Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Original research

The impact of the COVID pandemic on primary care diabetes services in the UK: A cross-sectional national survey of views of health professionals delivering diabetes care

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ABSTRACT

Background: Healthcare systems worldwide have been adversely affected by the Coronavirus disease 2019 (COVID-19) pandemic. There has been a substantial decrease in admissions for acute medical conditions with longer delays between the onset of the symptoms and hospital treatment compared to the pre-pandemic period. The impact of the COVID pandemic on primary care services is uncertain.
Aim: Using an online survey, we examined the impact of the COVID pandemic on primary care diabetes services in the UK.
Methods: An online survey was developed by the Primary Care Diabetes Society research group and administered to healthcare and allied health professionals delivering diabetes care in the UK from January to May 2021. Descriptive statistics and odds ratios (ORs) with 95% confidence intervals (CIs) were estimated.
Results: Of the 1070 professionals surveyed, 975 (91.1%) completed the questionnaire. Most respondents were nurses or nurse practitioners (59.7%) and doctors (32.9%). The mean age of respondents was 52 years and 79% were female. The majority of respondents felt overloaded with work (71.2%) or emotionally drained at the end of a working day (79.1%) compared with the pre-pandemic period. Being a doctor and worried about infecting a family member with the Coronavirus were each associated with an increased odds of being substantially overworked or emotionally drained: (OR = 2.52; 95% CI, 1.25–5.07) and (OR = 2.05; 95% CI, 1.24–3.39), respectively. The most common consultation method used to provide diabetes care during the pandemic was telephone consultation (92.0%). Overall 79.1% of respondents felt the COVID-19 pandemic had had moderate to significant impact on their practice's ability to provide routine diabetes care; 70.6% of respondents felt the COVID-19 pandemic had had moderate to significant impact on their practice's ability to provide routine health checks or screening for type 2 diabetes and approximately half of respondents (48.3%) reported encountering mental health concerns in people with diabetes.
Conclusions: COVID-19 pandemic has had significant impact on the ability of healthcare professionals and their practices to deliver routine diabetes care. Failure to restore primary care provision urgently and safely to at least pre-pandemic levels in a sustainable manner may lead to emotionally drained and overworked workforce in primary care, place additional burden on the already overburdened healthcare system and worse outcomes for patients.

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Novelty statement

The majority primary care health professionals felt overloaded with work (71.2%) or emotionally drained at the end of a working day (79.1%) compared with the pre-pandemic period.

Doctors were particular emotionally drained during the peaks of the pandemic.

Worries about infecting family members with the Coronavirus was also associated with an increased odds of being substantially overworked or emotionally drained.

70.6% of respondents felt the COVID-19 pandemic had had moderate to significant impact on their practice's ability to provide routine health checks or screening for type 2 diabetes.

1. Introduction

Following the announcement of the isolation of a new type of Coronavirus (severe acute respiratory syndrome coronavirus 2, SARS CoV-2) in January 2020, the disease caused by the virus was declared by the World Health Organisation (WHO) on January 30, 2020 as a global public health emergency and subsequently, named as coronavirus disease 2019 (COVID-19) on February 11, 2020. This disease has caused substantial morbidity and mortality worldwide [1]. As at 18 June 2021 there were 176,945,596 and 3,836,828 confirmed global cases and deaths, respectively [2]. The COVID-19 virus spreads primarily through aerosols, droplets generated when an infected person coughs or sneezes, or through droplets of saliva or discharge from the nose. The majority of patients with COVID-19 exhibit mild symptoms such as fever, cough and myalgia, with a few progressing to severe pneumonia, pulmonary edema, acute respiratory distress syndrome (ARDS), multiple organ failure, or death [3]. It is now well-established that older and obese people, ethnic minority populations and those with pre-existing comorbidities such as cardiovascular disease (CVD), hypertension, and diabetes are more likely to be infected with SARS CoV-2 and are at highest risk for severe illness or death from COVID-19 [4–7].

