 (19%)
Moderate	14 (20%)
Easy	23 (33%)
Very easy	17 (25%)
<b>Medication</b>	
Very difficult	5 (7%)
Difficult	13 (18%)
Moderate	16 (23%)
Easy	22 (31%)
Very easy	15 (21%)
<b>Emotional wellbeing</b>	
Very difficult	12 (17%)
Difficult	12 (17%)
Moderate	19 (27%)
Easy	15 (21%)
Very easy	13 (18%)
<b>Diabetes management (if showing symptoms)</b>	
Very difficult	8 (21%)
Difficult	10 (26%)
Moderate	9 (24%)
Easy	3 (8%)
Very easy	8 (21%)
<b>Physical/social distancing</b>	
Very difficult	10 (14%)
Difficult	9 (12%)
Moderate	16 (22%)
Easy	23 (31%)
Very easy	16 (22%)

## Supplementary file 2: support needs of people living with diabetes during COVID-19

In general, how difficult or easy has it been for you to obtain SUPPORT applicable to the person you are helping on the following?	n (%)
<b>Glucose control</b>	
Very difficult	8 (13%)
Difficult	10 (16%)
Moderate	12 (19%)
Easy	16 (26%)
Very easy	16 (26%)
<b>Diet</b>	
Very difficult	7 (11%)
Difficult	7 (11%)
Moderate	15 (24%)
Easy	19 (30%)
Very easy	15 (24%)
<b>Physical activity</b>	
Very difficult	6 (10%)
Difficult	10 (16%)
Moderate	13 (21%)
Easy	21 (33%)
Very easy	13 (21%)
<b>Medication</b>	
Very difficult	7 (11%)
Difficult	7 (11%)
Moderate	13 (20%)
Easy	20 (31%)
Very easy	17 (27%)
<b>Emotional wellbeing</b>	
Very difficult	16 (25%)
Difficult	6 (9%)
Moderate	17 (26%)
Easy	13 (20%)
Very easy	13 (20%)
<b>Diabetes management (if showing symptoms)</b>	
Very difficult	9 (26%)
Difficult	5 (15%)
Moderate	8 (24%)
Easy	4 (12%)
Very easy	8 (24%)
<b>Physical/social distancing</b>	
Very difficult	10 (16%)
Difficult	10 (16%)
Moderate	13 (20%)
Easy	16 (25%)
Very easy	15 (23%)

## Supplementary file 2: support needs of people living with diabetes during COVID-19

How would you rate the QUALITY of the information/advice/support from the following sources or channels?	n (%)
<b>Government</b>	
Very poor	11 (14%)
Poor	15 (19%)
Average	23 (30%)
Good	19 (25%)
Very good	9 (12%)
<b>Diabetes UK</b>	
Very poor	1 (1%)
Poor	3 (4%)
Average	13 (19%)
Good	29 (42%)
Very good	23 (33%)
<b>Social media</b>	
Very poor	7 (10%)
Poor	9 (13%)
Average	29 (43%)
Good	18 (26%)
Very good	5 (7%)
<b>News channels</b>	
Very poor	8 (11%)
Poor	16 (23%)
Average	24 (34%)
Good	14 (20%)
Very good	9 (13%)
<b>Friends</b>	
Very poor	4 (7%)
Poor	7 (12%)
Average	22 (38%)
Good	19 (33%)
Very good	6 (10%)
<b>Family</b>	
Very poor	4 (6%)
Poor	8 (13%)
Average	22 (34%)
Good	20 (31%)
Very good	10 (16%)
<b>Employer</b>	
Very poor	8 (18%)
Poor	10 (23%)
Average	16 (36%)
Good	8 (18%)
Very good	2 (5%)
<b>Healthcare team</b>	
Very poor	3 (5%)
Poor	10 (15%)
Average	13 (20%)
Good	14 (22%)

## Supplementary file 2: support needs of people living with diabetes during COVID-19

Very good	25 (38%)
-----------	----------

*2.6. Own role in supporting someone with diabetes*

How would you rate your understanding of their CURRENT diabetes self-management needs?	n (%)
Very poor	1 (1%)
Poor	3 (4%)
Average	11 (14%)
Good	26 (33%)
Very good	37 (47%)

