Clinical Pharmacy Congress 2018

POSTER ABSTRACT BOOK
SESSION: SATURDAY PM
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1. Review on rasburicase prescribing in the management of tumour lysis syndrome within an acute trust
Thao Huynh, Summer Ibrahim, Emma Foreman, Pharmacy Department, Brighton and Sussex University Hospitals (BSUH) NHS Trust, Brighton, UK

Background
Tumour lysis syndrome (TLS) is a life-threatening oncological complication. British Committee for Standards in Haematology (BCSH) guidelines recommend rasburicase for TLS management. There is perceived variability in rasburicase prescribing in BSUH due to lack of Trust guidelines.

Objectives
Review if patients prescribed rasburicase for TLS prophylaxis match the ‘high-risk’ criteria in BCSH guidelines.
Review if patients prescribed rasburicase for TLS treatment meet diagnosis criteria outlined in BCSH guidelines
Assess the adherence to BCSH rasburicase dosing guidance for TLS prophylaxis and treatment

Method
Data including indications, dosing regimen and biochemical data of patients prescribed rasburicase from September 2016 to September 2017 were obtained via medical notes and biochemistry database. Ethics approval was not required for this audit.

Results
Seventeen patients met inclusion criteria.
Adherence to BCSH guidelines in prescribing rasburicase for TLS prophylaxis is 15% (2/13). 8% (1/13) of the patients did not match the ‘high-risk’ criteria. 54% (7/13) inappropriately received multiple doses despite stable biochemical results. 31% (4/13) received treatment dose of rasburicase for TLS prophylaxis.
50% (2/4) of cases using rasburicase for TLS treatment complied with BCSH guidelines. Diagnosis criteria of TLS in BCSH guidelines were not fully met in the two non-compliant cases.

Discussion
Prescribers may not be aware of the ‘high-risk’ criteria in TLS prophylaxis and the difference in doses between prophylaxis and treatment. Trends indicate that daily biochemical markers were not fully evaluated to justify subsequent doses of rasburicase for TLS prophylaxis according to BCSH guidelines. TLS diagnosis did not consistently reflect criteria in BCSH guidelines due to lack of supporting biochemical results.

Recommendations
This project highlights the need for BSUH guidelines on the management of TLS. In TLS prophylaxis, rasburicase should be prescribed as a 3mg single dose initially and may only be continued after a full review of TLS biochemical markers.
References
(1) Held-Warmkessel J; How to prevent and manage tumour lysis syndrome; Nursing2010; 2010; February; 27-31.
(2) Jones G, Will A, Jackson G et al; Guidelines for the management of tumour lysis syndrome in adults and children with haematological malignancies on behalf of the British Committee for Standards in Haematology; British Journal of Haematology; 2015; 169; 661-671.
2. An evaluation of a ward pharmacy technician discharge transcribing service
Lloyd M, St Helens & Knowsley Teaching Hospitals NHS Trust, Whiston, UK

Introduction/Background/Context
Discharge prescribing is a high volume and error prone task required of hospital doctors.\textsuperscript{1,2} Pharmacy technicians are undertaking advanced roles in hospital settings, and to support the discharge process, this role has been innovated further in our hospital with pharmacy technicians transcribing inpatient medications for discharge.

Objectives
To explore the views and opinions of doctors, pharmacists, nurses and pharmacy technicians of the discharge prescription transcribing service.

Method
Self-administered questionnaires were distributed to all doctors, nurses, pharmacists and technicians working with the service. Questions combined 5-point Likert-scale and open-ended statements. Agreement scores were calculated for statements on perceived usefulness, appropriateness, and potential benefits of the service with qualitative statements analyzed thematically.

Results
Sixty-seven participants responded with 19 (100%) pharmacists, 9 (100%) pharmacy technicians, 15 (65%) doctors and 24 (31%) nurses completing the survey, an overall response rate of 52%. Sample quotes are presented in table 1. In general, all staff groups valued the service and agreed that it was useful and facilitated teamwork. The service raised awareness of the role of technicians with doctors not feeling threatened by the role. Most staff felt the service saved money and that technicians would make less errors. Some staff questioned the place of the service when electronic prescribing is implemented although advanced that parts of the service could still be utilised.