Public health response strategies introduced to slow down the transmission of COVID-19 have included social distancing, quarantine, use of personal protective equipment and facial covering, and personal hygiene. Since the declaration of COVID-19 as a pandemic by the WHO on 12 March 2020, other strategies have included shutting down nations ("lockdowns") and banning international or domestic travel. Most countries all over the world announced nationwide lockdowns, with severe restrictions on movement unless for essential reasons such as seeking medical care. Healthcare systems have had to reorganise their models of care delivery to limit human contact, resulting in a dramatic crisis for the delivery of healthcare. Consultation rates of patients for medical conditions, their management and outcomes have all been adversely impacted by the COVID-19 pandemic [8]. Compared to the pre-pandemic period, there has been a substantial decrease in admissions for acute medical conditions, longer delays between the onset of the symptoms and hospital treatment, less utilisation of inhospital procedures, and reduction in access to care for chronic diseases [9–11]. Even primary care services (the first point of contact in the healthcare system) have had to restructure their services to minimise the burden of COVID-19, whilst trying to deliver necessary care. Diabetes is a leading cause of morbidity and mortality and places substantial socioeconomic and financial pressures on individuals, health systems and global economies [12,13]. The burden and prognosis of diabetes are highly dependent on early detection and risk factor management, which usually starts at primary care level. Any delays in treatment lead to worse outcomes such as the increased incidence of cardiovascular events [14].

2. Aim

Despite emerging evidence on the impact of the COVID pandemic on primary care services [15–17], the impact on primary care diabetes services specifically is uncertain. In this context, using an online survey developed by primary care diabetes experts, our primary objective was to examine the impact of the COVID pandemic on primary care diabetes services in the UK from a healthcare professional perspective. Our specific objectives were to assess (i) the impact of the COVID-19 pandemic on healthcare professionals involved in diabetes care and the delivery of primary care diabetes services and (ii) the role of sociodemographic factors on relevant impacted outcomes.

3. Methods

3.1. Setting and data sources

An online survey was developed by the Primary Care Diabetes Society research group comprising primary care diabetes experts from England, Scotland, Wales and Northern Ireland. It was administered to healthcare and allied health professionals including doctors, pharmacists, nurses/nurse practitioners, dieticians, healthcare assistants and paramedics. The survey was web-based and administered using a platform developed by OmniaMed Communications (a leading medical communications agency). The survey consisted of a series of questions related to the COVID-19 pandemic and its impact on primary care diabetes services (Appendix A). The survey was administered between January 2021 and May 2021. Informed consent was sought, and respondents were informed that the results would be published in a report or medical journal. This survey study did not require ethical approval because analysis of the anonymous survey data was classified as nonhuman participant research. The study was of minimal risk and was conducted anonymously and voluntarily.

3.2. Outcomes of survey

Outcomes evaluated (i) included the impact of the COVID-19 pandemic on healthcare professionals involved in diabetes care such as COVID-19 illness episodes involving themselves or members of their households, their workloads, emotional states and worry about getting infected with COVID-19; (ii) the impact of COVID-19 on delivery of diabetes care such as consultation methods and time, ability to provide routine diabetes, patient's access to specialist advice, and staff absence; and (iii) the role of sociodemographic factors on healthcare professionals being overworked or emotionally drained.

3.3. Statistical analysis

The responses were anonymous and tabulated and reported in aggregate form. Mean (standard deviation, SD) values were reported for continuous variables. Percentiles and sample size were reported for categorical variables. To better visualise some of the data, box plots were generated. Multivariable logistic regression was to evaluate the effect of sociodemographic factors on being overworked or emotionally drained. Given the non-interventional setting of the study, it was not feasible to perform a statistical sample size calculation. Based on the existing literature [11,18], our sample size was adequate to investigate the objectives of the study. All analyses were conducted using Stata version MP 16 (Stata Corp, College Station, Texas).

Table 1
Characteristics of survey respondents.

