1. Did diabetes management minimise the risk of avoidable complications?
2. Did harm result from the inpatient stay?
3. Was the patient experience of the inpatient stay favourable?

In November 2010 the National Inpatient Audit was conducted in hospitals across England. The audit collected data on diabetes staff working in hospitals, information on the care received by all inpatients with diabetes and the experience of the inpatient stay from the perspective of the patient. The audit aimed to assess the following questions:

The information presented in this document should be used to reflect on and improve local service provision. The casemix of the patient population may impact on the indicators presented in this report. It should also be considered alongside the national report on the audit findings. This can be accessed at www.yhpho.org.uk. Individual units can also request the raw data for their unit for local analysis by contacting Heather Stephens (heather@innove.info).

Warning: The patient experience data included in this summary is based on a small sample (less than 20) of inpatients with diabetes. This means that the data is highly variable and small variations will have a substantial impact on the indicators presented. Care should be exercised in the interpretation of differences between this unit and all units included in the audit.

Inpatients with Diabetes

The National Diabetes Inpatient Audit identified 76 inpatients with diabetes at Royal Bolton Hospital NHS Foundation Trust. This is equal to 16.9% of beds audited. The chart to the left shows the distribution of all the units that participated in the audit in pale blue. Royal Bolton Hospital NHS Foundation Trust is shown in red. Across all participating units 15.0% of patients in audited beds had diabetes.

Completed patient experience questionnaires were received from 16 patients giving a response rate of 21.1% compared to 38.9% across all participating units.

The average (median) age of inpatients with diabetes in Royal Bolton Hospital NHS Foundation Trust was 74 years compared to 75 years across all inpatients included in the audit.

At Royal Bolton Hospital NHS Foundation Trust 92.3% of inpatients with diabetes were from White ethnic groups, 6.2% were from Asian ethnic groups and 0% were from Black ethnic groups. This compares to 88.2% from White ethnic groups, 6.6% from Asian ethnic groups and 3.3% from Black ethnic groups across all units included in the audit.

At the time of the audit, 97.3% of inpatients with diabetes in Royal Bolton Hospital NHS Foundation Trust had been admitted to hospital as an emergency compared to 86.7% across all the units included in the audit.
Of the inpatients with diabetes in Royal Bolton Hospital NHS Foundation Trust 2.6% have Type 1 diabetes and 21.1% have Type 2 diabetes treated with insulin (with or without tablets). This means that there is a lower proportion of inpatients with diabetes on insulin than compared to all units included in the audit.

**Diabetes Inpatient Staffing**

The charts below show the number of minutes per week spent by each of the staff groups per inpatient with diabetes. The dark green area shows the time spent on inpatient care and the light green area shows the time spent on outpatient care across all units that participated in the audit. Royal Bolton Hospital NHS Foundation Trust is shown in pink/red. If there is no red line the staff in that group did not spend any time on inpatient care.

In Royal Bolton Hospital NHS Foundation Trust there was 20 minutes of Diabetes Inpatient Specialist Nurse time and 38 minutes of Diabetes Specialist Nurse time per inpatient with diabetes to work on inpatient care compared to an average of 26 minutes and 10 minutes across all units participating in the audit.
Did diabetes management minimise the risks of avoidable complications?

Appropriate blood glucose testing

In Royal Bolton Hospital NHS Foundation Trust appropriate blood glucose testing was undertaken on 6.3 days out of the previous 7 days. After adjusting for casemix appropriate blood glucose testing took place on 0.1 more days than expected based on the pattern across the audit.

Appropriate testing adjusted for casemix

Good diabetes days

In Royal Bolton Hospital NHS Foundation Trust patients had an average of 4.5 good diabetes days in the previous 7 days. After adjusting for casemix there was an average of 0.2 more good diabetes days than expected based on the pattern across the audit.

Good diabetes days adjusted for casemix

Documented foot review within 24 hours

In Royal Bolton Hospital NHS Foundation Trust 12.5% of inpatients with diabetes had a documented foot review within 24 hours of admission compared to 22.6% across all units included in the audit. 29.4% of patients had been visited by a member of the diabetes team compared to 30.6% of all patients included in the audit.

Visited by diabetes team

In Royal Bolton Hospital NHS Foundation Trust 38.6% of inpatients with diabetes had been involved in designing a treatment or care plan compared to 29.1% across the audit. They were more likely to have been able to take control of their diabetes care whilst an inpatient (60.4% compared to 59.7%).

Involved in designing a treatment or care plan

Able to take control of diabetes care
Fewer patients at Royal Bolton Hospital NHS Foundation Trust reported unexpected low blood sugar measurements than across all units included in the audit (18% compared to 24.8%). 12.3% reported unexpected high blood sugar measurements compared to 24.5% across the audit.

Overall, at Royal Bolton Hospital NHS Foundation Trust 30.8% of inpatients experienced at least one medication error compared to 37.1% across all units included in the audit. Of the patients on insulin, 70% experienced at least one insulin prescription or management error.

At Royal Bolton Hospital NHS Foundation Trust fewer inpatients with diabetes had a prescription error (21.9% compared to 26.0% across the whole audit) and fewer patients experienced management error (16.1% compared to 20.0% across all participating units).

At Royal Bolton Hospital NHS Foundation Trust 20% of inpatients had a mild hypoglycemic episode (3-4mmol/L) compared to 22.6% across the audit. Fewer patients had a severe hypoglycemic episode (<3mmol/L) (5.5% compared to 11.6% across all inpatients included in the audit).

Fewer patients at Royal Bolton Hospital NHS Foundation Trust reported unexpected low blood sugar measurements than across all units included in the audit (18% compared to 24.8%). 12.3% reported unexpected high blood sugar measurements compared to 24.5% across the audit.
In Royal Bolton Hospital NHS Foundation Trust the choice of meals was always or almost always suitable for 75.8% of patients and the timing of meals was always or almost always suitable for 82.2% of patients.

In Royal Bolton Hospital NHS Foundation Trust 100% of patients indicated that all or almost all staff were aware that they had diabetes. Compared to all patients included in the audit they were more likely to report that staff had enough knowledge of diabetes (74.3% compared to 65.0%).

At Royal Bolton Hospital NHS Foundation Trust 69.9% of inpatients reported that staff were able to answer their questions in a way that they understood. They scored staff team work better than all inpatients included in the audit (high score indicates better team work).

In Royal Bolton Hospital NHS Foundation Trust 56.3% of inpatients indicated that they received enough emotional support. They had better overall satisfaction with their diabetes care (1.4 compared to 1.2, high score indicates higher satisfaction).