In what ways do you CURRENTLY support the individual in their diabetes self-management? (Tick all that apply)	n = 78*	%
Food shopping/preparation	69	88
Picking up medication	67	86
Essential travel	49	63
Monitoring blood glucose	49	63
Emotional support	69	88
Access to online resources	41	53
Prompting self-management behaviours	69	88
Other	6	8

\*1 person said not applicable

## Supplementary File 3: support needs of people living with diabetes during COVID-19

**Supplementary File 3****Title: Addressing support needs of people living with diabetes during the coronavirus COVID-19 pandemic: insights from a UK survey.**Sarah Sauchelli\*<sup>1</sup>, Julia Bradley<sup>1</sup>, Clare England<sup>1</sup>, Aidan Searle<sup>1</sup>, Alex Whitmarsh<sup>1</sup><sup>1</sup> *National Institute for Health Research Bristol Biomedical Research Centre, University Hospitals of Bristol and Weston NHS Foundation Trust and University of Bristol.*

Three timepoints were identified in responses (24<sup>th</sup> of June, 20<sup>th</sup> of July, and 17<sup>th</sup> of August). Response times matched ( $\pm 2$  days) major recruitment efforts but could not be linked to changes in government guidelines. Sample sizes were not sufficiently large to compare data across these time points but the data can be seen in Supplementary File 3. Here, survey responses are presented split across the three recruitment peaks.

**Responses to the survey****1. Responses from people living with diabetes***1.1. Geographical distribution of responses*

	Before July		July		August	
Region/Nation	n	%	n	%	n	%
Scotland	50	17.9	28	8.8	11	6.6
Wales	3	1.1	23	7.2	6	3.6
East Midlands	1	0.4	18	5.6	12	7.2
East of England	7	2.5	30	9.4	15	9.0
Greater London	10	3.6	37	11.6	18	10.8
North East	2	0.7	7	2.2	5	3.0
North West	3	1.1	34	10.6	18	10.8
Northern Ireland	2	0.7	7	2.2	5	3.0
South East	132	47.3	37	11.6	24	14.5
South West	60	21.5	52	16.3	30	18.1
West Midlands	8	2.9	34	10.6	15	9.0
Yorkshire & Humber	1	0.4	13	4.1	7	4.2
<b>Total</b>	<b>279</b>	<b>100.0</b>	<b>320</b>	<b>100.0</b>	<b>166</b>	<b>100.0</b>

*1.2. Demographic characteristics.*

	Before July		July		August	
Diabetes group	n	%	n	%	n	%
Type 1 diabetes	196	69.8	228	70.4	111	66.1
Type 2 diabetes	77	27.4	90	27.8	53	31.5
Another type of diabetes	8	2.8	6	1.9	4	2.4
	281	100.0	324	100.0	168	100.0

## Supplementary File 3: support needs of people living with diabetes during COVID-19



## Supplementary File 3: support needs of people living with diabetes during COVID-19

	Before July (n=281)	July (n=324)	August (n=168)
<b>Gender, n (%)</b>			
Female	162 (57.9%)	235 (73.2%)	119 (70.8%)
Male	115 (41.1%)	85 (26.5%)	49 (29.2%)
Other	3 (1.1%)	1 (0.3%)	0 (0.0%)
<b>Age, mean (SD)</b>	50.2 (14.7)	45.2 (14.2)	49.5 (14.0)
<b>Ethnicity, n (%)</b>			
Arab	1 (0.4%)	0 (0.0%)	0 (0.0%)
Asian or Asian British: Chinese	1 (0.4%)	1 (0.3%)	1 (0.6%)
Asian or Asian British: Indian	2 (0.7%)	4 (1.2%)	2 (1.2%)
Asian or Asian British: Pakistani	0 (0.0%)	0 (0.0%)	1 (0.6%)
Black or Black British: Caribbean	1 (0.4%)	2 (0.6%)	1 (0.6%)
Mixed: White and Asian	4 (1.4%)	1 (0.3%)	0 (0.0%)
Mixed: White and Black African	0 (0.0%)	1 (0.3%)	0 (0.0%)
Mixed: White and Black Caribbean	0 (0.0%)	1 (0.3%)	0 (0.0%)
Other ethnic group	0 (0.0%)	0 (0.0%)	1 (0.6%)
Other Mixed background	14 (5.0%)	13 (4.0%)	4 (2.4%)
Other White background	0 (0.0%)	1 (0.3%)	0 (0.0%)
Prefer not to answer	3 (1.1%)	0 (0.0%)	0 (0.0%)
White: British	251 (89.6%)	286 (89.1%)	156 (92.9%)
White: Irish	3 (1.1%)	11 (3.4%)	2 (1.2%)

