A pilot project in the use of inpatient diabetes risk scoring tool



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Introduction

- There is a 20% prevalence of diabetes in hospital patients.(1)
- Patients with diabetes have longer in patient stays, due to increased co-morbidities, erratic glycaemic control and variability in management of diabetes by non specialist teams (2).
- An inpatient diabetes risk scoring system was piloted at University Hospital Wales (UHW) to assess patients who are at increased risk of adverse glycaemic events related to their diabetes.
- The online risk tool was designed to be universally available within the hospital intranet system and accessible on every ward.
- It has the benefit of allowing diabetes specialists to communicate in-patient diabetes interventions using a paper free system.
- The aim of the pilot study was to identify patients experiencing hyper and hypoglycaemia and providing intervention to prevent further glycaemic related complications and develop an in-patient electronic diabetes database.



- The in-patient diabetes team attended medical and surgical wards in UHW.
- Information such as the type of diabetes and duration of the condition and associated complications were input into the online risk tool (fig 2,3,4).
- Based on the individuals' glycaemic control, a score was appointed depending on whether they experienced glycaemic complications as an in-patient including- diabetic ketoacidosis, hypoglycaemia or hyperglycaemia (fig 1).

Findings

- In a cross section of 38 patients:
 - 94% had Type 2 diabetes mellitus.
 - 30% were surgical inpatients.
 - The duration of diabetes ranged from 1-33 years.
 - 74% had either microvascular or macrovascular complications.
 - 37% of the patients had poor glycaemic control as identified by a risk score of 3 or above and required intervention which ranged from insulin dose adjustment to stopping oral hypoglycaemic medication.

2) Snapshots of the risk tool



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Conclusion

- This pilot project demonstrates the utility of a web based tool accessible on the hospital intranet for the risk assessment of in-patients with diabetes.
- The data collected from this study, in addition to real world experience will be utilised to guide future inpatient service evolution and develop a closed loop referral and risk assessment system when combined with bedside glucose testing data.

References

1)National inpatient diabetes audit; Diabetes UK 2013 2)Admissions avoidance and diabetes:guidance for clinical comissioning groups and clinical teams; ABCD 2013