

Improving the Perioperative Pathway of Patients with Diabetes (IP3D) undergoing elective surgery

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Introduction

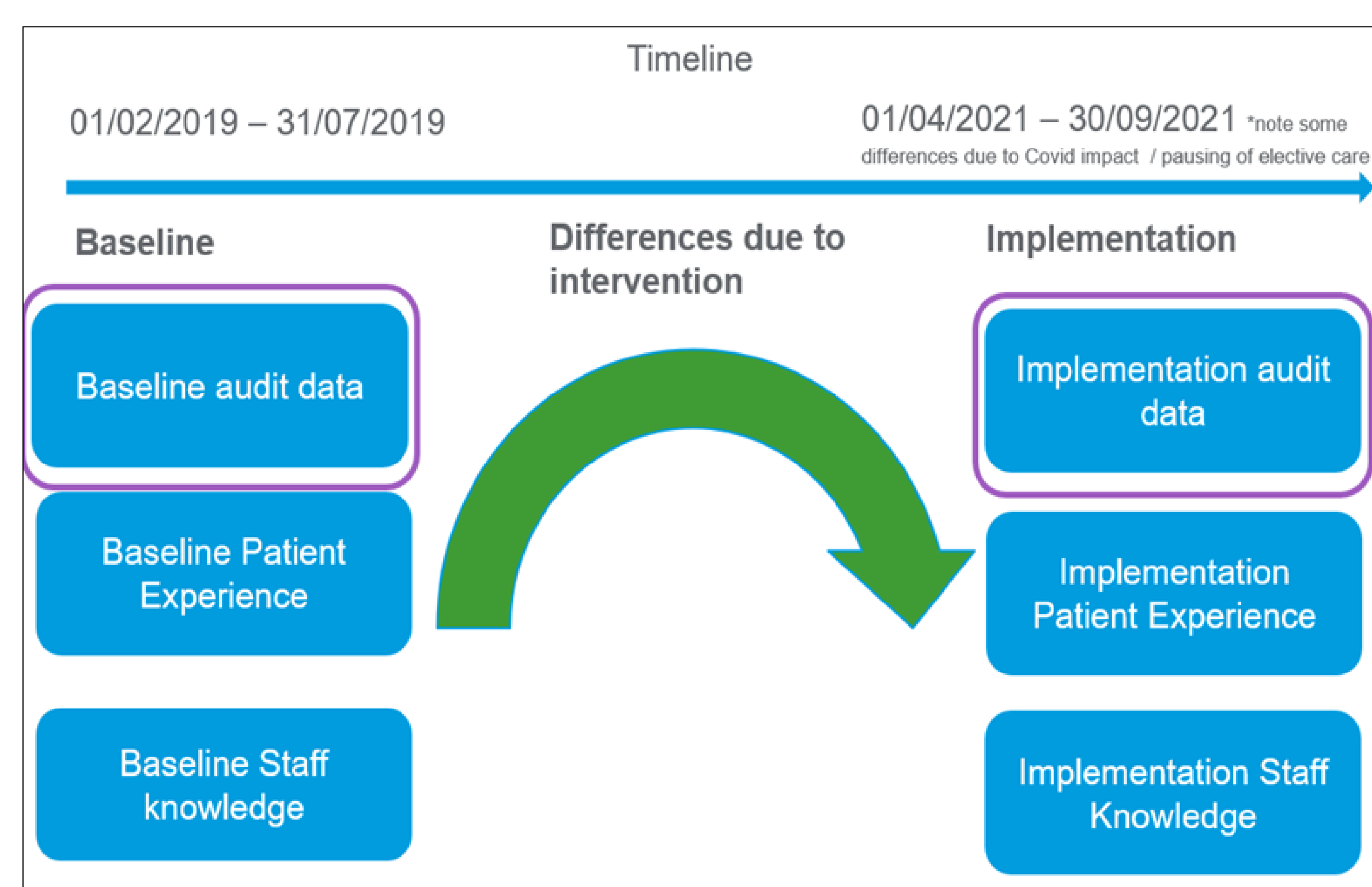
Prevalence of diabetes is increasing day by day and at Manchester Royal Infirmary (MRI), this was reported as nearly 30% according to the National Diabetes Inpatient Audit (NADIA, 2017)¹. Patients with diabetes are more likely to require surgical interventions due to the complications associated with the disease and are at higher risk of developing post operative complications compared to those without diabetes². Various studies have proved that the physiological stress of surgery and anaesthetic agents can cause post operative hyperglycaemia and if not managed appropriately, can lead to diabetes emergencies such as diabetic ketoacidosis (DKA) or hyperosmolar hyperglycaemic state (HHS)^{3,4}. National data also shows that on average, people with diabetes stay for 1.9 days longer on medical wards, but on surgical wards this increases to three days. A report published by The National Confidential Enquiry into Patient Outcome and Death (NCEPOD) published a report highlighting several issues relating to peri operative diabetes care such as lack of communication between specialist areas, inappropriate glucose monitoring during peri operative period, lack of diabetes pathway to optimise preoperative diabetes control and lack of diabetes planning prior, during and post surgery⁵.