**Living circumstances**

Are you currently living alone?	Before July	July	August
No	227 (81.1%)	277 (85.5%)	145 (86.3%)
Yes	53 (18.9%)	47 (14.5%)	23 (13.7%)
	280 (100.0%)	324 (100.0%)	168 (100.0%)

Has the number of people you are living with changed as a result of the coronavirus pandemic?	Before July	July	August
No	248 (88.3%)	288 (89.4%)	148 (89.2%)
Yes	33 (11.7%)	34 (10.6%)	18 (10.8%)
	281 (100.0%)	322 (100.0%)	166 (100.0%)

## Supplementary File 3: support needs of people living with diabetes during COVID-19

**Circumstances in relation to COVID-19**

Have you been diagnosed with or displayed symptoms of coronavirus since the beginning of February?	Before July	July	August
No	232 (83.2%)	255 (78.9%)	136 (81.4%)
Yes	22 (7.9%)	30 (9.3%)	18 (10.8%)
Diagnosed with coronavirus	0 (0.0%)	1 (0.3%)	1 (0.6%)
Not sure	25 (9.0%)	37 (11.5%)	12 (7.2%)
	279 (100.0%)	323 (100.0%)	167 (100.0%)

Which of the following best describes your current circumstances?	Before July	July	August
Following stringent Physical/social/physical distancing	174 (61.9%)	215 (67.0%)	124 (74.7%)
Self-isolating at home	12 (4.3%)	1 (0.3%)	3 (1.8%)
Shielding group	22 (7.8%)	27 (8.4%)	10 (6.0%)
Shielding (but not in shielding group)	39 (13.9%)	31 (9.7%)	5 (3.0%)
Key worker/still leaving home to work	30 (10.7%)	44 (13.7%)	23 (13.9%)
Other	3 (1.1%)	0 (0.0%)	1 (0.6%)
Don't know	1 (0.4%)	3 (0.9%)	0 (0.0%)
	281 (100.0%)	321 (100.0%)	166 (100.0%)

*1.3. Confidence in diabetes self-management*

BEFORE the coronavirus pandemic and social/physical distancing guidance I was confident that I was able to...	Before July		July		August	
	n	Median (IQR)	n	Median (IQR)	n	Median (IQR)
Check blood glucose	259	10 (10, 10)	302	10 (10, 10)	159	10 (10, 10)
Correct high blood glucose	258	10 (8, 10)	293	10 (8, 10)	152	10 (8, 10)
Correct low blood glucose	250	10 (9, 10)	285	10 (9, 10)	145	10 (10, 10)
Good blood glucose regulation	207	10 (8, 10)	233	9 (7, 10)	131	10 (7, 10)
Choose correct foods	262	10 (8, 10)	309	10 (7, 10)	158	10 (8, 10)
Keep healthy weight	274	8 (5, 10)	317	6 (4, 9)	164	8 (4, 10)
Examine feet	277	10 (9, 10)	324	10 (8, 10)	168	10 (8, 10)
Healthy eating pattern	278	9 (7, 10)	324	8 (6, 10)	168	8 (6, 10)
Physical activity	278	8 (6, 10)	324	7 (5, 10)	168	8 (5, 10)
Mental wellbeing	279	8 (6, 10)	324	7 (5, 9)	167	8 (5, 10)

Note: score given on a Likert scale ranging from 0 (Could not do at all) to 10 (Certain could do). Not applicable was also an option to account inter-individual variability in condition and self-management requirements.