Table 1: Example participant responses

<table>
<thead>
<tr>
<th>Participant role</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy technician</td>
<td>“I really do think that the doctors appreciate this service… and it helps them and saves them time to do other jobs they need to do.”</td>
</tr>
<tr>
<td>Doctor</td>
<td>“I must admit I didn’t know much about a technician but … On busy ward rounds this is great and very useful. We all work together to get the job done.”</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>“It should continue in some capacity but with EPMA this is surely going to become obsolete? Other parts of the service could still be utilised or advanced further with patient counselling or interface communication.”</td>
</tr>
<tr>
<td>Nurse</td>
<td>“It’s a valuable service and without the pharmacy techs, TTOs would take longer and we will have longer waiting times.”</td>
</tr>
</tbody>
</table>
Discussion/Conclusion
Transcribing of discharge medications by technicians was valued and desirable by all staff groups. There is some uncertainty surrounding the ongoing role with electronic prescribing but this study demonstrates an appetite for more advanced roles for pharmacy technicians, echoing recent government recommendations.\(^3\) Further research is required to determine the cost effectiveness and impact on discharge prescription error rates.

Ethical approval
Ethical approval was not needed as this was a service evaluation. The project was registered with the hospital audit department.

References
3. An overview of the implementation of the dose banding of chemotherapy CQUIN at Sheffield Teaching Hospitals to date.

Milly Finch, Sheffield Teaching Hospitals NHS Foundation Trust, Health Education England, Sheffield

Introduction

Following on from the publication of the Carter report, NHS England (NHSE) to date has developed several commissioning for quality and innovation (CQUIN) initiatives to deliver quality improvements and drive transformational change within the NHS in England. Sheffield Teaching Hospitals (STH) signed up for year 1 and year 2 of the implementation of dose banding intravenous chemotherapy CQUIN.

Objectives

Objectives for the project were:

- Gain approval by the Drugs and Therapeutics (D&T) committee
- Create a dose banding implementation group
- Set and achieve quarterly targets
- Analyse data for NHSE and STH

Method

After receiving D&T approval and setting quarterly targets. The dose banding was divided into separate stages and carried out on a weekend when the system was not been actively used. Data was analysed and supplied to NHSE on Excel spreadsheets.

Results

To date quarterly targets have been met except for quarter two year 1. There has been cost savings of approximately £70,000 a month for the year 1 drugs, which can be seen in graph one.

Graph one

A graph to show the spending on year one dose banded drugs compared to the number of doses prescribed

- Total Cost year 1 drugs
- Total number of doses year 1
The implementation of year 2 of the CQUIN is still in the early stages, it would be unfair to comment on potential cost savings at this stage.

**Discussion/Conclusion**

As seen in graph one there has been significant cost savings for the year 1 drugs despite there not been much change in the number of doses prescribed. The spikes in cost in August 2017 relate to the changing of contracts for two items which saw prices increase by 100%. The number of pre-made unlicensed medicines processed by the cytotoxic unit has increased from 40% to 49% over the CQUIN. Despite anomalies and the increase expenditure on pre-made unlicensed medicines from pharmaceutical manufacturers, it is clear to see that the dose banding CQUIN does reduce expenditure and may increase capacity of cytotoxic units.

*Ethics approval was not required for this piece of work.*

Word Count: 300
4. Inpatient’s preferred methods of receiving information about medicines

Wei Thing Szea, Richard Pudneyb, Li Weic

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b Department of Pharmacy, Lewisham and Greenwich NHS Trust, London, UK
c Department of Practice and Policy, UCL School of Pharmacy, London, UK

Background
Medication education programmes are often developed without input from patients and therefore did not provide what the patients want.1 There is limited research on inpatients’ preferences on the delivery format of medication education in the UK.

Objectives
To identify inpatients’ preferred methods of receiving information about their medicines and to determine the relationship between different preferences with regards to age group and education level.

Method
This was a cross-sectional study conducted at Lewisham Hospital and Queen Elizabeth Hospital. 100 inpatients were recruited in June 2017 across oncology, medical, surgical, cardiology, respiratory, and gynaecology ward. Patients’ preferences for methods of receiving information was assessed with a newly constructed questionnaire containing 10 preferred methods of receiving information about their medicines. A 5-point Likert scale was used and the score ranges between 1 to 5, where 1 indicates not desirable, and 5 indicates extremely desirable. Descriptive parameters and chi-square test were used in the data analysis.