Characteristic	Number (%) or mean (SD)
Professional role	
Nurse/nurse practitioner	582 (59.7)
Doctor	321 (32.9)
Other[*]	35 (3.6)
Pharmacist	27 (2.8)
Healthcare assistant	5 (0.5)
Dietician	4 (0.4)
Paramedic	1 (0.1)
Special interest in diabetes	
Yes	797 (81.7)
No	178 (18.3)
Age	52 (9)
Sex	
Females	770 (79.0)
Males	173 (17.7)
Prefer not to say	32 (3.3)
Ethnicity	
White	709 (72.7)
Asian/British Asian	128 (13.1)
Mixed/multiple ethnic groups	40 (4.1)
Black/African/Caribbean/Black British	38 (3.9)
Prefer not to say	34 (3.5)
Other, please describe your ethnicity in your own words[**]	18 (1.9)
Arab	8 (0.8)

[*] included mostly podiatrists and physician associates.
[**] included mostly mixed Asian origins.

4. Results

4.1. Characteristics of survey respondents and their practice

Of the 1070 healthcare and allied health professionals, 975 (91.1%) completed the questionnaire. Most respondents were nurses or nurse practitioners (59.7%) and doctors (32.9%). The age of respondents ranged from 24 to 89 years with a mean (SD) and median (interquartile range) of 52 (9) and 53 (47–58) years, respectively; 79% were female with 3.3% preferring not to disclose their sex. With regards to ethnicity, the majority were White (72.7%), followed by Asian/British Asian (13.1%) and mixed ethnic groups (4.1%) (Table 1). Most respondents reported to have a special interest in diabetes (81.7%). 55.9% reported their practice population as average or mixed, 14.9% as affluent and 29.2% as more deprived. During the course of the COVID-19 pandemic, only 26.6% of respondents reported having worked in out-of-hours services with face-to-face service provision and 29.6% of respondents reported having worked in a COVID hot hub or other service providing face to face assessment of people with suspected or confirmed COVID-19 infection.

4.2. Impact of COVID-19 on healthcare professionals involved in diabetes care

Most respondents (72.4%) reported not having an illness episode typical of COVID-19 during the pandemic, whilst about 10% each reported testing positive or negative to an illness episode typical of COVID-19 (Fig. 1). Of those who had tested positive to an illness episode, 29.3% had experienced symptoms that lasted longer than 12 weeks and 1.0% (representing one respondent) had been hospitalised with COVID-19. Overall, 15.8% of respondents reported having a member of their household testing positive for COVID-19. Most respondents (96.7%) were intending to receive or had already received the COVID-19 vaccine. 41.4% respondents reported "quite often" when asked how often they felt overloaded by work, with 29.8% responding "very often". About 79.1% of participants reported having felt emotionally drained at the end of a working day slightly

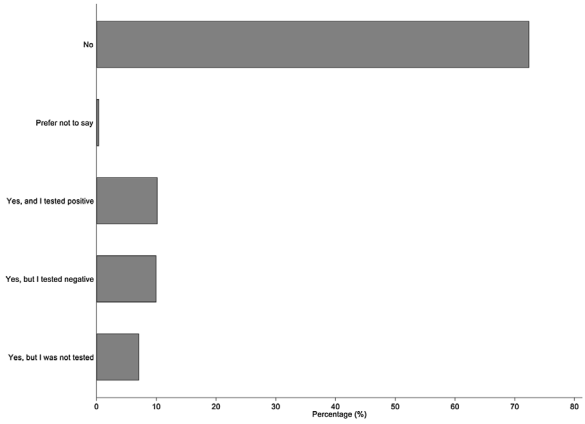

Fig. 1. Respondents who had an illness episode typical of COVID-19.

