National Subcutaneous Insulin Form Pilot Project

Audit Tool User Guide
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Suggested citation

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2. Introduction to National Insulin Form Pilot Project quantitative study

The primary aim of the National Subcutaneous Insulin Form Pilot Project is to improve the safety of insulin prescribing and administering for adults in acute care without compromising glycaemic control. A secondary outcome of improvement in in-hospital glycaemic control will be explored.

Project objective

The objective of the project is to test the following hypothesis:

- That the use of a standard form for subcutaneous administration of insulin, when combined with planned implementation and education, can:
  - Reduce the opportunities for error in subcutaneous insulin prescribing and administration documentation; and
  - Not result in inferior blood glucose level control.
- The standard subcutaneous insulin form must:
  - Link the prescribing of insulin with administration and recorded blood glucose levels;
  - Provide forcing functions to reduce the use of non-standard abbreviations and non-standard dosing regimens;
  - Provide guidelines for action to be taken in the event of BGLs reaching levels that indicate that the medical officer should be alerted and action taken; and
  - Prompt daily review and adjustment of insulin doses in response to BGLs.

The quantitative study will comprise a baseline data collection, education of staff, introduction of the pilot subcutaneous insulin form followed by a post-implementation data collection (See figure below).

2.1. Hospital audits

Each hospital will conduct two audits:

1. A pre-implementation (baseline) audit using the NIMC or local hospital insulin form. This must be completed before education of staff has commenced; and
2. Post-implementation audit at 6 months using the pilot subcutaneous insulin form.

2.2. Sample selection

Sample selection is a random sample of inpatients (or all inpatients) prescribed subcutaneous insulin. Patients must have been admitted for at least 24 hours prior to auditing. Paediatric patients are excluded.

The sample should be taken from patients that meet eligibility criteria i.e. the patient has been admitted to the hospital for at least 24 hours, prescribed subcutaneous insulin and using a form for the prescription and administration of subcutaneous insulin.
In the pre-implementation (baseline) audit the form(s) to be audited include:

- National Inpatient Medication Chart (NIMC) and specific hospital form for recording BGLs or;
- Hospital specific form for recording BGLs and for prescribing and administering insulin.

In the post-implementation audit the pilot subcutaneous insulin form will be audited. The audit requires a review of the end of bed charts/forms and tools for blood glucose monitoring, insulin prescribing and administration. Some audit parameters will require the auditor to review the patient’s medical record and/or laboratory tests in addition to the insulin form. The audit parameter on medication history recording will require review of forms used to record the patient’s medication history.

The six month post-implementation audit sample should be drawn from patients treated in the final month of the trial. Forms from only the final month of the pilot should be used to provide data on the appropriateness of the use of the form after it has been in use for several months.

The method for auditing to be used by hospitals will be based on availability of resources and access to patient medical records/insulin forms. The audits can be undertaken prospectively or retrospectively however hospitals should employ the same method for the pre and post-implementation audits. The post-implementation audits should be similar to the pre-implementation in the number of forms/charts and wards audited.

Where hospitals are auditing retrospectively (or where there is more than one form/chart available at the end of the bed for prospective audits) a maximum of seven days of insulin therapy should be audited.

Sample Size

The sample size for each hospital will be negotiated and agreed with individual hospitals as it will depend on the expected number of eligible patients available for the audit in a one month audit period. Smaller hospitals (with less than 40 inpatients prescribed subcutaneous insulin per month) should audit all patients.

Who should conduct the audits?

It is recommended that a clinician skilled in diabetes management with some experience in conducting safety and quality audits undertake the audits where possible. Ideally the same person should do all the auditing although it is recognised that this may not be possible. Referral to an endocrinologist or general physician for clinical queries when undertaking the audits is recommended.

2.3. Project schedule

The pre-implementation audit should be completed before education is provided. Data collection for both the pre-implementation audit and post-implementation audit should be completed within a 4 week period. The post-implementation audit should take place six months after introducing the pilot subcutaneous insulin form.