AT PRESENT, I am confident that...	Before July		July		August	
	n	Median (IQR)	n	Median (IQR)	n	Median (IQR)
Check blood glucose	264	10 (10, 10)	304	10 (10, 10)	159	10 (10, 10)
Correct high blood glucose	263	10 (8, 10)	302	9 (8, 10)	153	10 (8, 10)
Correct low blood glucose	258	10 (9, 10)	288	10 (9, 10)	151	10 (9, 10)
Good blood glucose	211	10 (8, 10)	234	9 (7, 10)	133	10 (7, 10)

## Supplementary File 3: support needs of people living with diabetes during COVID-19

regulation						
Choose correct foods	267	10 (8, 10)	315	9 (7, 10)	162	10 (8, 10)
Keep healthy weight	277	7 (5, 10)	318	6 (3, 9)	164	7 (4, 10)
Examine feet	279	10 (8, 10)	318	10 (8, 10)	167	10 (8, 10)
Healthy eating pattern	278	8 (7, 10)	321	8 (5, 10)	167	8 (7, 10)
Physical activity	279	8 (5, 10)	322	6 (4, 9)	167	8 (5, 10)
Mental wellbeing	277	8 (5, 10)	322	6 (4, 8)	166	8 (5, 10)

Note: score given on a Likert scale ranging from 0 (Could not do at all) to 10 (Certain could do). Not applicable was also an option to account inter-individual variability in condition and self-management requirements.

Change in score	Before July	July	August
<b>Check blood glucose</b>			
Decreased	14 (5.4%)	38 (12.8%)	16 (10.2%)
Same	225 (87.5%)	247 (82.9%)	128 (81.5%)
Increased	18 (7.0%)	13 (4.4%)	13 (8.3%)
<b>Correct high blood glucose</b>			
Decreased	30 (11.7%)	51 (17.6%)	14 (9.3%)
Same	205 (79.8%)	191 (65.9%)	114 (75.5%)
Increased	22 (8.6%)	48 (16.6%)	23 (15.2%)
<b>Correct low blood glucose</b>			
Decreased	29 (11.7%)	47 (16.7%)	16 (11.1%)
Same	198 (80.2%)	208 (74.0%)	116 (80.6%)
Increased	20 (8.1%)	26 (9.3%)	12 (8.3%)
<b>Good blood glucose regulation</b>			
Decreased	22 (11.0%)	50 (22.0%)	20 (15.6%)
Same	155 (77.5%)	139 (61.2%)	86 (67.2%)
Increased	23 (11.5%)	38 (16.7%)	22 (17.2%)
<b>Choose correct foods</b>			
Decreased	54 (21.1%)	83 (27.1%)	36 (22.9%)
Same	170 (66.4%)	174 (56.9%)	96 (61.1%)
Increased	32 (12.5%)	49 (16.0%)	25 (15.9%)
<b>Keep healthy weight</b>			
Decreased	69 (25.5%)	96 (30.8%)	37 (22.8%)
Same	150 (55.4%)	155 (49.7%)	81 (50.0%)
Increased	52 (19.2%)	61 (19.6%)	44 (27.2%)
<b>Examine feet</b>			
Decreased	27 (9.8%)	49 (15.4%)	11 (6.6%)
Same	223 (81.1%)	239 (75.2%)	136 (81.4%)
Increased	25 (9.1%)	30 (9.4%)	20 (12.0%)
<b>Healthy eating pattern</b>			
Decreased	78 (28.4%)	103 (32.1%)	45 (26.9%)
Same	157 (57.1%)	151 (47.0%)	85 (50.9%)
Increased	40 (14.5%)	67 (20.9%)	37 (22.2%)
<b>Physical activity</b>			
Decreased	87 (31.5%)	114 (35.4%)	44 (26.3%)
Same	145 (52.5%)	139 (43.2%)	77 (46.1%)
Increased	44 (15.9%)	69 (21.4%)	46 (27.5%)
<b>Mental wellbeing</b>			

## Supplementary File 3: support needs of people living with diabetes during COVID-19

Decreased	92 (33.5%)	148 (46.0%)	42 (25.5%)
Same	157 (57.1%)	121 (37.6%)	84 (50.9%)
Increased	26 (9.5%)	53 (16.5%)	39 (23.6%)

## 1.4. Cancellation of clinical appointments

Have you had to cancel diabetes appointments and check-ups because of the pandemic?	Before July	July	August
No	143 (50.9%)	135 (41.9%)	94 (56.0%)
Yes	138 (49.1%)	187 (58.1%)	74 (44.0%)
	281 (100.0%)	322 (100.0%)	168 (100.0%)

Qualitative responses regarding the impact of the cancellation of appointments are summarised in the appendices.

