

Investigating the Impact of a Dedicated Diabetes-Stroke Multi-Disciplinary Team (D/S-MDT) on Patient Outcomes, Referrals and Staff Satisfaction

Raunak Chugani Chandiramani, Laura Storey, Mina Mansor, Neil Hill

BACKGROUND

Stroke is a leading cause of death and disability worldwide^[1]. Around 30% of stroke patients have diabetes mellitus^[2]; they are more likely to experience worse outcomes following their stroke^[3].

MANAGEMENT

Current guidelines recommend target glucose levels between 4-11mmol/L in stroke patients^[4]. However, hyperglycaemia in stroke is not well understood hence blood glucose management can be challenging^[5].

THE INTERVENTION

At Charing Cross Hospital (CXH), a pharmacist-led, consultant supported **diabetes-stroke multidisciplinary team (D/S-MDT)** was created in December 2019 to address these challenges.

AIMS

This study aims to assess the impact of the D/S-MDT on patient outcomes, referrals to the diabetes team and staff satisfaction.

HYPOTHESES

The presence of the D/S-MDT will improve patient outcomes in-hospital and in the long-term and benefit the staff.

METHODS - PATIENT OUTCOMES

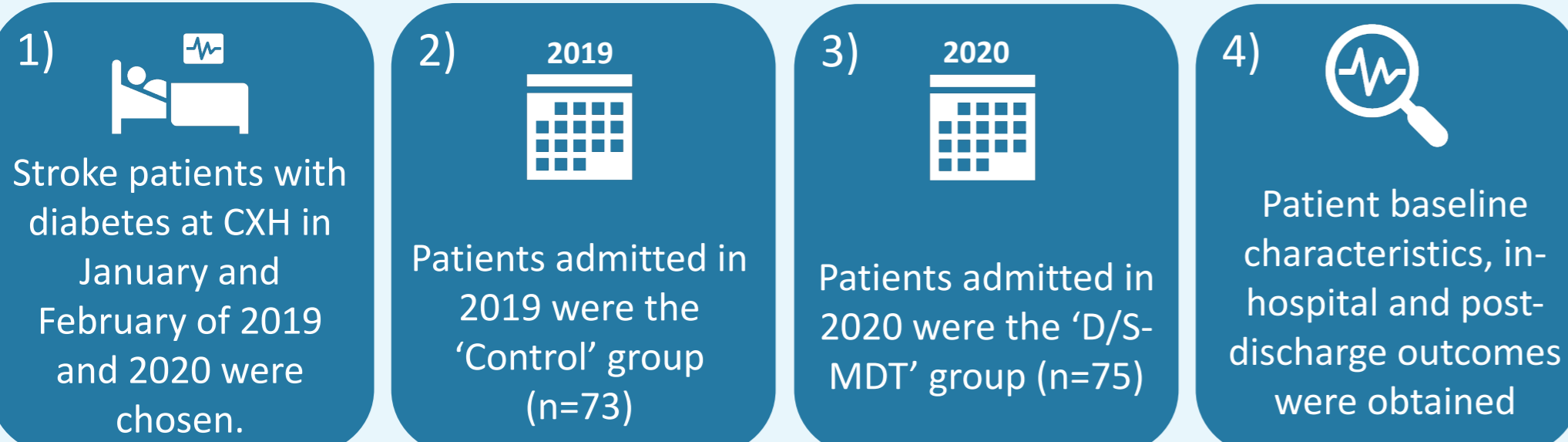


Figure 1. Study protocol involving patient outcomes

Patient Outcomes Measured

Baseline Characteristics	In-Hospital	90-Days Post-Discharge
<ul style="list-style-type: none"> Age Sex Ethnicity BMI status Smoking status Alcohol status 	<ul style="list-style-type: none"> Diabetes Status HbA1c on admission Glucose on admission Stroke category 	<ul style="list-style-type: none"> Hypoglycaemic events Hyperglycaemic events Glycaemic variability Mortality Mortality Change in disability since admission Change in dependency since admission