An indicative project schedule is provided below although it is recognised that timelines may vary by hospital. However it is expected that post-implementation auditing will be concluded by mid-August 2013.
### Project milestones

<table>
<thead>
<tr>
<th>Project milestone</th>
<th>Date completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial teleconference/Webinar</td>
<td>19 November 2012</td>
</tr>
<tr>
<td>Baseline Audit completed</td>
<td>By 30 December 2012</td>
</tr>
<tr>
<td>Hospitals send baseline audit data to Commission</td>
<td>By 15 January 2013</td>
</tr>
<tr>
<td>Staff education</td>
<td>By 15 February 2013</td>
</tr>
<tr>
<td>2(^{nd}) hospital teleconference</td>
<td>3(^{rd}) week January date TBC</td>
</tr>
<tr>
<td>Subcutaneous Insulin Chart introduced</td>
<td>By mid-February 2013</td>
</tr>
<tr>
<td>3(^{rd}) hospital teleconference</td>
<td>March / April 2013 date TBC</td>
</tr>
<tr>
<td>4(^{th}) hospital teleconference July TBC</td>
<td>July 2013 date TBC</td>
</tr>
<tr>
<td>Implementation experience survey completed by hospitals</td>
<td>By 30 July 2013</td>
</tr>
<tr>
<td>6 month post-implementation audit completed and sent to Commission</td>
<td>By mid-August 2013</td>
</tr>
<tr>
<td>Data Analysis and reporting</td>
<td>By 30 September 2013</td>
</tr>
<tr>
<td>Final Report and Individual Hospital Reports</td>
<td>By 30 October 2013</td>
</tr>
</tbody>
</table>

### 2.4. Audit Tool

An audit tool has been developed to assist sites participating in the National Subcutaneous Insulin Form Pilot. The audit tool is an automated Microsoft Excel spreadsheet that will be distributed to hospitals involved in the pilot. Staff at pilot sites will use the automated excel spreadsheet to record their answers to the audit questions for each patient’s data. The questions include data elements related to:

- Documentation of insulin prescription and administration;
- Accurate recording of BGLs and other test results (where available)
- Notification of out of range BGLs to medical officers and documentation of action taken.

When the audit is complete, project coordinators will save the file and email a copy of it to the Senior Project Officer managing data on behalf of the Commission.
3. **Installation and use of the Audit Tool**

There are two automated excel files used for data entry which will be distributed by email to hospitals involved in the pilot. One will be used for data collection for the pre-implementation (baseline) audit and the other for the post-implementation audit that will be undertaken six months after introducing the pilot subcutaneous insulin form. The two files are named:

1. ID##_national insulin pilot project_3.4.3_pre-audit.xls
2. ID##_national insulin pilot project_3.4.3_post-audit.xls

The files will be emailed to hospitals separately. The post-implementation audit file will be sent after the pre-implementation (baseline) audit has been completed and sent to the Commission.

### 3.1. Subcutaneous Insulin Form Pilot Pre-implementation Audit Tool

On receipt of the ID##_national insulin pilot project-3.4.3_pre-audit.xls file, project coordinators are instructed to:

1. Create a project folder on the computer C drive or desktop called C:\National Subcutaneous Insulin Form Pilot
2. Save the ID##_national insulin pilot project-3.4.3_pre-audit.xls file into this folder
3. Instruct the staff members conducting the audit to use the file (ID##_national insulin pilot project-3.4.3_pre-audit.xls) to enter and submit data for the pre-implementation audit.

Open the excel file when ready to commence entering data for the pre-implementation audit. Make sure the enable macro security settings are set to “Enable all Macros”. Search for “Enable security Macros” for further instructions.

If there is more than one staff member conducting the audit it is recommended that only one version of the pre-implementation audit file is used. One person should be responsible for keeping a record or log of how many audits have been completed for each stage of the project.

Note that data can be collected manually using printed versions of the spreadsheet and then entered into the pre-implementation audit file or the data can be entered directly into the file using a computer/laptop.

**NOTE:** Some users may find that on opening the spreadsheet it is protected and they are unable to enter any data. If this is the case go to the Tools menu and choose Protection then Unprotect Sheet (see screenshot below).
4. Enter the audit results into the Audit Result column (see screenshot below). There is a separate data entry record created for each patient each time the file is saved. The column titled Audit Result and the Comments field are the only cells in the pre-implementation (and post-implementation) audit files that can be used to enter data.