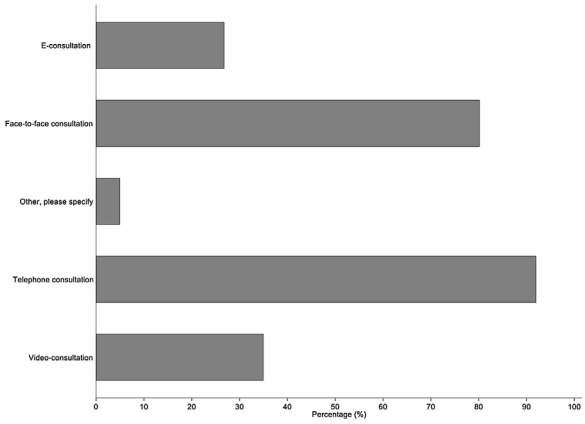

Fig. 2. Consultation methods used by respondents to provide diabetes care during the pandemic.
Each survey participant responded to multiple consultation methods.

or significantly more often than pre-pandemic times. With regards to worry about getting infected with the coronavirus, about 70% worried occasionally or quite often. Another 62% worried occasionally or quite often about infecting family members with the coronavirus.

4.3. Impact of COVID-19 on delivery of diabetes care

Regarding the question on common consultation methods used to provide diabetes care during the pandemic, respondents had the option of choosing more than one answer. The most common were telephone consultation (92.0%) and face-to-face consultation (80.2%); 35.0% used video consultations (Fig. 2). Regarding virtual consultations, about 36% reported consultation time was about the same or slightly longer than before the pandemic. With regards to people who were previously hard to engage, 39% felt the broader range of communication methods had had a moderate positive effect with 20.9% reporting no effect. About 79.1% of respondents felt the COVID-19 pandemic had had moderate to significant impact on their practice's ability to provide routine diabetes care (Fig. 3). Only 8.6% responded the impact was very significant. Most respondents (63.9%) had changed the method they were using to decide who should be recalled for diabetes annual review compared to pre-pandemic times, with the majority (82.4%) prioritising recalls for diabetes review based on clinical risk. For those not prioritising recalls for diabetes review based on clinical risk, the majority (61.1%) reported that their practice did not need to as they were able to provide full routine diabetes care as usual; 15.3% said they didn't

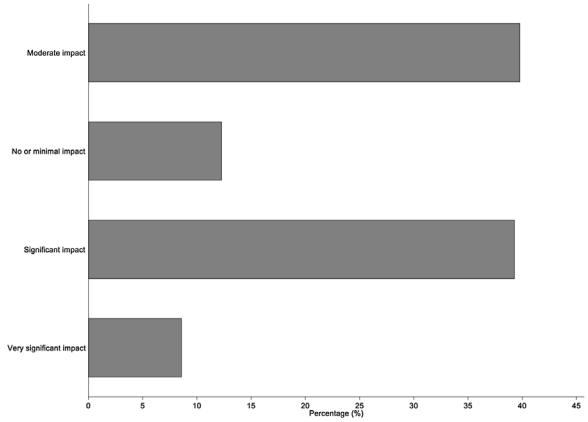

Fig. 3. Impact of respondents' practice's ability to provide routine diabetes care.

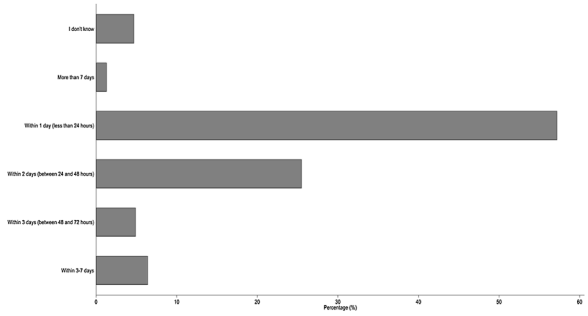

Fig. 4. How quickly a patient with a diabetes related problem could get a response from an appropriate healthcare professional at the peak of the pandemic.