METHODS – STAFF OUTCOMES

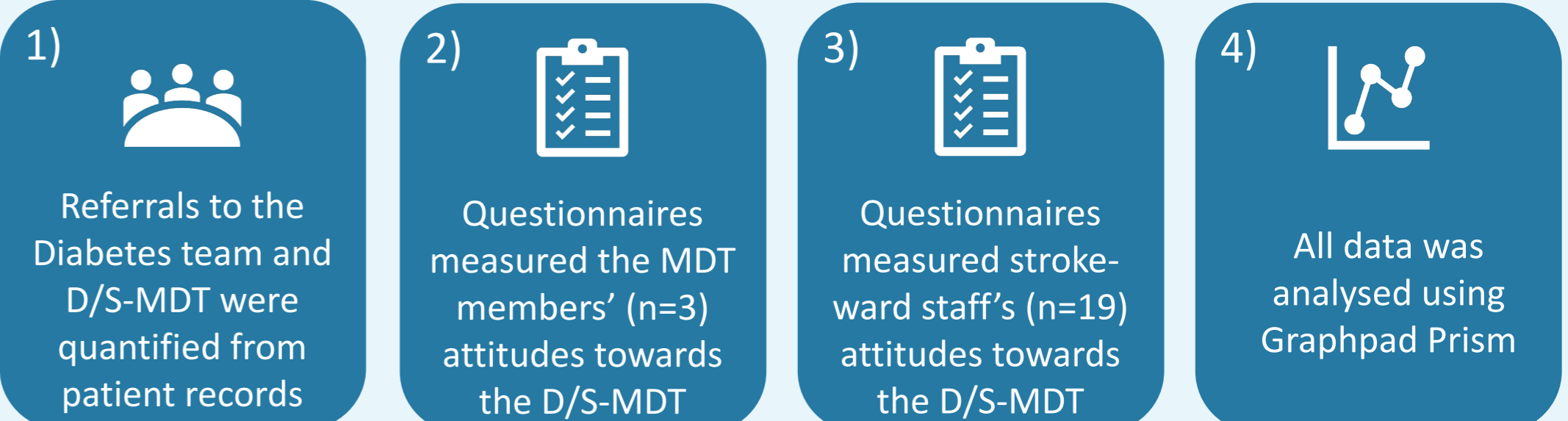


Figure 2. Study protocol involving staff outcomes

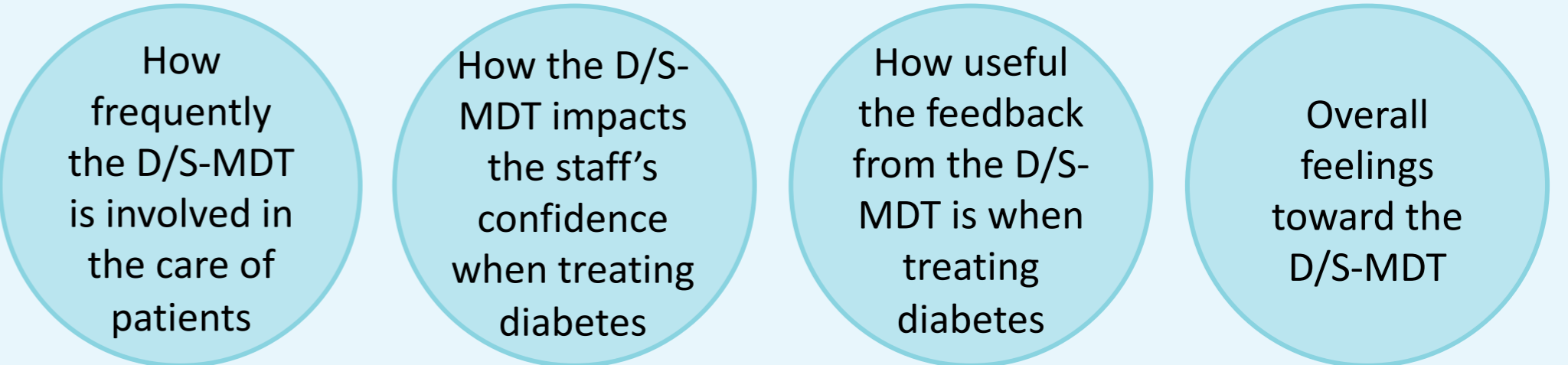


Figure 3. Main aspects of the D/S-MDT explored through the questionnaires.