Results
71 patients completed the questionnaires. The top 2 ‘extremely desired’ methods of receiving medication information were ‘face to face discussion with a doctor while in ward’ (n=31, 43.7%) and ‘a written memo or letter on important information about medicines’ (n=26, 36.6%). More inpatients expressed desirability to have ‘face to face discussion with a pharmacist while in ward’ (n=69, 97.2%) than ‘speaking to community or General Practitioner pharmacist after discharge’ (n=65, 91.5%) (Figure1). Younger patients and patients with higher education level were likely to accept the online discussion than older patients (p=0.004) and patients with less education level (p=0.005).

Conclusion
The study suggests that patients should be offered face to face discussion about their medicines with HCP before they were discharged home. Personalised written information about medicines is highly preferred and should be considered for dissemination of medicines information for inpatients.

References
Ethical Approval

This research was approved by the ethics board of School of Pharmacy, University College London as well as Lewisham and Greenwich NHS Trust. Participation in this survey was voluntary and confidentiality was maintained throughout the study.

Figure 1: Number of patients reported ‘extremely desirable’ for different ways of receiving information about medicines
5. Inpatient’s satisfaction towards information received about medicines

Wei Thing Sze\textsuperscript{a}, Richard Pudney\textsuperscript{b}, Li Wei\textsuperscript{c}

\textsuperscript{a} School of Pharmacy, University College London, London, UK
\textsuperscript{b} Department of Pharmacy, Lewisham and Greenwich NHS Trust, London, UK
\textsuperscript{c} Department of Practice and Policy, UCL School of Pharmacy, London, UK

Background
Although healthcare providers (HCP) had been involved in providing medication information, they often overestimate the quality and quantity of information they provide to patients.\textsuperscript{1} Patients had reported that they did not have adequate knowledge on the indications, duration, dose and side effects of their medications after discharge from hospital.\textsuperscript{2,3}

Objectives
This study aimed to find out patients’ satisfaction towards information about medicines provided during inpatient stay.

Method
This was a cross-sectional study conducted at Lewisham Hospital and Queen Elizabeth Hospital. 100 inpatients were recruited in June 2017 across oncology, medical, surgical, cardiology, respiratory, and gynaecology ward. Patients’ satisfaction with information about medicines provided during inpatient stay was assessed using Satisfaction with Information about Medicines Scale (SIMS).\textsuperscript{4} The options of the information received being ‘about right’ or ‘none needed’ was given a score of 1, which indicated that patients were satisfied; and ‘too much’, ‘too little’ or ‘none received’ was given a score 0 which indicated that patients were unsatisfied.

Results
75 patients completed the study. The average percentage of patients being satisfied with the information provided in the 9-items ‘action and usage’ subscale of SIMS was 74.4\%, which was higher compared to the 8-items ‘potential problems’ subscale with an average percentage of 56\% (Figure 1). Patients’ median satisfaction score for potential problems subscale was highest (7.5 out of 8) when patients received information about their medicines from pharmacist only as well as from both pharmacists and nurses. Median satisfaction score for action and usage subscale was highest (8.5 out of 9) when patients received information about their medicines from nurses.

Conclusions
This study suggests that HCP could improve on the provision of information on potential problems that patients might experience with their medicines. Patients were more satisfied when pharmacists involved in providing information on the potential problems about the medicines.
Figure 1: Percentage of patients (%) satisfied with information in SIMS

<table>
<thead>
<tr>
<th>Question</th>
<th>Potential problems subscale</th>
<th>Action and usage subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>What you should do if you forget to take a dose</td>
<td>57.3</td>
<td>56</td>
</tr>
<tr>
<td>Whether the medication will affect your sex life</td>
<td>56</td>
<td>58.7</td>
</tr>
<tr>
<td>Whether the medication will make you feel drowsy</td>
<td>53.3</td>
<td>65.3</td>
</tr>
<tr>
<td>Whether the medicine interferes with other medicines</td>
<td>53.3</td>
<td>53.3</td>
</tr>
<tr>
<td>Whether you can drink alcohol whilst taking this medicine</td>
<td>46.7</td>
<td>61.3</td>
</tr>
<tr>
<td>What you should do if you experience unwanted side effects</td>
<td>57.3</td>
<td>12.7</td>
</tr>
<tr>
<td>What are the risks of you getting side effects</td>
<td>76</td>
<td>76</td>
</tr>
<tr>
<td>How to get a further supply</td>
<td>61.3</td>
<td>61.3</td>
</tr>
<tr>
<td>How to use your medicine</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>How long you will need to be on your medicine</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td>How you tell if it is working</td>
<td>12.7</td>
<td>12.7</td>
</tr>
<tr>
<td>How long it will take to act</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>What it does</td>
<td>61.3</td>
<td>61.3</td>
</tr>
<tr>
<td>What your medicine is for</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>What your medicine is called</td>
<td>74.7</td>
<td>74.7</td>
</tr>
</tbody>
</table>