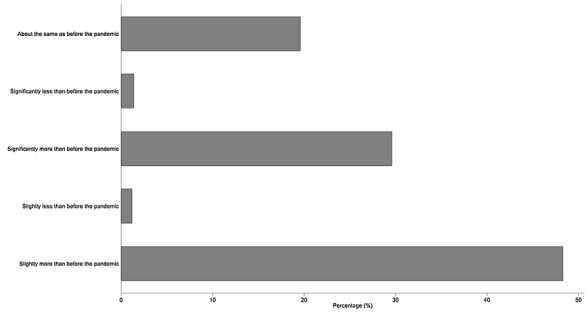

Fig. 5. Frequency of encounter with mental health concerns in people with diabetes.

have the capacity to do so. In response to how quickly a person with a diabetes-related problem got a response from an appropriate healthcare professional in their practice at the peak of the pandemic, more than half (57.2%) responded it was less than 24 h and 25.5% said it was between 24 and 48 h (Fig. 4). In response to how easy it was to access specialist advice when faced with a clinical concern in diabetes care compared to pre-pandemic times, 44.3% of respondents said it was the same and 33.4% said it was somewhat more difficult than before the pandemic. About 70.6% of respondents felt the COVID-19 pandemic had had moderate to significant impact on their practice's ability to provide routine NHS health checks or screening for type 2 diabetes. About half of respondents (48.3%) reported encountering mental health concerns in people with diabetes slightly more than before the pandemic followed by 30% who reported significantly more (Fig. 5). The majority of respondents (85.8%) reported that their practice had been affected by staff absence due to shielding, illness or self-isolation due to COVID-19.

Table 2
Association between sociodemographic characteristics and being overworked or emotionally drained.

Characteristics	OR (95 % CI)	*p*-Value
Age (years)		
Per 1-year increase	1.00 (0.98–1.01)	0.59
≤ 50	ref	
>50	1.19 (0.86–1.67)	0.30
Sex		
Female	ref	
Male	0.72 (0.44–1.18)	0.19
Professional role		
Other	ref	
Doctor	2.52 (1.25–5.07)	0.01
Nurse/nurse practitioner	1.23 (0.63–2.43)	0.54
Ethnicity		
Other	ref	
Asian/British Asian	0.88 (0.40–1.90)	0.74
Black/African/Caribbean/Black British	1.60 (0.55–4.64)	0.39
White	0.96 (0.53–1.74)	0.90

Analysis sample was based on 660 participants with non-missing data on all variables in the table.
CI, confidence interval; OR, odds ratio; ref, reference; each characteristic (exposure) was adjusted for all other characteristics in the table.

4.4. Role of sociodemographic characteristics on outcomes impacted by the pandemic

Age, sex and ethnicity were not associated with being overworked or emotionally drained in multivariable analysis; however, being a doctor was associated with an increased odds of being substantially overworked or emotionally drained compared to other roles excluding nurses (OR = 2.52; 95% CI, 1.25–5.07; p = 0.01); being a nurse/nurse practitioner was not associated being substantially overworked or emotionally drained (OR = 1.23; 95% CI, 0.63–2.43; p = 0.54) (Table 2). In analysis that adjusted for age, sex, professional role and ethnicity, being worried about infecting a family member with the Coronavirus also increased the odds of being substantially overworked or emotionally drained (OR = 2.05; 95% CI, 1.24–3.39; p = 0.005).

5. Discussion

5.1. Key findings

Using an online survey administered to healthcare and allied health professionals, we have examined the impact of the COVID pandemic on primary care diabetes services in the UK and the health and wellbeing of those delivering these services. Based on a large sample of respondents, our results demonstrated the following: (i) the majority of healthcare professionals delivering primary care diabetes services felt overloaded by work and emotionally drained compared with pre-pandemic times; (ii) most respondents were worried about getting infected with the coronavirus and infecting their family members, with the greater majority having received or intended to receive the COVID-19 vaccine if offered; (iii) the most common consultation method used to provide diabetes care during the pandemic was telephone consultation; (iv) most respondents felt the COVID-19 pandemic had had moderate to significant impact on their practice's ability to provide routine diabetes care; (v) most respondents had changed practice on how patients should be recalled for diabetes annual review compared to pre-pandemic times, with the majority prioritising recalls for diabetes review based on clinical risk; (vi) most respondents felt the COVID-19 pandemic had had moderate to significant impact on their practice's ability to provide routine NHS health checks or screening for type 2 diabetes; (vii) most respondents reported encountering mental health concerns in people with diabetes more