## 1.5. Sources used for information, advice and support

Which of these resources have you used for guidance on how you should behave regarding social/physical distancing measures? (Tick all that apply)	Before July (n = 279)	%	July (n = 324)	%	August (n = 167)	%
News channels	217	77.8	216	66.7	124	74.3
Public Health and government website	125	44.8	182	56.2	79	47.3
Diabetes UK website	134	48.0	217	67.0	110	65.9
NHS website	137	49.1	175	54.0	74	44.3
Other website	13	4.7	27	8.3	12	7.2
Social media	59	21.2	113	34.9	47	28.1
GP, diabetes nurse, healthcare professional	102	36.6	107	33.0	52	31.1
Family	67	24.0	78	24.1	29	17.4
Friends	44	15.8	47	14.5	20	12.0
Employer	45	16.1	48	14.8	20	12.0
Diabetes support group	16	5.7	36	11.1	16	9.0
Other	3	1.1	6	1.9	3	1.8

Which one have you used the most? (Tick one)	Before July	%	July	%	August	%
News channels	149	53.8	130	40.5	73	44.0
Public Health and government website	28	10.1	44	13.7	24	14.5
Diabetes UK website	30	10.8	56	17.5	28	16.9
NHS website	20	8.2	18	5.6	13	7.8
Other website	4	1.4	4	1.3	2	1.2
Social media	11	4.0	15	4.7	4	2.4
Facebook	5	1.8	7	2.2	1	0.6
GP, diabetes nurse, healthcare professional	12	4.3	13	4.4	7	4.2
Family	8	2.9	10	3.1	4	2.4
Friends	1	0.4	1	0.3	1	0.6
Employer	5	1.8	18	5.6	8	4.8
Diabetes support group	1	0.4	2	0.6	0	0.0
Other	2	0.7	2	0.6	1	0.6

## Supplementary File 3: support needs of people living with diabetes during COVID-19

Not applicable	1	0.4	0	0.0	0	0.0
----------------	---	-----	---	-----	---	-----

Which of these resources have you been using for guidance on general diabetes self-management since the start of the pandemic? (Tick all that apply)	Before July (n = 252)	%	July (n = 304)	%	August (n = 157)	%
News channels	44	17.5	31	10.2	26	16.6
Public Health and government website	25	9.9	33	10.9	18	11.5
Diabetes UK website	112	44.4	157	51.6	78	49.7
NHS website	60	23.8	62	20.4	31	19.8
Other website	7	2.8	14	4.6	7	4.5
Twitter	9	3.6	21	6.9	7	4.5
Facebook	6	2.4	38	12.5	19	12.1
GP, diabetes nurse, healthcare professional	81	32.1	90	29.6	36	22.9
Family	23	9.1	27	8.9	7	4.5
Friends	10	4.0	13	4.3	3	1.9
Employer	4	1.6	3	1.0	2	1.2
Diabetes support group	11	4.4	27	8.9	10	6.4
Other	8	3.2	4	1.3	3	1.9

Which of these resources do you use to obtain emotional support? (Tick all that apply)	Before July (n = 247)	%	July (n = 291)	%	August (n = 149)	%
Diabetes UK website – online forum	19	7.7	21	7.2	15	10.1
Diabetes UK helpline	6	2.4	7	2.4	2	1.3
Social media communities	22	8.9	32	11.0	17	11.4
GP, diabetes nurse, healthcare professional	32	13.0	31	10.7	23	15.4
Family	175	70.9	194	66.7	104	69.8
Friends	126	51.0	153	52.6	71	47.7
Employer	16	6.5	20	6.9	3	2.0
Diabetes support group	11	4.5	16	5.5	5	3.4
Other	6	2.4	2	0.7	2	1.3

Which means do you use to obtain advice/guidance/support from outside your household? (tick all that apply)	Before July (n = 219)	July (n = 273)	August (n = 146)
Telephone	53 (24.2%)	47 (17.2%)	24 (16.4%)
Computer	171 (78.1%)	194 (71.1%)	102 (69.9%)
Mobile phone	43 (65.3%)	189 (69.2%)	97 (66.4%)
Someone in the house	19 (8.7%)	16 (5.9%)	6 (4.1%)
Other	0 (0.0%)	3 (1.1%)	0 (0.0%)

Questions specific to those respondents living alone

If you are living alone, are you receiving support from people outside your household?	Before July	July	August
No	36 (51.4%)	34 (51.5%)	13 (46.4%)

## Supplementary File 3: support needs of people living with diabetes during COVID-19

Yes	34 (48.6%)	32 (48.5%)	15 (53.6%)
	70 (100.0%)	66 (100.0%)	28 (100.0%)

This table is restricted to participants who reported living alone for the question on living circumstances.

