Twenty six people gathered at the LIIPS Medication Safety Group meeting representing seven of the LIIPS organisations and demonstrated the value of academia and the NHS working together to improve patient care. Attendees had a range of educational and research expertise along with extensive clinical experience and a common desire to improve patient care.

Suzanne Khalid outlined the programme, learning objectives and the context for the meeting. National and local data show consistent errors involving diabetic medications, including insulin, resulting in increased length of stay and poor patient satisfaction.

Dr Ceri Jones gave an excellent overview of human factors with examples and illustrations of factors looking from the perspective of the job, the individual and the organisation. The three table groups, which were purposively mixed, then utilised the presented sociotechnical system as a framework for identifying factors contributing to the errors made in the case study (appendix). The case study involved a 10 fold prescribing error resulting in readmission.

The groups identified the following factors from the case study:
Work/ Patient/ Environment
- Patient factors – understanding/challenge
- Form design
- Time pressure
- Time of day incident occurred

Individual
- Doctor on call – not ward doctors
- DSN unable to prescribe and introduced another stage in process
- Knowledge and skills of doctors and nurses
- Doctor’s knowledge of patient – multiple tasks
- Attention – handover vs documentation
- Newly introduced strength of glargine
- Knowledge of patient’s history in pharmacy

Team and group
- Multiple documentation
  - EPMN
  - Separate diabetic chart
  - Dual systems
- Deference to specialists
- Standardisation of patient prescription
- Handover of management plan for patient
- Clinical notation?
- Clinical continuity
- Medicines reconciliation process at handover points

Organisational
- Training programmes
- Culture of speaking up
- Ambiguity in dose ranges in literature sources
- Flow/discharge pressure

After time for networking, and many useful connections were made, the groups were then asked to identify solutions to decrease the likelihood of the same error occurring again. Suggestions included having a standardised way to prescribe insulin, prioritising training in universities and piloting the green book. Full details are below.

Group 1
Preventing errors in dosage
- Not prescribing zeros as part of a dose (national)
- Standardising information and how it is given
- Separating strength of medication and dose of medication
- Writing dose in words and numbers

Team and Group
- Having one patient record
- Confidence to challenge discrepancies with prescriptions
- Increasing knowledge of insulin medications/dosages
• Diabetes nurse specialist should be able to prescribe

Group 2
• Standardised way of writing insulin so everyone understands
• Electronic systems that communicate across interface
• Not use more than 0.5ml syringe
• Insulin booklet
• Share learning of errors/SI with social care/ primary care/other care organisations
• More NMP in specialist roles
• Greater detail on discharge information around initiated medicines with reason/rationale for medicine
• Changing names of insulin
• Insulin for non-diabetics be on separate chart
• Specialist nurse clear plan for patient plan and educational role in patient care
• Never prescribe 100 units

Group 3
• Standardised way of prescribing insulin and doses across health community (LLR wide)
• Emphasise in university: product name, strength, dose (words and figures mandatory), frequency
• Indication: mandatory, eg. steroid induced, type II, etc. on all TTO’s – new or continuation
• Limited product approval through TAS (LMSG)
• Availability of DSN’s all hours, all prescribing
• Insulin type initiative ranges on “green” charts

There was particular interest in working together to produce a standardised chart to use across LLR and five people volunteered to meet and work on this idea further.

What next?
The next meeting of the Medication Safety Group on 9th June at 09.30, will be led by Group members from Loughborough University, and will build on this work applying knowledge and skills from a different human factors perspective.

For more details on the meeting or on the Medication Safety group please email liips@le.ac.uk.

Further resource:
How to: Manage insulin administration in the community from Diabetes UK.
Appendix - Insulin Case Study

On 15th of November Patient CS, a 70 year old female who resides in care home with mild dementia, was admitted to an acute medical ward with an intracranial bleed due to a fall. She presented with altered neurology and impaired cognitive function. The intracranial bleed was treated conservatively with a 5 day course of IV steroids.

On the 19th of November the patient was identified as having raised blood sugars and was reviewed by a Diabetes Specialist Nurse (DSN) who recommended starting insulin Glargine (a long acting insulin) 10 units daily. This was verbally handed over to the Dr on call and the ward nurse. The DSN documented her recommendations on the Diabetes team pink diabetics form and this was inserted into the main body of the notes. The notes entry stated

“Commence Glargine U100 10units OD”.

The Dr prescribed 100 units Glargine once a day. This dose was administered to the patient on the 19th and 20th of November. Patient CS was transferred to a rehabilitation ward ready for discharge. The TTO was written as “Glargine 100 units OD”.

On the 21st of November the patient was transferred to the Evington Centre (LPT) 100 units of glargine was administered on arrival. 100 units was administered on the 22nd and 23rd of November. The patients’ blood sugars were noted to be low and the patient was readmitted to ED on the 24th of November with hypoglycaemia.

The patient was treated with IV Fluids until the 25th of January when the blood sugars stabilised.