In a view to improve peri operative care of patients with diabetes, Improving Peri operative of Patients with Diabetes (IP3D) project was developed as part of the Getting It Right for the First Time (GIRFT) programme. The project was based on the pathway developed at Ipswich hospital in 2018.

Methods

Baseline data was retrospectively collected from 280 patients who had elective surgery during February- July 2019. Patient experience questionnaires were given out to 100 elective surgical patients before the implementation stage of the project. Staff knowledge questionnaires were completed by 100 registered nurses working in various surgical areas across MRI. Project implementation phase was from April-September 2021. Project timeline can be seen in Table 1.

Table 1. Project Timeline



Implementation Plan

The key interventions of IP3D project are described below:

Patients

- Perioperative diabetes passport and day case booklet (Figures 1&2.)
- Peri op DSN
- Pre-op Diabetes Optimisation Clinic
- Patient support and education
- Peri op DSN review on day of surgery

Staff

- Peri op DSN support to all pre op areas
- Diabetes Surgical Study Days- 110 staff members attended (Figures 3&4.)
- Diabetes Link nurse meetings
- Peri operative diabetes pathway

Figure 1.

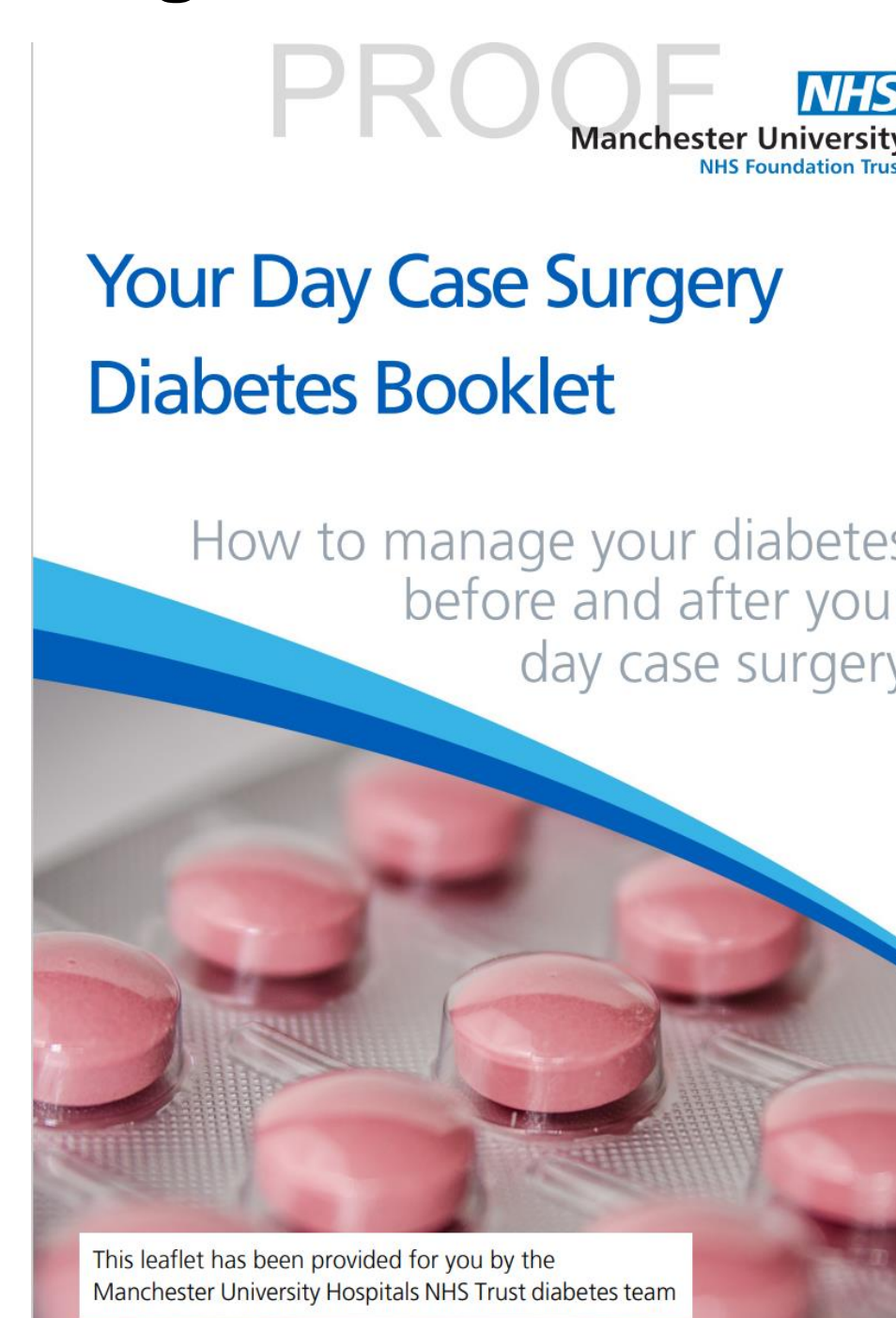


Figure 2.