than pre-pandemic times; and (viii) most respondents reported staff shortages in their practice due to absence caused by shielding, illness or self-isolation. We also showed that being a doctor and worried about infecting a family member with the Coronavirus were each independently and positively associated with being substantially overworked or emotionally drained.

5.2. Comparisons with previous studies

Several studies have assessed and reported the extent to which consultation rates of patients and healthcare services have been impacted during the COVID-19 pandemic compared to pre-pandemic times. These have included patient delays in seeking medical care, declines in hospitalisations for acute medical conditions such as strokes and myocardial infarctions (with reductions ranging from 20.2 to 73.0%), impact on routine cancer care, less utilisation of in-hospital procedures such as coronary angiographies, postponing or cancellation of surgical procedures, and shorter length of hospital stays [9,10,18–20]. Several studies have also reported on the impact of the COVID-19 pandemic on primary care services. In a retrospective analysis of the impact of COVID-19 on primary care GP consultations in China, there was a substantial reduction in patient visits for all major systems with reduced reappointments and waiting times; patients' physical and psychological health were also adversely affected [16]. In a study that used de-identified electronic health records from the Clinical Research Practice Datalink to study the indirect acute effects of the COVID-19 pandemic on physical and mental health in the UK, substantial reductions in primary care contacts for acute physical and mental conditions were reported [21]. In a qualitative interview study of GPs in the Flemish part of Belgium to gain insights into the consequences of the COVID-19 outbreak on the core functions of primary care, there was a major switch towards telephone triage and consult, there was a feeling that acute care was compromised, chronic care was mostly postponed and there was a worry about continuity of regular care [17]. Though there is some data on healthcare professional views on the impact of the COVID-19 pandemic on healthcare services such as cancer care management, arthroplasty services, and routine care for chronic diseases [11,15,18,19], there is limited data for primary care diabetes services specifically. Our study provides a previously unreported comprehensive assessment of the perspectives of healthcare professionals regarding the impact of the COVID-19 pandemic on the delivery of primary care for diabetes in UK primary care.

5.3. Potential explanation of findings

Several reasons could explain the profound impact of the COVID-19 outbreak on the ability of healthcare professionals and their practices to deliver routine diabetes care in primary care. As expected, infectious disease outbreaks have the potential to exert stress on the organisation and delivery of healthcare consistent with previous epidemics and pandemics [22–25]. With the unprecedented surge in COVID-19 infection rates and associated substantial morbidity and mortality rates, the demand for medical care has exceeded available resources. In addition to the containment measures ranging from social distancing to lockdowns, policy makers and stakeholders have also had to reorganise the delivery of healthcare services [26]. Chronic and non-urgent care in tertiary hospitals have been suspended or postponed to increase capacity for emergency care. Only few respondents had reported testing positive or negative to an illness episode typical of COVID-19, which could be attributed to the fact that only few had worked in out-of-hours services with face-to-face service provision, with majority of primary care consultations taking place via telephone. The increased workload and emotional strain on health personnel during the pandemic likely relates to the shortage of health personnel because of sickness due to COVID and the administrative burdens associated with reorganizing care. Our analysis also suggested that being a doctor (compared to the other roles apart from nurses) and the worry about infecting a family member with the Coronavirus was substantially associated with an increased risk of being overworked or being emotionally drained. Even though only 10 % of our survey respondents had tested positive to COVID-19, almost one-third of them had experienced symptoms that lasted longer than 12 weeks (long COVID). The significant impact on the ability of primary care diabetes practices to effectively provide routine diabetes care is attributed to the overall pressures on the health system and its restructuring, shortage of personnel and deferral or cancellation of visits and procedures deemed as nonessential. Finally, the increased mental health concerns in people with diabetes are likely because of the social restrictions such as loneliness, stress, anxiety about the future and financial worries.