There are four cell types in both spreadsheets:

- Cells which accept only numeric values only eg. Number of days of insulin therapy audited
- Cells with only Yes/No options or Yes/No/Not applicable options
- Cells with single option selection eg. Is the insulin name clear? Select either clear, unclear, missing
- The Comments sections which are free text fields (word limit of 250 characters).

5. The audit requires Questions 26 to 38 to be answered for each type of insulin order e.g. answer these questions for a routine insulin and then again for supplemental insulin. Click on the Add another insulin order for this patient button to answer the questions for each type of insulin ordered for the patient (see screenshot below).
6. Click on the Next Patient button (see screenshot below) when all values are entered for this patient. This will copy the data into a separate sheet within the excel file and will also reset the Audit Result column for the next patient.

7. In the data sheet that is automatically created the column headed “Test Case ID” allows auditors to see how many patients audits have been entered. Each Test Case ID represents one patient (see screenshot below). Do not change any data once it is in the data sheet. If you need to revise any data that has been copied across to the data sheet please contact the Commission Senior Project Officer first.

8. Auditors should regularly save the file using the usual File Save option. Once the audit is complete, ensure you have saved the final version of the file. The file should be emailed as a normal attachment to the senior project officer managing data on behalf of the Commission. Hospitals should retain a copy of the pre-implementation audit data for their records.
3.2. Control buttons

1. **Add Another Insulin Order for this Patient**
   This button is used when an additional insulin order is required for the same patient. It also resets the position of the audit back to Question 26 which is the start of the insulin order questions.

2. **Reset Form**
   This button is utilised to reset the form to blank. The position is then reset to Question 1. This function should only be used if the auditor is half way through an audit and realises the patient is ineligible to be included or otherwise wishes to delete information for this patient.

3. **Next Patient**
   This button will reset the form for the next patient. The position is reset to Question 1.

3.3. Post-implementation Audit

The post-implementation audit parameters are identical to the pre-implementation (baseline) audit. The method for conducting the audit should be the same as for the baseline audit. A post-implementation audit excel tool will be emailed to hospitals towards the end of the six month pilot period for hospitals to use to enter their post-implementation audit results.
4. Data analysis and audit parameters

Data will be analysed for effectiveness of the pilot subcutaneous insulin form’s safety features in reducing opportunities for error in the prescribing and administration of insulin.

Audit parameters

1. Parameters to measure opportunities for and actual errors in prescribing and administration of insulin including:
   - Clarity of order
   - Dose, frequency, route of administration unclear, incorrect or missing
   - Use of unapproved abbreviations
   - Completeness of administration documentation
   - Incorrect insulin doses administered
   - Scheduled doses not administered
   - Evidence that hypoglycaemia is treated and hyperglycaemia is managed, and
   - Type of insulin regimen prescribed

2. Agreed Glucometrics
   - Percentage of patient days with BGLs in acceptable range (4.0 to 12.0 mmol/L)
   - Percentage of patient days with at least one BGL < 4.0 mmol/L
   - Percentage of patient days with at least one BGL > 20.0

Inclusion criteria for audits

- Patients must be admitted for at least 24 hours and must be prescribed subcutaneous insulin
- Audit up to the most recent seven days of insulin therapy
- Six month post-implementation audit sample should be drawn from patients treated in the final month of the trial
- Paediatric patients are excluded
## 4.1. Audit parameters