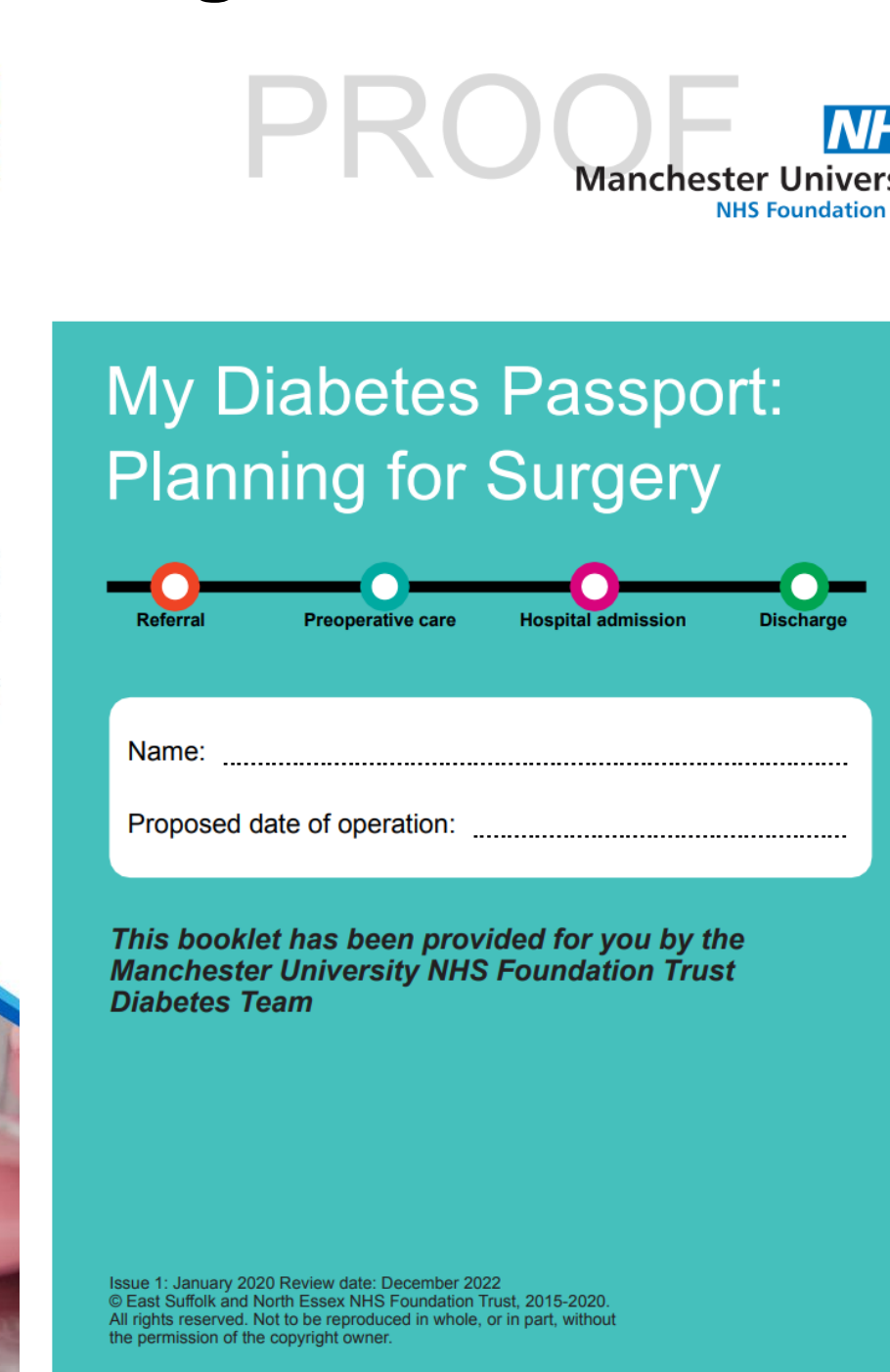


Figure 3.



Figure 4.



Results

Best Outcome- Reduction in Mean Length of stay by 4 days

	Baseline	Intervention
CBG>17	34% at least one episode	18% at least one episode
Diab Team input prior to admission	9 patients	90 patients
Diabetes related complications	40%	18%
Any complications	34%	15%
Seen by Diab team whilst inpatient	24%	83%
First 1/3 rd of Operating list	44%	66%
3 months HbA1c	76%	96%
Hypoglycaemia episodes	19%	5%
Hyperglycaemia episodes	34%	18%

Conclusions/ Plans for future

- Perioperative DSN at all MFT sites
- Pathway for patients listed for emergency surgery
- Appropriate input for high-risk patients
- Monthly dashboard on electronic patient record
- All patients with diabetes on the first 1/3rd of surgical list
- Identification of diabetes at the front door
- Mandatory diabetes training for all MFT staff
- Preop assessment and HbA1c prior to listing elective patients
- Surgical 'preparation list' not waiting list – GIRFT diabetes optimization leaflet link on patient portal
- GIRFT poster for surgical outpatient clinics and GP surgeries
- Periop diabetes study day has continued
- Proactive vs reactive

References

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