RESULTS

Patient Outcomes

- 73 patients with diabetes were admitted to CXH in January and February 2019 ('control' group); 75 patients in January and February 2020 ('D/S-MDT' group).
- No difference in baseline characteristics
- In-Hospital:** No significant difference in the care provided to patients
- The number of hypoglycaemic events almost halved from the control to the D/S-MDT group (**Fig. 4**) but was not significant
- Post-Hospital:** No significant difference

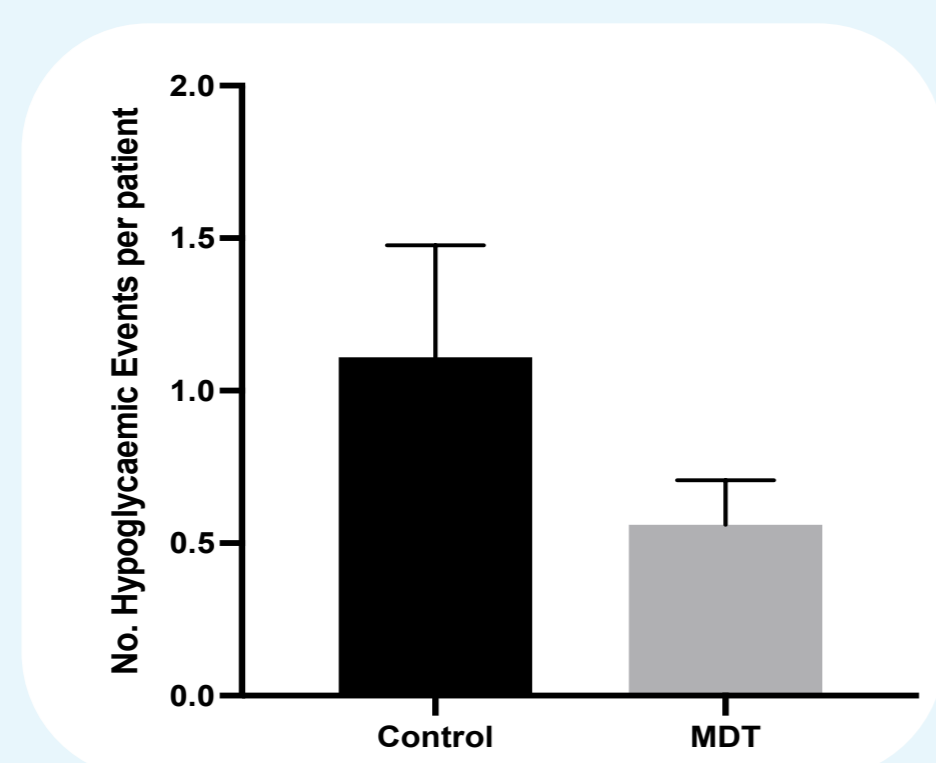


Figure 4. Mean (SEM) number of hypoglycaemic incidents (BM <4 mmol/L) per patient during hospital admission in the control group (n=73) and the D/S-MDT group (n=75).