Opinions on information, advice, and support received

In general, how difficult or easy has it been for you to obtain INFORMATION/ADVICE applicable to you on the following?	Before July	July	August
<b>Glucose control</b>			
Very difficult	6 (2.9%)	21 (7.8%)	7 (5.0%)
Difficult	22 (10.6%)	49 (18.2%)	18 (12.9%)
Moderate	67 (32.4%)	70 (26.0%)	31 (22.1%)
Easy	57 (27.5%)	73 (27.1%)	34 (24.3%)
Very easy	55 (26.6%)	56 (20.8%)	50 (35.7%)
<b>Diet</b>			
Very difficult	10 (4.7%)	20 (7.2%)	9 (6.6%)
Difficult	18 (8.4%)	48 (17.4%)	14 (10.3%)
Moderate	67 (31.3%)	79 (28.6%)	28 (20.6%)
Easy	55 (25.7%)	76 (27.5%)	42 (30.9%)
Very easy	64 (29.9%)	53 (19.2%)	43 (31.6%)
<b>Physical activity</b>			
Very difficult	14 (6.3%)	24 (8.5%)	9 (6.5%)
Difficult	26 (11.7%)	45 (15.9%)	14 (10.1%)
Moderate	59 (26.6%)	75 (26.5%)	29 (21.0%)
Easy	66 (29.7%)	85 (30.0%)	48 (34.8%)
Very easy	57 (25.7%)	54 (19.1%)	38 (27.5%)
<b>Medication</b>			
Very difficult	3 (1.3%)	26 (9.0%)	5 (3.7%)
Difficult	27 (11.8%)	48 (16.6%)	19 (14.0%)
Moderate	60 (26.3%)	77 (26.6%)	28 (20.6%)
Easy	64 (28.1%)	87 (30.1%)	42 (30.9%)
Very easy	74 (32.5%)	51 (17.6%)	42 (30.9%)
<b>Emotional wellbeing</b>			
Very difficult	9 (4.4%)	57 (19.8%)	18 (12.9%)
Difficult	40 (19.7%)	65 (22.6%)	27 (19.3%)
Moderate	68 (33.5%)	83 (28.8%)	46 (32.9%)
Easy	43 (21.2%)	57 (19.8%)	22 (15.7%)
Very easy	43 (21.2%)	26 (9.0%)	27 (19.3%)
<b>Diabetes management (if showing symptoms)</b>			
Very difficult	18 (13.4%)	31 (19.9%)	10 (11.8%)
Difficult	28 (20.9%)	26 (16.7%)	16 (18.8%)
Moderate	36 (26.9%)	45 (28.8%)	22 (25.9%)
Easy	30 (22.4%)	32 (20.5%)	17 (20.0%)
Very easy	22 (16.4%)	22 (14.1%)	20 (23.5%)
<b>Physical/social/physical distancing</b>			
Very difficult	26 (10.2%)	30 (9.8%)	6 (3.9%)
Difficult	34 (13.3%)	59 (19.2%)	11 (7.1%)
Moderate	55 (21.6%)	70 (22.8%)	44 (28.6%)
Easy	66 (25.9%)	81 (26.4%)	44 (28.6%)



## Supplementary File 3: support needs of people living with diabetes during COVID-19

Very easy	74 (29.0%)	67 (21.8%)	49 (31.8%)
-----------	------------	------------	------------