<table>
<thead>
<tr>
<th>ID</th>
<th>Audit element</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Demographics and patient identification</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Number of insulin forms used to prescribe and administer insulin</td>
<td>Count the number of current active forms per patient used to prescribe and administer insulin (for pre-audit use local processes)</td>
</tr>
<tr>
<td>2</td>
<td>Number of days where audit data is collected (number of days where BGls are recorded and subcutaneous insulin is prescribed)</td>
<td>Auditors should audit the same days for BGL monitoring/recording and insulin ordering. Patient must be admitted for at least 24 hours. A maximum of up to 7 days should be audited.</td>
</tr>
<tr>
<td>3</td>
<td>Is patient ID complete on the NIMC/insulin form/chart?</td>
<td>Patient identification (ID) on the National Insulin Subcutaneous Form should be consistent with the identification required when using the National Inpatient Medication Chart (NIMC). In the pre-audit for hospitals using specific forms for insulin patient ID should be as per the NIMC. Either the current patient identification label; or, as a minimum, the patient name, UR number, date of birth and gender written in legible print. The first prescriber must print the patient’s name under the label. Patient ID must be complete on all active forms to record “Yes”. For further information see National Inpatient Medication Chart User Guide including Paediatric versions at <a href="http://www.safetyandquality.gov.au/publications/national-inpatient-medication-chart-user-guide-including-paediatric-versions/">www.safetyandquality.gov.au/publications/national-inpatient-medication-chart-user-guide-including-paediatric-versions/</a></td>
</tr>
<tr>
<td>4</td>
<td>Is the insulin form cross-referenced in the regular medications section of the NIMC?</td>
<td>Yes, No or Not Applicable (in pre-audit only if using specific insulin form and/or applicable) cross referencing must be on all active forms. For further details see page 5 of the User Guide to National Insulin Subcutaneous Form</td>
</tr>
<tr>
<td></td>
<td>HbA1C tests</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Was a HbA1C test performed?</td>
<td>Review tests results and/or medical records for in-hospital HbA1C test result or a recent HbA1C test done within the last three months</td>
</tr>
<tr>
<td>6</td>
<td>What is the HbA1C result?</td>
<td>Record the HbA1C result if readily available</td>
</tr>
<tr>
<td></td>
<td>BGL monitoring</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Are BGls recorded on the same form as insulin is prescribed?</td>
<td>Record Yes if BGls are recorded on the same form as insulin is prescribed. Record No if separate forms used for BGL monitoring and insulin prescribing</td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>Instructions</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 8 | Is the requested frequency of BGL monitoring documented on the BGL monitoring form/chart?                                                | Yes/ No  
Record Yes if the frequency of BGL monitoring is recorded on all active BGL monitoring forms at the time of the audit  
Record No if the frequency of BGL monitoring is not recorded on all active BGL monitoring forms at the time of the audit.                                                                                                                                                                                                                              |
| 9 | Number of days BGLs are recorded as requested                                                                                             | Count the number of days in which the number of BGLs recorded match (as a minimum) the frequency requested  
For example: the patient’s requested BGL frequency is 4 times daily (before meals and before bed). The patient was admitted at 10:00 hours on day 1 and the audit is undertaken at 14:00 hours on the day 3 of the admission. Therefore the expected minimum number of recorded BGLs is, three on day 1, four on day 2 and two on day 3 up to the time the audit is undertaken. |
| 10| How many BGLs are recorded?                                                                                                               | Count the number of BGLs recorded (denominator for Question 11)                                                                                                                                                                                                                                                                                                     |
| 11| How many BGLs are recorded correctly?                                                                                                     | Count the number of BGLs recorded correctly  
Is the documentation legible?  
If a graph, does the dot position and the written number match?  
If the BGLs are written in a shaded range (as in the Pilot subcutaneous insulin form) are the numbers written in the correct range?                                                                                                                                                                                                                     |
|   | **Hypoglycaemia**                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                           |
| 12| Number of BGLs less than 4mmol/L                                                                                                          | Count the number of readings where BGL is less than 4 mmol/L (denominator for following two questions)  
Record zero if there are no BGLs less than 4mmol/L.                                                                                                                                                                                                                                                                                                               |