Staff Outcomes

- Referrals to the Diabetes Team reduced significantly ($P < 0.0001$) from the control to the D/S-MDT group (**Fig. 5A**)
- The total number of referrals to the Diabetes Team (in 2019) and to the Diabetes Team and D/S-MDT combined (2020) were not different (**Fig 5B**)
- Responses to the questionnaires from the ward staff were overwhelmingly positive
- D/S-MDT members felt that:
 - The D/S-MDT was a good use of their time
 - They were extremely likely to keep being involved in the D/S-MDT

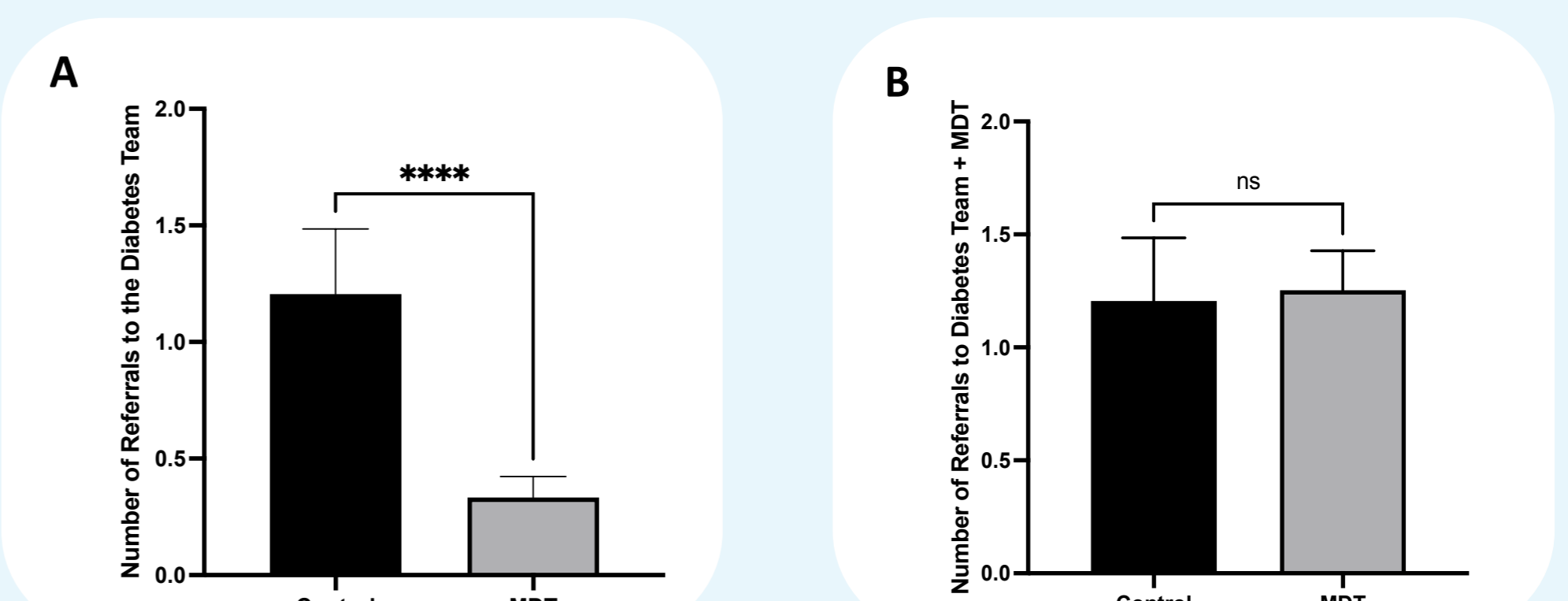


Figure 5. (A) Mean (SEM) number of referrals to diabetes team per patient and (B) to the diabetes team and the D/S-MDT per patient, in control (n=73) and D/S-MDT groups (n=75). **** = $p < 0.0001$; ns = no statistical significance

CONCLUSIONS

- The addition of the D/S-MDT **significantly reduced** the burden of referrals from the diabetes team.
- The D/S-MDT **maintained standards** in managing patients with diabetes and stroke.
- Ward-staff were satisfied with the feedback received from the D/S-MDT.

In conclusion, this study suggests that the D/S-MDT is a positive addition to CXH.

References:

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