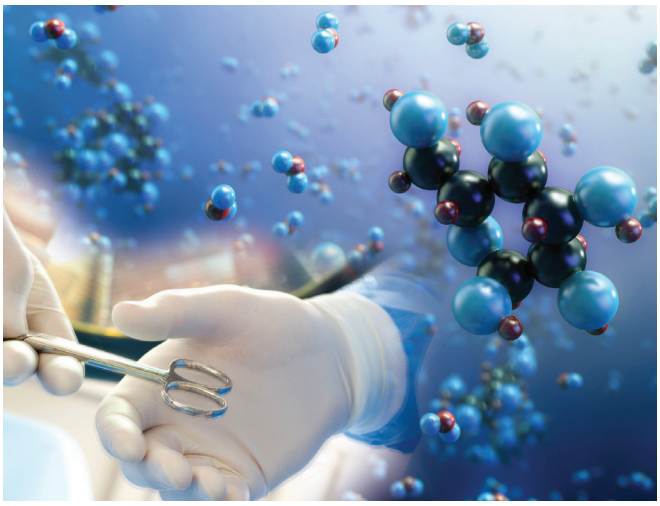

# Highs and Lows

**A review of the quality of care provided to patients over the age of 16 who had diabetes and underwent a surgical procedure**

## Executive summary


### Aim

The aim of this study was to highlight where care could be improved in patients with diabetes undergoing surgery.

### Method

A retrospective case note and questionnaire review was undertaken in 509 patients aged 16 and over who had diabetes (type 1 or type 2) and who underwent a surgical procedure.

### Key findings

The overarching theme of the findings was that that was a lack of clinical continuity of diabetes management across the different specialties in the perioperative pathway. Absence of joint ownership of the diabetes management and multiple guidelines targeted at specific specialties, rather than a joint multidisciplinary approach, meant that the diabetes management of the patient was falling between gaps in the surgical pathway.

Diabetologists, anaesthetists and surgeons were commonly involved in the patient's care, however there was under involvement of key diabetes team members such as diabetes specialist nurses, dietitians and pharmacists. Nutritional assessments and medicine reconciliations were frequently not undertaken, only 55.4% (221/399) of patients, had a MUST score calculated on admission to hospital and adequate medicines reconciliation by medical staff occurred in 84.4% (320/379) of patients but only by a pharmacist in 75.3% (192/255). This was particularly noticeable for elective surgery where pre-operative assessment clinics should have provided opportunity for such reviews to be undertaken and a management plan developed and explained to the patient.

The management plan for a patient with diabetes undergoing surgery should include their prioritisation on the operating list. This study found that 19.4% (42/439) of patients were not prioritised appropriately, which subjected them to prolonged fasting, putting them at increased risk of complications.

Regular monitoring of blood glucose was under-utilised pre- intra- and post-operatively. It was the opinion of the reviewers that better monitoring would have helped facilitate the assessment of patient status.

Overall the report highlighted that there was room for improvement in the clinical care of 35.8% (182/509) of patients in the study. This percentage was similar to that of good practice which was found in 34.8% (177/509) of patients. Organisational systems of care were deemed to require improvement in 9.2% (47/509) of cases reviewed and a further 14.1% (72/509) of cases indicated improvements both in clinical and organisational systems of care.

# Principal recommendations

Write and implement a national joint standard and policy for the multidisciplinary management of patients with diabetes who require surgery. Information should include responsibilities for diabetes management across all specialties during routine care and in high-risk patients. ***(AoMRC to lead at an organisational level, and the Clinical Lead for Perioperative Diabetes Management to lead at a local level)***

---

Appoint a clinical lead for perioperative diabetes care in hospitals where surgical services are provided. This person will be responsible for developing policies and processes to:

a. Ensure diabetes management is optimised for surgery
b. Ensure patients with diabetes are prioritised on the operating list, including the co-ordination of emergency surgery*
c. Identify when involvement of the diabetes multidisciplinary team, including diabetes specialist nurse, is required
d. Ensure high-risk patients are identified, such as those with type 1 diabetes
e. Identify patients with poor diabetes control who may need pre-operative optimisation or VRIII
f. Audit cases of prolonged starvation
g. Ensure high quality discharge planning.

***(Medical Directors, Directors of Nursing)***

* *This supports the recommendation from the National Emergency Laparotomy Audit*

---

Use a standardised referral process for elective surgery to ensure appropriate assessment and optimisation of diabetes. This should include:

a. Satisfactory HbA1c levels within 3 months of referral
b. Control of co-morbidities
c. A list of all current medications
d. The patient's body mass index (BMI)
e. Estimated glomerular filtration rate (eGFR)
f. Perioperative risk rating.

***(Primary Care Providers, Commissioners, Clinical Lead for Perioperative Diabetes Management, Lead anaesthetist for pre-operative assessment)***

Ensure that patients with diabetes undergoing surgery are closely monitored and their glucose levels managed accordingly. Glucose monitoring should be included:

a. at sign-in and sign-out stages of the surgical safety checklist (e.g. WHO safety checklist)
b. in anaesthetic charts
c. in theatre recovery
d. in early warning scoring systems

System markers and alerts should be used to raise awareness of glucose levels, e.g. tagging of electronic medical records, use of a patient passport or unique stickers in paper based case notes.

***(Clinical Lead for Perioperative Diabetes Management, Lead Anaesthetist for Pre-Operative Assessment, Clinical Directors, Medical Directors, Directors of Nursing)***

---

Ensure a safe handover of patients with diabetes from theatre recovery to ward, this should be documented in the case notes and include:

a. Medications given in theatre
b. Glucose level on leaving the recovery area
c. Glucose level on arriving into the ward
d. Ongoing management of diabetes, especially VRIII
e. Criteria for contacting the diabetes team.

***(Clinical Lead for Perioperative Diabetes Management, Clinical Directors, Medical Directors, Directors of Nursing)***