

Inpatient diabetes care during the COVID-19 pandemic: A Diabetes UK rapid review of healthcare professionals' experiences using semi-structured interviews

Olivia Burr¹  | Alex Berry¹ | Nikki Joule¹  | Gerry Rayman² 

¹Diabetes UK, London, UK

²Ipswich Hospital, East Suffolk and North East Essex NHS Foundation Trust, Colchester, UK

Correspondence

Olivia Burr, Diabetes UK, London, UK.
Email: Olivia.burr@diabetes.org.uk

Funding information

Sanofi

Abstract

Aims: Inpatient care for people with diabetes can and must be improved. The COVID-19 pandemic has impacted the way care is delivered across the UK. Diabetes UK needed to understand how inpatient care for people with diabetes has been affected and to identify opportunities, areas of concerns and recommendations for the future.

Methods: We interviewed 28 healthcare professionals and hospital teams from across the UK to find out about their experiences of delivering inpatient diabetes care during the first peak of the COVID-19 pandemic.

Results: We found that disruption to inpatient diabetes services created positive environments and opportunities for new ways of working, but in the minority, impacted on the quality of care clinicians felt they were able to deliver.

Conclusions: It is important that these positive ways of working be maintained and as a result of these experiences we have outlined urgent recommendations for the challenging winter months ahead.

KEYWORDS

healthcare delivery, inpatient diabetes

1 | INTRODUCTION

On average, one in six people in hospital in England have diabetes, and in some areas, this rises to as many as one in four. Despite this large representation, inpatient care for people with diabetes is considered unsafe and in need of significant improvement. Data from the National Diabetes Inpatient Audit in 2017 indicate almost one third of patients with diabetes had a medication error during their stay, and 2,200 people suffered from diabetic ketoacidosis due to under treatment of insulin.¹ Whilst the Audit shows that many trusts in England have made year-on-year improvements, there remains a significant amount of variability which must be addressed.¹

Prior to the COVID-19 pandemic, Diabetes UK outlined recommendations for improving diabetes inpatient care in the 'Making Hospitals Safe for People with Diabetes'

publication.² The key recommendations from this report are summarised in Box 1.

Since then, COVID-19 has impacted on all elements of care for people with diabetes. To understand the initial impact of COVID-19 on inpatient services, we interviewed healthcare professionals and hospital teams from across the UK to find out about their experiences of delivering inpatient diabetes care.

2 | METHOD

We conducted semi-structured interviews with 28 healthcare professionals and hospital teams. These healthcare professionals consisted of diabetes consultants, diabetes specialist nurses and allied health professionals involved in delivery of diabetes inpatient care. Participants were identified using

a mixture of purposive and snowball sampling methods. Purposive methods included ensuring representation from across the United Kingdom and a mixture of large teaching hospitals and smaller district general hospitals. We employed snowball methods to recruit participants via professional and clinical networks.

3 | FINDINGS

We found that disruption to inpatient diabetes services created positive environments and opportunities for new ways of working (93% of trusts), but in the minority (the remaining 7%), impacted on the quality of care clinicians felt they were able to deliver. Regardless of location, the way hospitals re-organised and prioritised inpatient services frequently determined whether clinicians reported a positive or negative experience. Services who were already delivering care in line with Diabetes UK's recommendations, by employing strong clinical leadership and with access to better systems and technology, described more positive experiences and felt they were able to provide a high standard of care.

4 | COMMON EXPERIENCES

The following themes were common amongst clinicians' experiences.

4.1 | Use of technology

Technology such as web-linked glucometers, electronic patient records and prescribing, online referral systems, video conferencing tools and the creation of inpatient diabetes dashboards were all deemed vital to providing care during the pandemic. This use of technology enabled teams to rapidly and remotely identify and consult on people with diabetes, thereby increasing the number of people who could be reviewed and improving patient flow from admission through to discharge. Importantly, this technology also enabled staff who were unable to attend at the bedside to continue to provide an inpatient service.

4.2 | Service structure

During the pandemic most teams re-organised their inpatient services, with many describing these structural changes as the key to providing safe and effective care. Key changes to service structure included:

What's new?

- This position statement makes recommendations to improve and sustain inpatient diabetes care during the current COVID-19 pandemic and for future waves.
- It describes the experiences of clinicians working during the first wave of the COVID-19 pandemic.

BOX 1 What do we already know about delivering safe inpatient diabetes care?

