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# CLINICIAN FOLLOW-UP OF ELEVATED GLYCATED HAEMOGLOBIN RESULTS IN HOSPITAL INPATIENTS

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# BACKGROUND

Diabetes is prevalent amongst hospital inpatients, and hyperglycaemia is associated with poorer outcomes.<sup>1</sup>

An elevated glycated haemoglobin (GHb) level indicates chronic hyperglycaemia and should prompt action to improve glycaemic control.

# OBJECTIVE

To audit clinician follow-up of elevated GHb results in hospital inpatients.

1. Australian Diabetes Society Guidelines for Routine Glucose Control in Hospital 2012 ([diabetessociety.com.au](http://diabetessociety.com.au))

# METHOD

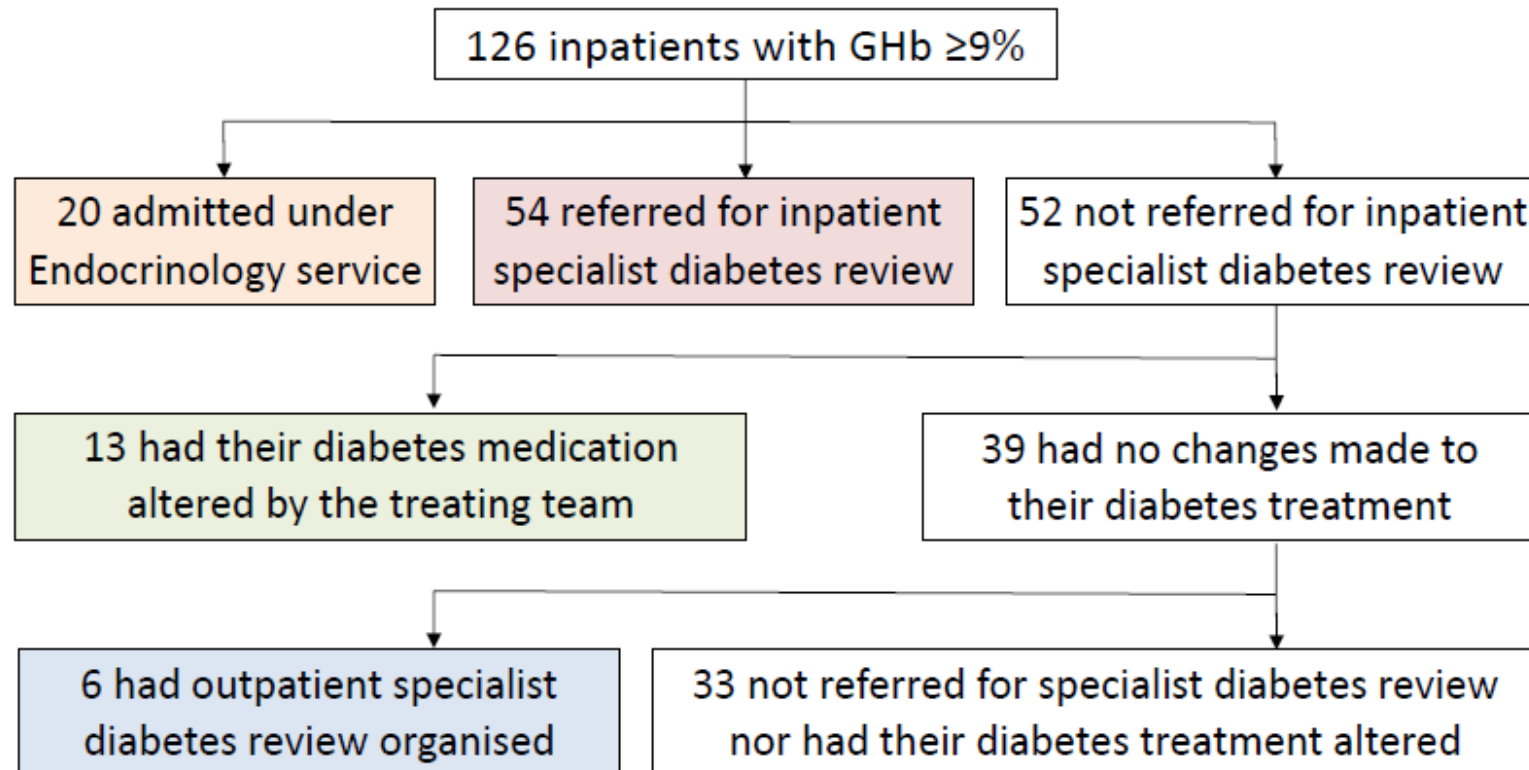
We extracted from the PathWest laboratory medicine database the results of all inpatient GHb measurements performed over a three-month period (1 January to 31 March 2017) at Royal Perth Hospital (RPH), a teaching tertiary hospital in metropolitan Perth, Western Australia.

We examined the electronic discharge summary and referral records of the inpatients with GHb  $\geq 9\%$  to determine if they were referred for specialist diabetes review (inpatient or outpatient), and/or had their diabetes treatment altered.

# RESULTS

In the three-month audit period, 764 GHb measurements were performed on 718 RPH inpatients: 44 patients were tested twice, and one patient tested three times.

There were 126 inpatients with GHb  $\geq 9\%$ : mean age was  $57 \pm 15$  years, 68% were male, 85% had Type 2 diabetes, median GHb was 10.6% (IQR 9.7–11.8).



# RESULTS

The median length of inpatient stay of the 33 patients (26%) who were not referred for specialist diabetes review (inpatient or outpatient) nor had their diabetes treatment altered was significantly shorter than those who were referred for specialist diabetes review and/or had their diabetes treatment altered (3 vs 7 days,  $p=0.001$ ); most (82%) were admitted under Cardiology (18) and Acute Medicine (9).

Of these 33 patients, four were non-adherent to treatment, two had limited life expectancy, two were foreign visitors due to return overseas, five were transferred to another hospital, and six were referred to their GP for diabetes follow-up; however, 19 patients had no documented plan for diabetes follow-up, and no discernible reason for this.

# DISCUSSION

A quarter of poorly controlled diabetic inpatients were not referred for specialist review/follow-up, nor had their treatment altered. Most of these patients were admitted to busy, high turnover units and had short inpatient stays.

Discontinuity of care, suboptimal handover, turnaround time of GHb results, urgent competing clinical priorities, and therapeutic pessimism are possible reasons why these patients did not have their hyperglycaemia addressed.

# CONCLUSION

There are opportunities to improve the glycaemic control of hospital inpatients by improving clinician follow-up of elevated GHb results, and facilitating referral pathways and access to specialist diabetes review, especially for services with a high turnover of short stay patients.

There is also potential to save costs by avoiding unnecessary repeat GHb testing, and by not testing those where the GHb result is unlikely to influence management