References


Ethical Approval

This research was approved by the ethics board of School of Pharmacy, University College London as well as Lewisham and Greenwich NHS Trust. Participation in this survey was voluntary and confidentiality was maintained throughout the study.
6. An audit of pharmacists’ documentation of medication changes for the discharge letter
Miles S¹, Wilcock M¹, Rutkowska A¹, Harvey L²
¹Pharmacy Department, Royal Cornwall Hospitals NHS Trust, Truro
²4th year pharmacy student, Bath University (at time of study)

Background
At discharge, the patient’s general practitioner should be advised of discharge medication and reasons for medication changes occurring during the admission.¹ Incorrect medication-related information may result in discontinuity of care and patient harm. An acute kidney injury (AKI) initiative required evidence of medicines review undertaken to be included in the discharge summary.² Our pharmacists record AKI medication changes on our electronic prescribing system, with this AKI note extracted into the discharge letter. This process now covers other medication change not specific to AKI.

Objectives
To assess the pharmacist-inputted notes in the e-discharge letter against the discharge medication list. The standard was that 100% patients would have medication lists accurately matching the pharmacists’ notes (AKI or other) in the e-discharge.

Method
Identify the first 125 patients discharged in July 2016 with a pharmacist note, and compare the notes with e-discharge medication list. This study did not require ethics approval.

Results
Prescriptions and notes for 125 patients (60 male) were reviewed. Average age was 75.6 years (range 23-95). For 43 (34.4%) patients, the notes described medication changes due to AKI. Overall 1201 medicines were prescribed (mean 9.6 per patient, range 2-20). Potential discrepancies were identified for 20 (1.6%) medicines affecting 15 (12%) patients. For 10 patients the notes reflected an AKI review when medicines were initially described as held or stopped, but later restarted during the admission. For 5 patients the medication list contained errors such as omitted medicine, different medicine or different dose compared to the pharmacists’ notes.

Conclusions
Our standard was not met - 12% patients had a medication list that did not reconcile with the notes – mainly due to the note being made early in the admission and subsequent medication changes not captured. Pharmacists now know to update these notes throughout the patient journey, and to be consistent with terminology used to describe medicines temporarily withheld. A repeat audit is planned.

References
1. NICE NG5. Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. 2015.
7. Investigating the appropriateness of VTE prophylaxis in patients who have had a VTE risk assessment completed
Roxanne Marwood and Dimitrios Karagkounis, Croydon University Hospital, London

Introduction
A venous thromboembolism (VTE) occurs when a thrombus forms in a vein. Most hospitalised patients have at least one VTE risk factor, which includes surgery and smoking. This risk can be decreased by giving anticoagulants e.g. heparins, or by mechanical prophylaxis e.g. compression stockings (TEDs).

Objectives
The aim was to quantify the percentage of patients receiving inappropriate unfractionated heparin (UFH) and dalteparin, alongside the number of surgical patients inappropriately given TEDs, for VTE prophylaxis. The objectives were to identify the most common reasons for inappropriate treatment and length of inappropriate treatment.

Method
100 patients were randomly selected, and data collected from their records over 6 days. The appropriateness of VTE prophylaxis treatment was assessed based on trust and NICE guidance. Only data on patients with a completed VTE risk assessment receiving prophylactic dose dalteparin or UFH, and surgical patient on TEDs, were collected. Paediatrics and maternity were also excluded. As this was an audit, so ethical approval was not needed.