5.4. Implications of findings

Indeed, the COVID-19 pandemic has led to several adverse health effects other than those directly attributed to the disease itself. These include patient's health and healthcare delays which are deleterious for the society. The significant reductions in the practices' ability to provide routine NHS health checks or screening for type 2 diabetes could lead to not only a drop in diabetes prevalence of disease registrars, but more importantly a lot of patients are likely to present late with microvascular and macrovascular complications at diagnosis. Chronic kidney disease and cardiovascular disease are the leading cause of morbidity and mortality associated with diabetes [27]. People with diabetes need timely and intensive management of risk factors such as glucose, lipids, and blood pressure to reduce the risk of disease progression, complications and avoidable deaths [28]. These findings therefore have serious implications for the diagnosis and prognosis of people with diabetes and has relevance for primary care diabetes practitioners, clinicians and policymakers. It would be helpful if future studies quantified the impact of the findings on healthcare delivery and patient's prognosis such as time to recovery calculations, which estimate the level of expansion required in service provision to address the deficit caused by the pandemic. This will enable appropriate and sustainable strategies to be put in place to ensure high standards of patient care and prepare for future crisis of this nature. Nevertheless, despite the adverse impact of the COVID-19 crisis on healthcare, it has also led to rapid changes in medical care and created opportunities such as the rapid expansion of telemedicine [8]. The broader range of communication methods has had a moderate positive effect especially with regards to people who were previously hard to engage. These may add value to care and guide recommendations that ensure safe and effective future clinical practice for primary care.

5.5. Strengths and limitations

The strengths of the current evaluation include the novel nature of the topic given the abundance of literature on the impact of the COVID-19 pandemic on healthcare delivery, the high completion rate among those surveyed, the use of a broad range of primary care diabetes professionals, and the ability of the survey to assess the impact of the COVID-19 crisis on patients, healthcare professions and practices. The limitations include (i) the survey design; (ii) survey questions may be subjective; (iii) the relatively small sample; (iv) inability to capture the locations of the survey respondents; and (v) the possibility that the population who chose to respond to the survey represents a small subset of primary care diabetes pro-

fessionals and may not be indicative of the larger group as a whole and generalisable to the UK population.

6. Conclusions

The COVID-19 pandemic has had significant impact on the ability of healthcare professionals and their practices to deliver routine diabetes care in the UK. Failure to restore primary care provision urgently and safely to at least pre-pandemic levels in a sustainable manner can adversely impact patients' physical and mental health and place additional burden on the already overburdened healthcare system.

Data availability

Data will be made available on request.

Funding

The study was funded by the Primary Care Diabetes Society.

Conflict of interest

The authors have no relevant conflict of interest.

Data sharing

The corresponding author had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Appendix A. Survey instrument

