



Winners of the Rowan Hillson Insulin Safety Award 2016: Best joint pharmacy and diabetes team initiative to improve insulin and prescribing safety in hospital

A pharmacist led initiative to support insulin self administration

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CASE FOR CHANGE

In March 2012 the Joint British Diabetes Societies published their recommendations for the continued self-management of diabetes during hospital admission. Following this, Sheffield NHS Foundation Trust amended the self-administration policy to state that people taking insulin could continue to self-administer their insulin during the admission, with two important caveats, firstly that a lengthy assessment of competence was completed and secondly that the insulin be stored in a locked cabinet. The diabetes team felt that these caveats would hinder self-administration, and as such the pharmacist was asked to support the team. It was felt that the pharmacist was the most appropriate person to lead the project due to expertise in governance assurance, navigating trust wide policies and their specialist clinical knowledge in the area.

Despite the initial policy introduction, the team continued to experience anecdotal incidents of people not being able to self-administer their insulin, and insulin access being restricted. Concern was also raised that the policy was not deliverable due to lack of suitable storage. In areas that were none compliant with the policy, but permitted people to keep possession of their insulin there was concern that the Trust would not be able to support them in the event there were any clinical incidents. Following the success of driving the policy change there was insufficient resource to offer widespread education of the change.

WHAT DID THEY DO?

Through the project, the Trust wanted to support people prescribed insulin to continue to self-administer insulin whilst in hospital if they are willing and capable.

The objectives of the project were as follows:

- To undertake an audit to determine if appropriate inpatients are self-administering insulin
- To measure compliance with the trust self-administration policy
- To evaluate if the current policy supports people to self-administer insulin in hospital
- To complete a risk assessment of current practice and the considered solution
- To undertake an options appraisal of potential storage options
- To review the trust incident reporting system to consider the impact of self-administration
- To undertake a patient focus group to determine their requirements for any further work
- To implement any recommendations from the audit and governance review





HOW DID THEY DO IT?

Baseline Audit

A trust wide audit was undertaken by the clinical pharmacy team. This was performed as a one day snap shot assessment of all prescriptions for subcutaneous insulin. For all insulin prescriptions, data was collected on a standardised data collection form, including; the patients' self-administration status at home and in hospital, patients' suitability to self-administer in line with the trust policy. The storage conditions were also recorded to determine if the insulin was accessible to the patient.

Risk assessment submission to Medicine Safety Committee

A full risk assessment was undertaken considering the current policy and the potential clinical implications to patient care, including the risk of hypoglycaemia, hyperglycaemia and potential errors of picking the wrong insulin from the fridge. The risk assessment was contextualised in the national agenda to support patient empowerment and continue self-administration in hospital. The completed risk assessment was submitted to the Trust Medicines Safety Committee (MSC) for review and recommendations.

Options appraisal

A set of criteria that must be assessed when choosing an appropriate storage solution were defined:

- Security: portability, type of lock
- Infection control: easy to clean with standard procedures
- Suitable for use in all areas
- Nurse accessibility: available at all bed spaces, portable product that can be stored on ward in easily accessible area
- Patient accessibility: poor mobility, neuropathy, poor sight

A review of the NHS supplies catalogues was manually reviewed in July 2014 to identify medication storage options. An internet based search was undertaken during the same time period, using search terms medication lockers, self-administration lockers, medication storage, secure personal storage. The options were then submitted to the MSC for consideration.

Datix review

The incident reporting system (DATIX) was reviewed for all reported insulin incidents within the Trust for the period of 1 year to identify if insulin self-administration had been related to any incidents, or if there were any incidents of misappropriated insulin.

Patient focus group

The pharmacist attended a local diabetes UK meeting to discuss potential concerns people had about insulin management in hospital.

Introduction of a self-administration focussed service

The pharmacist undertook pilot assessment all people with type 1 diabetes admitted to one of the hospital sites. The assessment included a full review of suitability to self-administer in hospital, documentation of competence, review and supply of insulin where required. Following this trust documentation was updated to meet the governance requirements.