In general, how difficult or easy has it been for you to obtain SUPPORT applicable to you on the following?	Before July	July	August
<b>Glucose control</b>			
Very difficult	15 (9.3%)	35 (13.9%)	13 (11.3%)
Difficult	29 (18.0%)	61 (24.3%)	21 (18.3%)
Moderate	48 (29.8%)	61 (24.3%)	32 (27.8%)
Easy	36 (22.4%)	55 (21.9%)	22 (19.1%)
Very easy	33 (20.5%)	39 (15.5%)	27 (23.5%)
<b>Diet</b>			
Very difficult	13 (8.0%)	31 (12.4%)	13 (11.8%)
Difficult	28 (17.2%)	64 (25.6%)	17 (15.5%)
Moderate	46 (28.2%)	66 (26.4%)	32 (29.1%)
Easy	45 (27.6%)	55 (22.0%)	22 (20.0%)
Very easy	31 (19.0%)	34 (13.6%)	26 (23.6%)
<b>Physical activity</b>			
Very difficult	17 (9.9%)	31 (12.2%)	12 (10.6%)
Difficult	30 (17.4%)	61 (24.0%)	18 (15.9%)
Moderate	44 (25.6%)	66 (26.0%)	35 (31.0%)
Easy	42 (24.4%)	62 (24.4%)	23 (20.4%)
Very easy	39 (22.7%)	34 (13.4%)	25 (22.1%)
<b>Medication</b>			
Very difficult	9 (4.9%)	35 (13.3%)	11 (9.3%)
Difficult	26 (14.2%)	54 (20.5%)	22 (18.6%)
Moderate	56 (30.6%)	60 (22.8%)	31 (26.3%)
Easy	41 (22.4%)	73 (27.8%)	24 (20.3%)
Very easy	51 (27.9%)	41 (15.6%)	30 (25.4%)
<b>Emotional wellbeing</b>			
Very difficult	16 (9.5%)	54 (20.0%)	19 (16.2%)
Difficult	35 (20.8%)	75 (27.8%)	20 (17.1%)
Moderate	48 (28.6%)	73 (27.0%)	45 (38.5%)
Easy	39 (23.2%)	43 (15.9%)	15 (12.8%)
Very easy	30 (17.9%)	25 (9.3%)	18 (15.4%)
<b>Diabetes management (if showing symptoms)</b>			
Very difficult	18 (17.3%)	30 (22.6%)	9 (13.2%)
Difficult	20 (19.2%)	27 (20.3%)	11 (16.2%)
Moderate	27 (26.0%)	34 (25.6%)	23 (33.8%)
Easy	22 (21.2%)	25 (18.8%)	8 (11.8%)
Very easy	17 (16.3%)	17 (12.8%)	17 (25.0%)
<b>Physical/social distancing</b>			
Very difficult	23 (11.6%)	34 (12.3%)	10 (7.8%)
Difficult	32 (16.2%)	57 (20.7%)	12 (9.3%)
Moderate	54 (27.3%)	70 (25.4%)	41 (31.8%)
Easy	42 (21.2%)	68 (24.6%)	33 (25.6%)
Very easy	47 (23.7%)	47 (17.0%)	33 (25.6%)
<b>How would you rate the QUALITY of the information/advice/support from the following sources or channels?</b>	<b>Before July</b>	<b>July</b>	<b>August</b>