	By completing this questionnaire, you consent to the pseudonymised use of your answers for scientific research. Do you agree? Yes No
Section A. Background: about you and your practice.	
1	Which role best describes your professional background? Doctor Pharmacist Nurse/Nurse practitioner Dietitian Health care assistant Paramedic Other, please specify
2	Do you have a special interest in diabetes? Yes No
3	How old were you on your last birthday? <leave open ended> Prefer not to say
4	What is your sex? Female Male Prefer not to say
5	How would you describe your practice population? More affluent Average or mixed More deprived
6	How would you describe your ethnicity? White Mixed/Multiple ethnic groups Asian/British Asian Black/African/Caribbean/Black British Arab Other, please describe your ethnicity in your own words Prefer not to say
7	During the course of the pandemic, have you worked in out-of-hours services with face to face service provision? Yes No
8	During the course of the pandemic, have you worked in a COVID hot hub or other service providing face to face assessment of people with suspected or confirmed COVID-19 infection? Yes No
9	Have you had an illness episode typical of COVID-19 (i.e. Dry cough, high temperature, altered sense of smell or taste)? Yes, and I tested positive Yes, but I tested negative Yes, but I was not tested No Prefer not to say
10	If yes and tested positive, have you been hospitalised with COVID-19? Yes No Prefer not to say
11	If yes and tested positive, have you had symptoms that have persisted for longer than 12 weeks, since contracting COVID? Yes No Prefer not to say
12	Have you had any household members that have tested positive for COVID-19? Yes No Prefer not to say
13	Have you had or are you intending to have a COVID-19 vaccine? Yes No Undecided Prefer not to say
Section B. The following questions relate to your consultations with your patients with diabetes during the COVID-19 pandemic	
14	What consultation methods are you, or have you been using, to provide diabetes care during the pandemic? (please tick all that apply) Face-to-face consultation Telephone consultation Video-consultation E-consultation (for example, email or via practice website) Other, please specify
15	What impact do you feel the pandemic has had on your practice's ability to provide routine diabetes care? No or minimal impact Moderate impact Significant impact Very significant impact
16	Compared to before the pandemic, have you changed the method you are using to decide who should be recalled for diabetes annual review? Yes No
17	Are you prioritising recalls for diabetes review based on clinical risk? Yes No
18	If no, which of the following best describes your practice? Our practice doesn't need to, we are able to provide full routine diabetes care as usual Our practice would like to, but has no capacity to do so Our practice is not confident, or is unsure how to prioritise based on clinical risk Other, please specify
19	Typically, at the peaks of the pandemic, how quickly can a person with a diabetes related problem get a response from an appropriate healthcare professional in your organisation? Within 1 day (less than 24 h) Within 2 days (between 24 and 48 h) Within 3 days (between 48 and 72 h) Within 3–7 days More than 7 days I don't know
20	Compared to before the pandemic, when faced with a clinical concern in diabetes care, how easy is it for you to access specialist advice?

Much easier than before the pandemic
Somewhat easier than before the pandemic
Same as before the pandemic
Somewhat more difficult than before the pandemic
Much more difficult than before the pandemic

21 With reference to virtual consultations (whether by telephone, video or e-consultation), on average, and compared to before the pandemic, how long do you feel you need for a consultation with a person with diabetes?
Much shorter than before the pandemic
Slightly shorter than before the pandemic
About the same as before the pandemic
Slightly longer than before the pandemic
Much longer than before the pandemic

22 With regards to people who were previously hard to engage, what impact do you feel the broader range of communication methods has had on engagement?
Strong positive effect
Moderate positive effect
No effect
Moderate negative effect
Severe negative effect
I do not know

23 Compared to before the pandemic, how often are you encountering mental health concerns in people with diabetes?
Significantly less than before the pandemic
Slightly less than before the pandemic
About the same as before the pandemic
Slightly more than before the pandemic
Significantly more than before the pandemic

24 What impact do you feel the pandemic has had on your practice's ability to provide routine NHS health checks or screening for type 2 diabetes?
No or minimal impact
Moderate impact
Significant impact
Very significant impact

Section C The following questions are related to your experience of work as a healthcare professional during the peaks of the COVID-19 pandemic.

25 How often do you feel overloaded by work?
Not at all
Occasionally
Quite often
Very often

26 Has your practice been affected by staff absence due to shielding or illness or self-isoltation due to COVID-19?
Yes
No

27 Compared to before the pandemic, how often do you feel emotionally drained at the end of a working day?
Significantly less than before the pandemic
Slightly less than before the pandemic
About the same as before the pandemic
Slightly more than before the pandemic
Significantly more than before the pandemic

28 Do you worry about getting infected with coronavirus?
Not at all
Occasionally
Quite often
Very often

29 Do you worry about infecting your family with coronavirus?
Not at all
Occasionally
Quite often
Very often

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