WHAT DID THEY FIND?

Baseline Audit

On the day snapshot subcutaneous insulin was prescribed for 71 patients, 41 of which had been self-administering insulin at home. Four patients were not suitable for continued self-administration, five expressed a wish not to, 30 were administering their own insulin and importantly two wanted to self-administer, but were not being supported to do so. Of the 30 people self-administering their insulin, 23 were keeping it amongst their possessions, which at the time did not meet Trust requirements.

Risk assessment and options appraisal

The options appraisal identified ten different storage options, two of which met all the criteria identified as important considerations. A business assessment of these options identified that the trust wide implementation would be prohibitively expensive, and would still not truly meet the needs of the patient, the nursing teams or the Trust. It was also identified that a pilot of providing additional lockers had failed on a ward of engaged staff due to failure to allocate the storage facility.

Datix® review

The system was interrogated for all insulin related incidents for the twelve months previous to the review. 51 insulin and self-administration related incidents were reported; ten omitted doses, two cases of the patient administering the correct dose, but the prescription was wrong, 20 incidents that would have been preventable if the patient had administered their own insulin, two cases of duplication (both the nurse and patient gave a dose, four cases of the patient giving themselves the wrong dose). There were no incidents of misappropriation or unintended administration to the wrong patient.

In conjunction with the risks identified in the formal risk assessment, and review of the Datix® reports the medicine safety committee recommended that the self-administration policy be amended. The policy amendment included the statement that insulin can be kept upon the person, and removes the requirement to complete a formal assessment of competence to be replaced by a simpler, patient focussed discussion between healthcare professional and patient.

Patient focus group

The discussion identified that the main concerns about coming into hospital were not having access to their insulin and doses not being given at the correct time, especially in relation to meals. The most powerful story was from a gentleman who had experienced numerous severe hypoglycaemic episodes in hospital due to not having access to his insulin himself and the doses being given at a prescribed time that did not correlate to the meal time or carbohydrate content.

IMPACT

The policy change was made with the intention that the trust systems would no longer be a barrier to self-administration, and that staff would support people to continue self-administering their insulin.

A one day re-audit of self-administration status of patients prescribed insulin on the diabetes wards (56 beds) was undertaken. 15 patients were prescribed insulin, seven patients met the criteria to self-administer, three of which were fully independent and had access to their insulin, one patient who was calculating her doses, but the nurse was witnessing the injection as the patients therapy had changed, and two were new to insulin and being supported by the nurse and one who wanted support whilst unwell.





To assess the impact of the policy change and to scope the potential impact of the pharmacy team further supporting the inpatient diabetes service, a two week pilot of a peripatetic pharmacist reviewing all Type 1 admissions to a single site was undertaken. Twenty seven patients with Type 1 diabetes were admitted, 17 were reviewed by the pharmacist, seven were discharged prior to review, two were not on the pilot site and one patient was absent. Actions undertaken by the pharmacist included updating the self administration status on the charts (n=12) and assessment of competence to self-administer (n=7). Of the seven competent patients 5 were fully self-administering and had access to the insulin, 2 were being supported by the nurse due to recent confusion and re-establishing confidence for discharge. Other interventions made by the pharmacist for the patient cohort (not just those self-administering) included prescribing the basal insulin (n=1), requesting blood glucose levels, requesting that insulin be administered and ketones tested for an incident of no insulin administration for 24 hours (n=1), hence preventing severe harm.

The policy change is meeting the needs of the patients, and the nurse teams by removing the administrative burden of supporting patients.

LEARNING

The main challenge was overcoming the preconceptions of the governance teams about the potential risk of a patient or visitor misappropriating insulin and causing harm to themselves or another patient. This was overcome by analysing the incident reporting system and communication with the national medicines safety officers. The confirmation that their concerns had not been a reality appeased this misconception.

The other barrier that has been faced was concern from nurses about 'what if the patient gives the wrong dose', this is covered in the policy which details the action to be taken, and states that the responsibility does not lie with the nurse if the correct procedures for ensuring competence had been followed.

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