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An Audit on Antibiotic De-escalation Based on Urine Sample Sensitivities
Effect of academic detailing on insulin prescribing: a before and after study
Hart, A. Lloyd, M. Furlong, N. Hardy, K. St Helens and Knowsley Teaching Hospitals NHS Trust, Merseyside.

Background
Insulin is a high risk medication\textsuperscript{1,2} with prescribing errors potentially compromising patient care.

Objectives
The aim of the study was to assess the impact of educational outreach on insulin prescribing in an acute hospital setting. Insulin prescriptions were measured against standards defined by the trust's adult inpatient diabetes guidelines, the medicines policy and the lead diabetes consultant.

Methods
Insulin prescribing was prospectively audited over a four-week period. Educational outreach on insulin prescribing was then delivered by trained pharmacists to ward based prescribers. Insulin prescribing was then re-audited over a four-week period. Chi-squared tests were used to determine the impact of the intervention on insulin prescribing standards.

The study was reviewed by the relevant research and ethics departments and it was considered that ethical approval was not needed as the study was a service evaluation.

Results
A significant improvement in error free prescriptions was observed (13.1\% pre-intervention increased to 37.2\% post-intervention, \( P < 0.01 \)) for inpatient prescriptions. Significant improvements were reported for two particular inpatient prescribing standards: endorsement of the administration instructions in relation to food (86.2\% error rate pre-intervention reduced to 67.6\% post-intervention; \( P < 0.01 \)) and endorsement of device (86.2\% error rate pre-intervention reduced to 68.8\% post-intervention; \( P < 0.01 \)). All other standards measured for inpatient (see table 1) and discharge prescriptions did not show any statistically significant differences between the pre and post-intervention groups.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>( P ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Units&quot; prescribed in full?</td>
<td>300 / 9</td>
<td>174 / 5</td>
<td>2.9% / 2.8%</td>
</tr>
<tr>
<td>Administration instructions prescribed?</td>
<td>28 / 175</td>
<td>34 / 75</td>
<td>86.2% / 68.8%</td>
</tr>
<tr>
<td>Device specified?</td>
<td>38 / 238</td>
<td>44 / 92</td>
<td>86.2% / 67.6%</td>
</tr>
<tr>
<td>Frequency correct?</td>
<td>266 / 7</td>
<td>137 / 2</td>
<td>2.6% / 1.4%</td>
</tr>
<tr>
<td>Time correct?</td>
<td>255 / 18</td>
<td>130 / 11</td>
<td>6.6% / 7.8%</td>
</tr>
<tr>
<td>Prescribed by brand?</td>
<td>312 / 1</td>
<td>180 / 3</td>
<td>0.3% / 1.6%</td>
</tr>
<tr>
<td>Prescription amended (without being re-</td>
<td>22 / 123</td>
<td>10 / 6</td>
<td>15.2% / 14.1%</td>
</tr>
<tr>
<td>prescribed)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separate prescriptions for different doses?</td>
<td>150 / 4</td>
<td>76 / 1</td>
<td>2.6% / 1.3%</td>
</tr>
<tr>
<td>Other errors?</td>
<td>47 / 266</td>
<td>20 / 163</td>
<td>15.0% / 10.9%</td>
</tr>
</tbody>
</table>

Table 1: Comparison of error rates on inpatient insulin prescriptions pre and post pharmacist educational intervention
<table>
<thead>
<tr>
<th>Error free insulin prescriptions</th>
<th>Yes / No</th>
<th>Error free (%)</th>
<th>Yes / No</th>
<th>Error free (%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription free from errors?</td>
<td>41 / 272</td>
<td>13.1%</td>
<td>68 / 115</td>
<td>37.2%</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

*Fisher’s Exact Test reported as cells have expected counts <5.*

**Conclusions**

Structured educational outreach can promote and reinforce adherence to some insulin prescribing standards. A reduction in insulin prescribing errors can potentially improve patient safety and workplace processes. Further work is required to optimise and determine the most effective method at reducing insulin prescribing errors.

This study has been accepted for poster presentation at the Diabetes UK conference and submitted to the Journal of Diabetes for consideration.

**References**

Introduction
Healthcare professionals from different disciplines are increasingly being brought together to deliver patient services \(^1\), \(^2\). This is represented by the gradual inclusion of clinical pharmacy into general practice \(^3\). Such initiatives may result in secondary care organisations losing a number of experienced clinical pharmacists, potentially impacting on patient care. Little is known about the roles and responsibilities of newly qualified pharmacists (FPs) in general practice organisations. A three-year structured programme was designed and implemented that exposed FPs to clinical practice across primary and secondary care settings.

Objective(s)
This aim of this study was to explore key stakeholders’ experiences of the programme.

Method
Six general practices were identified. Two FPs were allocated to each practice to spend alternative four-week rotations in primary and secondary care. Each FP had a GP and senior pharmacist mentor to support them. Practices co-fund the role with tiered funding from the Vanguard project (60% and 40% in years 1 and 2, respectively). Eighteen qualitative semi-structured interviews were conducted after 3 months with FPs, GPs, nurse practitioners, administrative assistants, hospital pharmacy technicians, senior clinical pharmacists, and community pharmacists. Interview data was analysed thematically by hand and using NVivo to support data management.

Results
Data analysis identified that FPs were able to i) perform a range of tasks including discharge reconciliation, prescription requests and medication review clinics to directly improve patient care, ii) act as a point of contact and reference resource for professionals in primary, intermediary and secondary care settings, including community pharmacists, to support pharmaceutical care, and iii) release GP time. Analysis also identified that difficulties in the programme were due to iv) inappropriate type and quantity of work and that v) further clarity and structure is needed as to how GP mentor may support FPs.