Since 2018, Diabetes UK² have called for every stay in hospital for someone with diabetes to be safe. For people with diabetes to be safe in hospital, we need:

- Multidisciplinary diabetes inpatient teams in all hospitals
- Strong clinical leadership from diabetes inpatient teams
- Knowledgeable healthcare professionals who understand diabetes
- Better support in hospitals for people to take ownership of their diabetes
- Better access to systems and technology
- More support to help hospitals learn from mistakes

- 6 or 7 day working.
- Running a proactive rather than reactive service; actively seeking people with diabetes for review.
- A greater number of junior and/or senior doctors available for diabetes review and management.
- Redefining roles within the diabetes team to share workloads across different professions.
- Maintaining flexibility to respond to emerging areas of concern.

Crucially, many of these positive changes to service structure were only possible due to a cessation or change in providing diabetes outpatient services. This increased the availability of staff to deliver these new ways of working. Those teams who were already well-resourced relied less on redeployed staff.

Whilst the majority reported positive changes to service structure, some described negative changes. These negative changes were rooted in the disbanding or redeployment of the diabetes inpatient team. Diabetes specialist clinicians who were redeployed felt under-utilised in their temporary roles and were concerned that safe and quality care for people with diabetes could no longer be provided in their absence.

4.3 | Relationship with others

Different ways of working during the pandemic strengthened existing relationships and fostered new ones within diabetes teams and others across the hospital. These relationships were characterised by better communication, appreciation and trust.

4.4 | Recognition and importance

As a result of improved relationships, a perceived prioritisation from hospital management and greater visibility of diabetes teams, clinicians described a new or enhanced recognition of the importance of inpatient diabetes teams. Clinicians felt non-specialists better valued their skills and expertise, which often coincided with an increase in referrals. Clinicians also spoke positively of working closer with previously hard-to-access areas of the hospital such as accident and emergency and intensive care units.

4.5 | Momentum and opportunity

Finally, almost all those interviewed spoke of a refreshed momentum and new opportunities to improve diabetes inpatient care. Those who had positive experiences were concerned with losing momentum, and those who reported negative experiences were concerned that diabetes inpatient care would slip further down the agenda and limit future opportunities for improvement.

5 | CASE STUDIES

5.1 | Trust A

Trust A's diabetes inpatient service operates across four sites and became a 7-day service just prior to the pandemic. Despite some staff being redeployed or shielding, the team were able to continue providing a 7-day service. Acting to stop people being admitted unnecessarily was key and steps to do this included:

- Proactively calling those deemed at high risk of admission to remind them of the 'sick day rules' and provide advice on glycaemic management if required.
- Increased follow-up after discharge.
- Providing triage in emergency department and ambulatory care follow-up to those not admitted.
- Providing helpline for primary care colleagues and people with diabetes.

Using technology such as networked blood glucose monitors meant the team could undertake remote reviews. They

also shifted to more proactive, responsive and individualised care. The team had good visibility in the hospital, were seen as responsive, helpful and able to provide the support others needed.

5.2 | Trust B

Despite a business case for increased diabetes inpatient specialist nurse previously being approved, a freeze was put on recruitment and so the diabetes team were unable to provide a 7-day service. Due to capacity, the team had to focus only on insulin users, and not all people with diabetes. Previous systems of identifying people with diabetes and then triaging them to the diabetes team were stopped.

The diabetes team felt taken out of the equation by hospital management and were not prioritised. This was felt on the wards as well, with colleagues not asking for help or seeking their specialist advice. The team were concerned about the quality of care provided to people with diabetes, but also that this experience has set their importance as a specialty back and that in the recovery period they will be starting again from scratch.

6 | TOWARDS THE FUTURE

6.1 | Short-term preparedness

With the potential for a protracted pandemic before us, clinicians identified the following priorities for diabetes inpatient care in the short term:

- Maintaining or reinstating multidisciplinary diabetes inpatient teams.
- Evidencing the impact of enhanced services employed during the first peak of the pandemic.
- Maintaining technological advances or putting new systems in place where they have previously been unable to.
- Putting in place better processes to tackle key challenges such as discharge and patient education.
- Prioritising the well-being of healthcare professionals to ensure there is time for rest and recovery.

6.1.1 | Immediate recovery phase

Priorities for the medium-term recovery phase included:

- Ensuring a holistic approach to care in hospitals. Including prioritising self-management and making use of opportunities to review a person's diabetes management when in

hospital.

- Re-starting staff education; including mandatory insulin safety education and ward-based sessions.
- Re-commencing paused quality improvement projects and business cases.
- Reviewing inpatient team roles and skills.

One trust felt the pandemic meant there was less distinction between professions which encouraged everyone learning from each other. This has led to them developing a set of cross-profession core competencies for inpatient diabetes care.