Results & Discussion

<table>
<thead>
<tr>
<th>Inappropriate VTE prophylaxis</th>
<th>Number</th>
<th>% of those on inappropriate treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no. of pts on inappropriate VTE prophylaxis</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Inappropriate treatment for Renal Function (RF)</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Inappropriate dose for weight</td>
<td>11</td>
<td>55</td>
</tr>
<tr>
<td>K+ and platelets not measured before treatment</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Contraindications (CIs) to therapy</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Multiple inappropriate classes</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

About 33% of the assessed patients on VTE prophylaxis were treated inappropriately. This was mostly due to inappropriate doses for their weight, followed by those with CIs and inappropriate treatment due to RF. Some patients also fell into multiple categories for inappropriateness. The most frequent inappropriate length of treatment was 1-4 days.

Discussion/Conclusion
As demonstrated, there is the potential for improvement in VTE prophylaxis and closer monitoring of patients. Patients should ideally be weighed on admission to avoid inaccurate dosing. Furthermore, clearer documentation of contraindications is
needed, however clinical judgement is required when considering whether to prescribe. Patients who received inappropriate treatment for their RF may have been due to the different equations used in this audit compared to the electronic system. Additionally, a small sample size was used, sampled during winter pressures, therefore this may not accurately reflect practices.

References


Background:
Transcribing is a rewriting process of medicine instructions which could lead to medication errors. One of the preventive mechanisms to avoid transcribing errors in our hospital is by verifying written documents with the primary source which was performed by pharmacists. This study aimed to evaluate the impact of pharmacists in preventing transcribing errors.

Objectives:
Three objectives were defined, which were to identify the type of errors, identify near-miss events, and compare type of errors in wards and in intensive care unit (ICU).

Methods:
A prospective observational study was conducted by recording each error in each day and categorized the errors into ten categories. Transcribing error by nurses was identified in ICU, whereas transcribing error by pharmacy technicians was identified in other wards. The result was analysed descriptively. As this study is a service evaluation, this study did not require ethics approval. However, an approval from the hospital director was obtained.

Results:
90 (29.22%) of 308 patients included were in ICU. Transcribing error was found in 184 (59.7%) patients and in 667 (27.89%) drugs. The types of error can be seen in Table 1. Transcribing error found in ICU (1.6%) is higher than in wards (47.2%). 68% of error found in wards was because pharmacy technicians did not write drug route completely. Another study in Indonesia found that the highest types of transcribing error were drugs that were not transcribed (35.2%). It did not happen in this study as before patients are admitted, all drug documentations should be checked by doctors, nurses and pharmacists to reduce the chance of medicines not transcribed.

<table>
<thead>
<tr>
<th>Types of error</th>
<th>Number of error</th>
<th>Number of Near Miss Events</th>
<th>Error percentage*</th>
<th>Number of error</th>
<th>Number of Near Miss Events</th>
<th>Error percentage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbreviated Drug Name</td>
<td>2</td>
<td>1</td>
<td>13%</td>
<td>49</td>
<td>0</td>
<td>8%</td>
</tr>
<tr>
<td>Incorrect dose</td>
<td>7</td>
<td>5</td>
<td>44%</td>
<td>54</td>
<td>16</td>
<td>8%</td>
</tr>
<tr>
<td>Incorrect drug</td>
<td>1</td>
<td>1</td>
<td>6%</td>
<td>28</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Incorrect/incomplete route</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>445</td>
<td>7</td>
<td>68%</td>
</tr>
<tr>
<td>Incorrect instruction</td>
<td>2</td>
<td>0</td>
<td>13%</td>
<td>48</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>Incorrect time of administration</td>
<td>0</td>
<td>2</td>
<td>0%</td>
<td>4</td>
<td>4</td>
<td>1%</td>
</tr>
<tr>
<td>Incorrect dosage form</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>15</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Drug was not ordered</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>Late dose given</td>
<td>4</td>
<td>4</td>
<td>25%</td>
<td>2</td>
<td>2</td>
<td>0%</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>5</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>13</td>
<td>1.6%</td>
<td>651</td>
<td>39</td>
<td>47.2%</td>
</tr>
</tbody>
</table>

*Error percentage was calculated by dividing the total number of error by the total number of error in each ward. In the total row, the error percentage was calculated by dividing the total number of error by the total number of medicines (1013 for the ICU and 1378 for the wards).
Discussion/Conclusion:
This study showed that pharmacist's role is important in detecting error. By identifying error, near-miss events could be prevented. Further research regarding the significance of near-miss event is suggested to elaborate the impact of pharmacist's role.