## Supplementary File 3: support needs of people living with diabetes during COVID-19

<b>Government</b>			
Very poor	38 (14.7%)	47 (15.0%)	20 (13.1%)
Poor	64 (24.7%)	83 (26.4%)	31 (20.3%)
Average	69 (26.6%)	94 (29.9%)	46 (30.1%)
Good	59 (22.8%)	62 (19.7%)	37 (24.2%)
Very good	29 (11.2%)	28 (8.9%)	19 (12.4%)
<b>Diabetes UK</b>			
Very poor	7 (3.3%)	6 (2.1%)	1 (0.7%)
Poor	21 (9.9%)	7 (2.4%)	6 (4.0%)
Average	41 (19.2%)	83 (29.0%)	28 (18.5%)
Good	97 (45.5%)	124 (43.4%)	72 (47.7%)
Very good	47 (22.1%)	66 (23.1%)	44 (29.1%)
<b>Social media</b>			
Very poor	19 (10.2%)	25 (8.6%)	12 (8.2%)
Poor	47 (25.3%)	74 (25.5%)	29 (19.9%)
Average	70 (37.6%)	104 (35.9%)	47 (32.2%)
Good	37 (19.9%)	67 (23.1%)	39 (26.7%)
Very good	13 (7.0%)	20 (6.9%)	19 (13.0%)
<b>News channels</b>			
Very poor	18 (7.0%)	33 (10.9%)	10 (6.5%)
Poor	47 (18.2%)	71 (23.4%)	33 (21.6%)
Average	80 (31.0%)	102 (33.6%)	52 (34.0%)
Good	90 (34.9%)	83 (27.3%)	41 (26.8%)
Very good	23 (8.9%)	15 (4.9%)	17 (11.1%)
<b>Friends</b>			
Very poor	7 (3.4%)	17 (6.5%)	5 (3.8%)
Poor	25 (12.3%)	34 (13.0%)	13 (9.8%)
Average	75 (36.9%)	113 (43.3%)	41 (31.1%)
Good	69 (34.0%)	77 (29.5%)	53 (40.2%)
Very good	27 (13.3%)	20 (7.7%)	20 (15.2%)
<b>Family</b>			
Very poor	6 (2.7%)	14 (5.0%)	3 (2.2%)
Poor	22 (10.0%)	29 (10.4%)	12 (8.8%)
Average	62 (28.1%)	103 (36.9%)	41 (29.9%)
Good	78 (35.3%)	100 (35.8%)	51 (37.2%)
Very good	53 (24.0%)	33 (11.8%)	30 (21.9%)
<b>Employer</b>			
Very poor	19 (12.8%)	47 (22.7%)	14 (14.9%)
Poor	25 (16.8%)	33 (15.9%)	7 (7.4%)
Average	33 (22.1%)	51 (24.6%)	29 (30.9%)
Good	42 (28.2%)	50 (24.2%)	29 (30.9%)
Very good	30 (20.1%)	26 (12.6%)	15 (16.0%)
<b>Healthcare team</b>			
Very poor	15 (7.6%)	65 (24.3%)	28 (21.1%)
Poor	45 (22.7%)	47 (17.5%)	23 (17.3%)
Average	38 (19.2%)	55 (20.5%)	23 (17.3%)
Good	56 (28.3%)	52 (19.4%)	32 (24.1%)
Very good	44 (22.2%)	49 (18.3%)	27 (20.3%)

**Personal support networks**

## Supplementary File 3: support needs of people living with diabetes during COVID-19

For the next questions, please consider your current network of family, friends, contacts.	Before July	July	August
How would you rate their understanding of your CURRENT diabetes self-management needs?			
Very poor	10 (3.6%)	18 (5.6%)	6 (3.6%)
Poor	31 (11.4%)	48 (15.1%)	19 (11.5%)
Average	80 (29.3%)	107 (33.5%)	57 (34.3%)
Good	85 (31.1%)	96 (30.1%)	44 (26.5%)
Very good	67 (24.5%)	50 (15.7%)	40 (24.1%)
How would you rate their support in your diabetes self-management during the pandemic?			
Very poor	12 (4.7%)	21 (6.7%)	4 (2.4%)
Poor	19 (7.5%)	37 (11.8%)	20 (12.2%)
Average	54 (21.2%)	85 (27.0%)	42 (25.6%)
Good	88 (34.5%)	105 (33.3%)	47 (28.7%)
Very good	82 (32.2%)	67 (21.3%)	51 (31.1%)

How has the support you are receiving changed since before the pandemic? (0 = stayed the same)	Before July	July	August
Decreased	36 (12.9%)	76 (23.7%)	32 (19.4%)
Same	157 (56.5%)	158 (49.2%)	90 (54.6%)
Increased	85 (30.6%)	87 (27.1%)	43 (26.1%)
	278 (100.0%)	321 (100.0%)	165 (100.0%)

Note: score given on a Likert scale ranging from -5 (Decreased) to 5 (Increased).

In what ways do they CURRENTLY support your diabetes self-management? (Tick all that apply)	Before July (n = 217)	%	July (n = 256)	%	August (n = 130)	%
Food shopping/preparation	122	56.2	132	51.6	51	39.2
Picking up medication	113	52.1	124	48.4	55	42.3
Essential travel	30	13.8	35	13.7	19	14.6
Monitoring blood glucose	27	12.4	36	14.1	19	14.6
Emotional support	138	63.6	151	59.0	85	65.4
Access to online resources	25	11.5	22	8.6	18	13.9
Prompting self-management behaviours	56	25.8	83	32.4	35	26.9
Other	11	5.1	14	5.5	1	0.8