6.2 | A new normal for inpatient care

Despite the challenges of providing care during the COVID-19 pandemic, many of those interviewed described a revelatory opportunity to deliver inpatient services in ways they had always wanted to. They stressed that the new normal for inpatient care should therefore not involve a move back to old ways where there was lack of appreciation of the importance of inpatient diabetes service. Clinicians described their hopes for a new normal in inpatient diabetes care consisting of:

- A continued prioritisation and recognition of diabetes inpatient care as an integral, governance and safety-led component of hospital care.
- Continued or enhanced resourcing to ensure appropriate workforce depth, technology, and scope for quality improvement analysis and activity.

- Support to capitalise on the momentum for positive change to the way diabetes inpatient care has been delivered, and to bring attention to the impact of negative experiences.

7 | CONCLUSION

We acknowledge that inpatient diabetes services are a vital part of the larger journey of diabetes care. Each part of the journey requires planning and resourcing for the path ahead and moves to enhance inpatient care should not be at the cost of other services.

8 | LIMITATIONS

The findings of this review are limited by the number (28) of interview participants, which only represents a small percentage of diabetes teams across the UK. Perspectives of health-care professionals from the devolved nations of Scotland, Wales and Northern Ireland have been included, but as there was limited difference related to location, these were not specifically identified.

8.1 | What needs to happen now?

In England, the NHS is in phase 3 of their response to COVID-19. Priorities for phase 3 stress the need to take account of the lessons learned during the first COVID-19 peak and lock in beneficial changes. This report identifies those

TABLE 1 NHSE priorities and Diabetes UK recommendations for phase 3 COVID-19 recovery planning

NHSE phase 3 priority	Diabetes UK recommendation
Accelerating the return to near-normal levels of non-COVID health services, making full use of the capacity available in the ‘window of opportunity’ between now and winter.	Making use of available capacity for planned, elective or emergency surgery should not come at the cost of safe and equally accessible care. The Diabetes UK position statement ³ on inpatient surgical care recommends that during the COVID-19 pandemic local health systems ensure surgical care pathways for people with diabetes are in place at all sites where surgery is carried out. These pathways must be appropriately resourced and created in collaboration with local diabetes inpatient teams.
Preparation for winter demand pressures, alongside continuing vigilance in the light of further probable Covid-19 spikes locally and possibly nationally.	To prepare for the immediate months ahead, hospitals and local health systems must urgently ensure that: <ul style="list-style-type: none"> • Hospitals and local health systems involve diabetes specialist teams in recovery phase and winter planning. • The NHSE Long-Term Plan commitments to ensure universal coverage of Diabetes Inpatient Specialist Nurse teams are urgently actioned. • Diabetes inpatient teams are deployed effectively to maximise their value and provide safe, effective care for people with diabetes. • Technology such as web-linked glucometers, ketone meters, electronic patient records, inpatient diabetes dashboards and video call equipment is available in all hospitals. • Hospitals and local health systems must ensure appropriate support and protection for staff physical and mental well-being.

beneficial changes made in diabetes inpatient care and a refreshed sense of momentum and opportunity; which hospitals and local health systems must carry forward.

We believe the recommendations listed in Table 1 are key to ensuring safe and effective inpatient diabetes care across the UK in the months ahead.

ACKNOWLEDGEMENTS

Sanofi has provided financial sponsorship to support Diabetes UK's Improving Inpatient Care Programme. Sanofi has no editorial control over the content or the delivery of the programme.

ORCID

Olivia Burr  <https://orcid.org/0000-0003-1531-5526>

Nikki Joule  <https://orcid.org/0000-0002-3827-8724>

Gerry Rayman  <https://orcid.org/0000-0003-3331-7015>

REFERENCES

1. *National Diabetes Inpatient Audit 2017: Full Report*. UK: NHS Digital. <https://files.digital.nhs.uk/pdf/s/7/nadia-17-rep.pdf>. Accessed September 24, 2020.

2. *Making Hospitals Safe*. London: Diabetes UK. https://www.diabetes.org.uk/resources-s3/2018-10/Making_Hospitals_safe_for_people_with_diabetes_FINAL.pdf. Accessed August 24, 2020.
3. *Availability of Specialist Support and Equal Access to Surgery for People with Diabetes*. London: Diabetes UK. https://www.diabetes.org.uk/resources-s3/public/2020-08/Availability_of_Specialist_Support_and_Equal_Access_to_Surgery_for_People_with_Diabetes_position_statement_0.pdf. Accessed August 24, 2020.

How to cite this article: Burr O, Berry A, Joule N, Rayman G. Inpatient diabetes care during the COVID-19 pandemic: A Diabetes UK rapid review of healthcare professionals' experiences using semi-structured interviews. *Diabet Med*. 2021;38:e14442. <https://doi.org/10.1111/dme.14442>