| 13| Number of times treatment for hypoglycaemia (less than 4 mmol/L) is documented on BGL monitoring form, insulin ordering form or medical record | Count the number of times treatment for hypoglycaemia is documented on BGL monitoring form, insulin ordering form or in medical record (can be a tick on the insulin form indicating treatment initiated or documentation in the medical record). In pre-audit specify location of documentation using the free text field.  
Leave field blank if there are no occurrences ie. where zero is recorded in item 12 above.                                                                                                                                                                                               |
| 14| Number of times there is documentation that a medical officer has been notified regarding hypoglycaemia on the BGL monitoring form, insulin ordering form or medical record | Count the number of times there is documentation that a medical officer has been notified of hypoglycaemia (can be a comment or a tick on the BGL or insulin form indicating that the medical officer has been notified, or documentation in the medical record). In pre-audit specify location of documentation using the free text field.  
Leave field blank if there are no occurrences ie. where zero is recorded in item 12 above.                                                                                                                                                                                                 |
|   | **Hyperglycaemia**                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                           |
| 15| Number of BGLs greater than 20 mmol/L                                                                                                     | Count the number of BGLs that fall into the hyperglycaemia range (denominator for next question).  
Record zero if there are no BGLs greater than 20mmol/L.                                                                                                                                                                                                                                                                                                      |
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Number of times there is documentation that a medical officer has been notified regarding severe hyperglycaemia (greater than 20 mmol/L) is documented on the BGL monitoring form, insulin ordering form or medical record.</td>
<td>Count the number of times there is documentation that a <strong>medical officer has been notified of hyperglycaemia</strong> (can be a comment or a tick on the BGL or insulin form indicating that the medical officer has been notified, or documentation in the medical record). In pre-audit specify location of documentation using the free text field supplied. Leave field blank if there are no occurrences i.e. where zero is recorded in item 15 above.</td>
</tr>
<tr>
<td>17</td>
<td>Number of BGLs in the range of 12 - 20 mmol/L</td>
<td>Count the number of BGLs that fall into the hyperglycaemia range of 12-20 mmol/L.</td>
</tr>
<tr>
<td>18</td>
<td>What are the specified BGL parameters for medical officer notification documented on the form? (eg Notify medical officer if BGL is &lt;4 and &gt;13) for each patient's chart being audited?</td>
<td>Enter the BGL notification range for this patient eg. less than 4 and greater than 13</td>
</tr>
<tr>
<td>19</td>
<td>Number of BGLs that are outside the specified parameters for this patient's BGL parameters for Medical Officer notification</td>
<td>Count the number of BGLs that fall outside the specified parameters for this patient’s BGL parameters for Medical Officer notification (denominator for next question). Record <strong>zero</strong> if there are no BGLs that fall outside the specified parameters for this patient’s BGL parameters for Medical Officer notification</td>
</tr>
<tr>
<td>20</td>
<td>Number of BGLs that are outside the specified parameters for Medical Officer notification where a MO was notified?</td>
<td>Count the number of BGLs that fall outside the specified BGL parameters for Medical Officer notification where a Medical Officer was notified Leave field blank if there are no occurrences i.e. where zero is recorded in item 19 above.</td>
</tr>
<tr>
<td>21</td>
<td>Where is insulin ordered?</td>
<td>Select either NIMC, Hospital-specific insulin form, Pilot subcutaneous insulin form (post audit only), Other - please specify (if other, free text field required to be completed).</td>
</tr>
<tr>
<td>22</td>
<td>Is there evidence of pharmacist review?</td>
<td>Yes/No Have a pharmacist initials been documented in the pharmacy review section (or otherwise annotated) at least once at the point of insulin prescription?</td>
</tr>
<tr>
<td>23</td>
<td>Is the diabetes treatment prior to admission documented?</td>
<td>Select either NIMC, National Medication Management Plan, Medication reconciliation form, insulin prescribing form, not documented anywhere, Other - please specify using free text field.</td>
</tr>
<tr>
<td>24</td>
<td>Total number of phone orders</td>
<td>Count the number of subcutaneous insulin phone orders on current active insulin form(s). Record zero if there are no phone orders.</td>
</tr>
<tr>
<td>25</td>
<td>How many phone orders are initialised as being received by two nurses?</td>
<td>Count the number of phone orders on current active form(s) that have been initialised as being received by two nurses. Record zero if there are no phone orders that are initialised as being received by two nurses. Leave blank if there are no applicable phone orders or where zero is recorded in item 24 above.</td>
</tr>
</tbody>
</table>
**Insulin orders** *(Complete items 26 to 38 for each type of insulin order e.g. one for routine and another for supplemental)*