References:
9. Feasibility and effectiveness of the second follow-up DOAC appointment
Ganjian S, Whittington Health NHS Trust

Introduction:
Increasingly, anticoagulation clinics in secondary care are initiating patients on direct oral anticoagulant agents (DOACs) based on NICE and local recommendations. Initially, in North Central London hospitals, all patients on DOACs were seen within the first 4 weeks of initiation. However, clinic experience suggests that many patients do not need this second appointment, and there are no available criteria to guide its appropriateness.

Objectives
- To determine the proportion of patients referred for a second DOAC appointment
- To determine the reason for the second DOAC appointment
- To determine the outcomes from these second DOAC appointments
- To develop a set of draft referral criteria for a second DOAC appointment

Method
Those initiated on a DOAC in 2017 were identified from clinic records and their notes retrospectively reviewed. Ethics approval was not required for this service evaluation.

Results
75% of 228 patients initiated on DOAC’s were referred for a second DOAC appointment. In two-thirds of cases, the reason for the second follow-up appointment was unclear (Table 1).

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low CrCl</td>
<td>24%</td>
</tr>
<tr>
<td>Low Hb/haemoglobin</td>
<td>3%</td>
</tr>
<tr>
<td>Deranged ALT</td>
<td>4%</td>
</tr>
<tr>
<td>S.E risk</td>
<td>2%</td>
</tr>
<tr>
<td>Other/ Unclear reason</td>
<td>67%</td>
</tr>
</tbody>
</table>

Table 1: Second DOAC appointment referral reasons
Following the second appointment, 88% of patients had no changes made, 7% had their DOAC dose changed, 3% had DOACs switched and 2% of patients stopped DOACs altogether.

Discussion/Conclusion
The service evaluation indicated the need for referral criteria to guide the appropriateness of a second DOAC appointment, and to optimise the clinic’s resource as follows:
- Low creatinine clearance: CrCl <50mls/min
- Blood clotting and/or abnormal liver function tests; 2 x upper limit of ALT, INR>1.5#
- Low platelets: <75 x 109/L
- Low Haemoglobin: <130g/L
These criteria will be audited in 6-months’ time to determine their effectiveness.

References
1) NICE; Clinical Knowledge Summaries; Anticoagulation-oral management accessed via: https://cks.nice.org.uk/anticoagulation-oral#scenariorecommendation:8 (accessed 1/02/18)
2) EHRA guidelines; the use of new oral anticoagulants in patients with non-valvular atrial fibrillation; Hein Heidbuchel, 2016 via: https://academic.oup.com/europace/article/17/10/1467/2467018 (accessed 1/02/18)
3) NCL Anticoagulation Referral proforma; January 2017; North Central London Joint Formulary Committee
10. A Retrospective Assessment of the Appropriateness of Antimicrobial Prescribing within a large UK Teaching Hospital

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Introduction
Antimicrobial resistance presents as a threat to all nations¹. With inappropriate antibiotic prescribing being a factor that precipitates resistance², a national audit tool has been designed to assess current levels of inappropriate prescribing within hospitals, providing comprehensive feedback on how this can be reduced. This audit is the first of its kind within the UK.

Objectives
To review ‘appropriateness’ of prescribing within a large teaching hospital using the audit tool.
Identify areas by which prescribing can be improved within the Trust
Provide feedback on the piloted audit tool

Methods
Patient data sourced from integrated medical software was collected retrospectively across two months in a large teaching hospital. Antibiotic prescription regimens were noted, and a decision of appropriateness was made by the auditor.

Results
100 patients were assessed for appropriateness of antimicrobial treatment. 136 antibiotics were prescribed during the study period. It was identified that 11% of patients were given antibiotics inappropriately. The most inappropriately prescribed drug was found to be Co-Amoxiclav, given in error for respiratory tract infections. Inappropriate prescribing was found to be always accompanied with stable vital signs, and microbiology data. In total, 8% of the days of therapy were found to be unnecessary, with the antibiotic not being indicated at start date constituting the bulk of inappropriate prescribing (45 days).

