

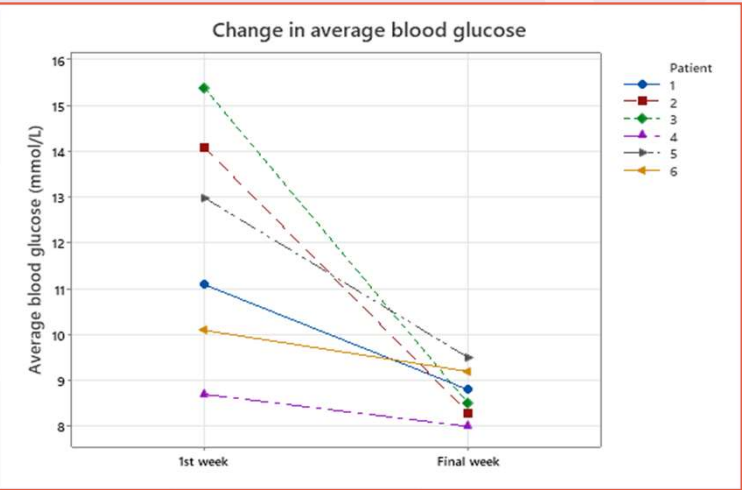
Pre-operative dietetics intervention for patients with uncontrolled diabetes prior to elective surgery

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Introduction

- Diabetes is recognised to worsen surgical outcome, but there is conflicting evidence regarding influence of short and long-term glucose control on surgical outcome.
- 2011 AABGI guidelines recommended a controversial HbA1c cut-off of 69mmol/mol for elective surgery.
- Resulted in large numbers of patients having procedures cancelled or postponed for long periods.

We are undertaking a short pilot intervention aligned to the NENC ICS waiting well program aiming to improve and maintain glucose control <10mmol/L in the pre and peri-operative period, for patients usually excluded from elective surgery due to HbA1c >69.



Method

Patients with type 2 diabetes awaiting minor day case urology surgery, with HbA1c >69mmol/mol were identified from a 'Waiting Well' pre-operative assessment dashboard and offered a short-term dietetics educational intervention augmented with flash glucose monitoring (Freestyle Libre 2) with the aim to reduce and maintain blood glucose <10mmol/L before being offered their procedure. Once achieved surgery was allowed to proceed.

Results

20 patients contacted : 6 completed intervention + procedure; 7 within intervention; 7 uncontactable/declined

Patient	Length of intervention (days)	Time in Range BM 3.9-10mmol/l (%)		Time very high BM >13.9 (%)		Time high BM 10 - 13.9mmol/l (%)		Average blood glucose (mmol/L)		HbA1c (mmol/mol)	
		1st week	Final week	1st week	Final week	1st week	Final week	1st week	Final week	Closest to start of intervention	Estimated from final 2 weeks
1	69	41	71	19	4	40	25	11.1	8.8	102	54
2	77	31	74	43	4	26	22	14.1	8.3	101	57
3	54	0	83	71	0	29	17	15.4	8.5	106	54
4	17	89	91	1	0	16	9	8.7	8	70	51
5	18	16	60	31	3	53	37	13	9.5	76	64
6	56	52	59	19	14	26	22	10.1	9.2	101	55
Mean	48.5	38.2	73.0*	30.7	4.2	31.7	22.0*	12.1	8.7*	92.7	55.8*

- All patients had capillary blood glucose measured within recommended operable range (4-12mmol/L) during their time in hospital and were discharged as a day case, with no additional interventions required.
- 1 patient had a minor surgical site infection post-operatively and required antibiotics from their GP.

* P < 0.05

Conclusion

Dietary intervention alongside flash glucose monitoring can quickly improve glucose control in people with uncontrolled diabetes to a level which could be considered suitable for surgery and therefore allow many patients previously having surgery delayed or cancelled to swiftly access required minor procedures.

Future direction

- Carry out longer term follow up to evaluate complication rate and whether improved control is maintained
- Assess whether outcomes are non-inferior to non-diabetic patients and diabetics with HbA1c <69mmol/mol

Key words: **diabetes, prehabilitation, population health management**