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 26 | Specify type of insulin order | Select either Routine / Scheduled, Supplemental, Stat / Phone, sliding scale insulin.  
*‘stand - alone sliding scale’ insulin* is intermittent short acting insulin given in response to BGLs without any background basal or mixed insulin.  
Audit each complete order that has been prescribed for the patient, even if order has been ceased. |
| 27 | Is the insulin name clear? | Options: Select either **clear, unclear, missing.**  
Clear = Name of insulin spelled correctly, legible, includes suffixes (e.g. NovoMix 30, Humalog Mix 25)  
Unclear = any of the above not fulfilled.  
Missing = name of insulin not documented |
| 28 | Is route of administration clearly specified? | Options: Select either **clear, unclear, missing.**  
Clear = intended route of admin complete or approved abbreviation used. Acceptable terminology = subcutaneous, sub cut.  
Unclear = use of unapproved abbreviations s/c, s/q.  
Missing = route of admin not documented (pre-audit only). |
| 29 | Is frequency of administration clearly specified? | Options: Select either **clear, unclear, missing, incorrect, not applicable.**  
Clear = order to be administered with breakfast, lunch, dinner or (for basal insulin) at a specific time.  
Unclear = for mixed or short acting insulin doses to be administered at a specific time, the order does not specify to be administered with food/at mealtime  
Missing = no frequency documented  
Incorrect = frequency documented is incorrect  
Not Applicable = applies to stat/phone orders. |
| 30 | Has the order been signed by the prescriber? | Yes/No/Not Applicable  
Record Yes if there is evidence of prescriber signature  
Record No if no evidence of prescriber signature  
Record **Not Applicable** if your hospital does not have a policy for Doctor’s signature required on phone orders |
| 31 | Is the prescriber name clear? | Yes/ No  
Record yes if prescriber name is clearly legible at least once on the form  
Record No if the prescriber name is **NOT** clearly legible on the form |
| 32 | Number of insulin doses prescribed | Count the number of doses for each order up to the point of auditing (denominator for next three questions).  
Will require auditor to only count doses required up until the time the audit takes place, even if additional doses are ordered.  
**For example:**  
**Routine/ Scheduled order:** A scheduled order is written for basal insulin to be administered at 21:00 hours on the NIMC. The patient has been admitted for 6 days and the audit is undertaken at 16:00hrs on the 6th day. Therefore the number of doses prescribed is 5 as the 6th dose is not yet due.  
**Supplemental order:** Count the number of times a dose would be required according to the BGL parameters for the
|   |   | supplemental doses  
|   |   | **Sliding scale:** as above  
|   |   | **Phone:** Number of stat/ phone order doses prescribed  
| 33 | Number of insulin doses prescribed which are clear? | Count the number of insulin doses which are clear = number of units written legibly e.g. you can read it is a “6”. Will require auditor to only count doses required up until the time the audit takes place, even if additional doses are ordered.  
| 34 | Number of insulin doses prescribed which use unapproved abbreviations? | Count the number of insulin doses which use unapproved abbreviations e.g. units abbreviated to u, U, u/s, IU  
| 35 | Number of insulin dose prescriptions that are missing? | Count the number of **missing** orders for insulin doses  
Missing = not prescribed  
For scheduled doses this refers to when a dose has not been prescribed. For sites that use the NIMC for the pre audit this would be an unusual occurrence and would only apply if an entire order was not written. Therefore if using NIMC leave this field blank.  
| 36 | Number of doses that are required to be administered | Count the number of insulin doses required to be administered up to the point of the audit (denominator for next question).  
If a code is used for not administering insulin (as per NIMC), this is counted as an administration.  
For supplemental doses, this refers to the number of times the parameters were met for administration of the supplemental dose  
Will require auditor to determine if supplemental doses that were required at the particular BGL range were administered.  
| 37 | Number of doses initialled as having been administered | Count the number of insulin doses initialled as having been administered.  
If a code is used for not administering insulin (as per NIMC) count as an administration.  
| 38 | Number of doses with administration time documented | Count the number of doses administered with time given documented.  
Record "not applicable" for a form that does not require the nurse to document the actual administration time of the insulin dose - pre-audit only.  