Discussion/Conclusions
Most of inappropriate prescribing occurred at the start date. Prudent observations and assessments are needed to improve inappropriate prescribing, i.e, more attention paid to patient vital signs and symptoms. While the audit allows the rater to identify the patient journey with clarity, it is not yet ready for official use, and must first be modified to incorporate other factors that influence inappropriate prescribing. Lack of training and verification of the audit were major pitfalls within the study, and this must be implemented in new designs going forwards.

References
1. Who.int. (2017). WHO | WHO’s first global report on antibiotic resistance reveals serious, worldwide threat to public health. [online] Available at:
Introduction:
Parkinson’s Disease (PD) is a complex neurological condition requiring timely medications and monitoring. Medication management in PD patients is complex due to varied dosing regimens and lack of familiarity with medications. Missed and delayed PD medication administration can be associated with adverse clinical consequences, including worsening symptoms, increased length of stay and increased care needs.

Objective:
To quantify the prevalence of delayed and missed PD medication doses in a University Hospital, and explore determinants

Methods:
Retrospective analysis of electronic prescribing & medicine administration (ePMA) prescription records over a 4-month period. Outcomes were classified as: administered, missed, delayed and other. Exploratory analysis included comparison of outcome by drug type, route and frequency of administration, and time trends. Ethical approval was not required as this was undertaken as a medication safety audit.

Results:
Out of 6751 administrations over 25 wards, 5817 (86.17%) of medications were administered on time, 117 (1.73%) were missed, 192 (2.84%) were delayed. At ward level on average, 1.42% of medications were missed and 3.45% were delayed. At patient level on average, 1.30% of medications were missed and 3.16% were delayed. There was no significant difference when comparing outcomes between drug types, route or frequency of administration. No significant time trend was noted when analysed by calendar month.

Conclusions:
A significant proportion of Parkinson’s medications are missed or delayed in hospital. We have identified a robust metric to measure quality of hospital care for people on PD medications. The ward teams receive regular feedback on their performance enabling a multi-disciplinary awareness of the issue and we are now able to target medication safety & educational interventions to locations with higher rates of missed or delayed medications. A larger analysis should allow identification of determinants and an ongoing assessment of the impact of medication safety interventions.

Reference:
University Hospitals of Leicester NHS Trust. Guideline for the Management of Parkinson’s Disease Medication. July 2017
12. An economic analysis of a ward based dispensing for discharge pharmacy technician service.
Gunn, N., Thakrar, J., Reid, P. Sheffield Teaching Hospitals NHSFT

Background
Most hospitals throughout the UK now use a `dispensing for discharge' model for issuing medication to inpatients. There is significant evidence of substantial improvements in productivity and service delivery, but little evidence of financial savings currently exists. The data presented here aim to address the lack of financial evidence for this model.

Purpose
To elucidate the drug cost benefit of introducing a pharmacy technician led a `dispensing for discharge’ service. To prove the service was cost beneficial after accounting for associated staffing costs.

Material and Methods
Admission data from the hospital patient administration system were combined with pharmacy drug expenditure data. The data were then analysed to establish drugs costs for all admissions to the two acute respiratory wards which had implemented the `dispensing for discharge' service, versus two that had not. Data were reviewed for a period of 6 months from April 2016 to September 2016.

Results
The results below show the two a `dispensing for discharge' intervention wards had lower drug expenditure compared with the same months from the previous financial year:

<table>
<thead>
<tr>
<th></th>
<th>Non-intervention wards</th>
<th>Intervention wards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ward 1</td>
<td>Ward 2</td>
</tr>
<tr>
<td>£ Change</td>
<td>£7,972</td>
<td>£2,225</td>
</tr>
<tr>
<td>% Change</td>
<td>11.6%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Combined total spend</td>
<td>£10,197</td>
<td>£21,787</td>
</tr>
<tr>
<td></td>
<td>7.3%</td>
<td></td>
</tr>
</tbody>
</table>

Table showing drug expenditure compared with the previous financial year

Discussion
A cumulative saving of £31,984 was realised for the 6 months studied. This would equate to a total year saving of £63,968. This was sufficient to offset staffing costs associated with implementing the service and resulted in a financial gain. This analysis does not take into account wider financial impact, or quality improvements.

Conclusion
This analysis shows the drug cost savings associated with the ward based technician service was sufficient to fully fund all associated staffing costs.


www.audit-
13. Optimising the discharge process: Pharmacists can improve efficiency, quality and safety
Pharmacy Department, Chesterfield Royal Hospital NHS Foundation Trust, Chesterfield

Introduction and Objective
A key element of the NHS Improvement’s ‘SAFER Patient Flow Bundle’ is early patient discharges\(^1\). However, prioritisation of other urgent clinical activity by junior doctors routinely causes delays. The Rapid Improvement Guide to optimising medicines discharge highlights the benefits of pharmacists writing discharge prescriptions\(^2\). This project aimed to assess the impact of implementing pharmacist-led discharge prescriptions at Chesterfield Royal NHS Foundation Trust.

Method
Two weeks of baseline data was collected from three wards. Data included the time of: decision-to-discharge, electronic-TTO written, pharmacy notified, verified, TTO complete. The number of amendments required to both the prescription and discharge letter was also collected. This included amendments to the medication changes, AKI and anticoagulation sections of the TTO. Following collection of baseline data, the change in practice involved the ward pharmacist (Band 7/8) transcribing medicines onto the discharge prescription and completing the medication changes, AKI and anticoagulation information. Where the patients’ admissions were short and not complex, the pharmacists also completed the details of stay. A technician undertook a subsequent accuracy check.

Results
The average time between decision-to-discharge and medicines complete reduced by 61%, saving the patient an average of 118 minutes (figure 1). The time saving was primarily between the decision-to-discharge and medicines added to TTO (103 minutes for doctors, 31 minutes for pharmacists).

![Average time between decision-to-discharge and medicines complete before and after pharmacist-led discharge]

Most importantly, there was a significant reduction in errors and prescription amendments when pharmacists completed the TTO. When doctors were writing the TTOs 74% of prescriptions needed amending and 86% of letters. This reduced to 5.8% and 5.7% respectively when a pharmacist completed the TTO.
Conclusion
Improving patient flow is a key priority in reducing bed pressures in NHS organisations across the country. This project has shown that pharmacists taking the lead writing discharge prescriptions significantly improves efficiency but also the quality of a process that can have an important impact on patient safety.

References

*Ethics approval was not required as this was undertaken as an audit project*
14. Developing image stickers for indications of medicines via feedback from Pharmacy Patient Forum Group (PPFG)

Ishrat S Ali 1, 2 Gemma Harris 1

1. Walsall Healthcare NHS Trust, Manor Hospital, Moat Road, Walsall, West Midlands, WS2 9PS
2. NHS Walsall CCG, Jubilee House, Bloxwich Lane, Walsall, West Midlands, WS2 7JL

Background:
In October 2014, the Pharmacy Department at Walsall Healthcare NHS Trust set up a PPFG. The main aim was to discuss ideas and share experiences from patients who had become Trust Members, to support the Pharmacy Department in implementing changes to enhance patient safety and experience. The idea behind setting up this group was inspired by innovative Pharmacy Team members who wanted to raise the profile of the Pharmacy Team. The Trust Members raised concerns that they had been sent home with a bag full of medication and were confused with what they were prescribed for or didn’t understand what they were told e.g. language barrier. We decided the most effective way of getting around this would be to create sticker image(s) to add onto medication boxes.

Aim:
The aim of this project was to develop image stickers for indications of medications to overcome polypharmacy and where language barriers were an issue.

Method:
Meetings arranged every 6 weeks and attended by:
- Trust Membership and Engagement Manager
- Pharmacy staff
- Trust members

Trust members were invited to design a sticker for cardiology medicines, whilst Pharmacy Members worked alongside specialist teams to create ‘the top medications’ in the group. Everyone agreed the universal recognised ‘heart shape’ would be used. We proceeded to creating the pain and heartburn/indigestion stickers.

Ethical approval was not required for this project.

Results:
Image stickers and ‘top medication lists’ have been developed for
- Cardiology
- Pain
- indigestion/heartburn

We are in the process of finalising the following indications:

Discussion:
The 3 image stickers have been rolled out and are part of the dispensing process. Interest has been received from various NHS Trusts around the West Midlands after we presented at the ‘Regional Dispensary Manager Meeting’. CQC inspectors have also praised this innovative project.

We are looking to roll out into the community once we have developed a range of images.