Discussion/Conclusion
This work demonstrates that FPs are able to practice across care settings competently, supporting direct and indirect patient care to release GP time. The study identified differences in the expectations of stakeholders between the type and quantity of work for FPs. This may be due to differences in perspective \(^4\). Further qualitative and quantitative follow-up is planned for 6, 9, 12, 18, 24, 36 months.

Reference
Secondary care based pre-registration pharmacists (PRP) workshop simulation using a high fidelity manikin patient simulator.
Radford A & Lean V, University of Portsmouth – Portsmouth & Western Sussex Hospitals NHS Foundation Trust – Chichester & Worthing.

Background & Objective

Simulation is beginning to be established within the MPharm degree and has shown to enhance practical skills, knowledge and communication. Variations between the students’ performance, which could be a result of their experience of simulation at undergraduate level have become evident when a PRP engages in group training. The objective is to ensure PRP have a consistent level of clinical experience which could be achieved by a controlled ward environment.

Method

PRP introduced to the simulated environment and presented with a high fidelity manikin, observations monitor and medication chart. The education pharmacist will play the “Consultant” on a ward round and explain the scenario. Scenario - patient suffering an ischaemic stroke and experiencing dysphasia / dysphagia. PRP will advise on the patients current medications including changes in medications / formulations in order to maintain their current prescription and not compromise care. The “Consultant” returns and prescribes the PRP recommendations regardless of their appropriateness.

Results (anticipated)

The simulated environment could enhance the experience of a practical pharmaceutical task. PRP clinical skills, ethical decision making, knowledge of drugs and their formulations will be tested, which include omitting certain drugs without compromising patient care. Values, attitudes and professional behaviour towards patient care will be tested during the scenario.

Discussion/Conclusion

The session will enable the PRP to reflect on clinical decision making and how it will be interpreted by prescriber whether right / wrong, in a safe simulated environment. Feedback from this session will assess whether the experience improved their pharmacy knowledge / skills and whether the PRP found the simulated experience realistic / supportive. It will serve to value the inclusion of simulation to be embedded in PRP training locally, then if successful regionally. This will ultimately assess the PRP ability to abide by the new standards for pharmacy professionals set out by the General Pharmaceutical Council.

References


Ethics approval was not required nor obtained.
Optimising medication use for older people at high risk of adverse events: a new clinical pharmacy model within community nursing service

Lee CY1,2, Elliott RA2,3, Beanland C1, Goeman D1, Petrie N4, Petrie B4, Vise F5, Gray J5
1Royal District Nursing Service Institute. Melbourne, Australia.
2Monash University Centre for Medicine Use and Safety, Melbourne, Australia.
3Austin Health Pharmacy Department, Melbourne, Australia.
4PRN Consulting, Melbourne, Australia.
5Royal District Nursing Service, Melbourne, Australia.

Background: Community nursing (CN) clients are a frail, complex group of older people at high risk of adverse medication events.1 Community nurses work in a challenging environment with limited access to medical and pharmacy support.1

Objective(s): To pilot a clinical pharmacy model for CN clients at a large non-profit Australian-based CN service (Figure 1).

Method: Two consultant clinical pharmacists were employed part-time at two clinical sites of the CN service between September 2014–December 2015. Their main role was to visit clients’ homes with community nurses to review and reconcile medications, educate clients/carers about their medicines, provide advice to community nurses, and work with clients’ GPs to optimise and simplify clients’ medicines. Evaluation involved retrospective review of CN clients’ medicines data, and interviews and focus groups with nurses, older people, carers, GPs, community pharmacists and CN pharmacists. The study was approved by a Human Research Ethics Committee.

Results: Of the 104 clients referred by nurses, 96 agreed to a pharmacist visit; 84/96 (88%) clients received a medication review (median 86 years, 6 health conditions, taking 13 medications). The pharmacists identified 334 medication-related problems (MRPs) for all 84 clients (median 4 per client). The most commonly identified MRPs were potentially unnecessary medicines (17%), non-adherence (13%) and adverse drug reactions (13%). The pharmacists made 282 recommendations. As a result, 60/84 (71%) clients had a medication change made by their doctors, resulting in a total of 190 changes (median 2 per client). Clients, carers, GPs, nurses and pharmacists reported positive experiences with the clinical pharmacy model.

Discussion/Conclusion: The CN pharmacist service was well accepted by clients, carers, nurses and GPs. It was able to identify and resolve MRPs, optimise and simplify medication use and provide support to community nurses providing medication management services for frail, complex, older people living at home.

References:

Figure: Figure 1: A new role for clinical pharmacists in a community nursing service
Figure 1: A new role for clinical pharmacists in a community nursing service

Direct client care:
- Home visits
- Medication review
- Medication reconciliation
- Regimen simplification

Indirect client care:
- Medicines information for nurses
- Nurse education
- Development of medication resources for nurses
- Medication policies and procedures

New pathway for nurses’ referral:
- Direct referral for a clinical pharmacy medication
Poster 5
Adherence and viral load in patients taking Atripla Vs Truvada and generic Efavirenz
Lawson, A and Warwick, Z. Plymouth Hospitals NHS Trust. Plymouth

Introduction
Antiretroviral (ARV) drug spend is increasing\(^1\), which may be offset by savings generated through generics\(^2\). Gathering patient views on generic ARV’s allows greater understanding of patient knowledge on the subject\(^3\). However, information on the effects of generics and pill burden on adherence and VL is limited.

Objectives
To assess adherence and VL of patients taking Atripla Vs Truvada and generic efavirenz.

Method
Patients taking Atripla presenting for appointments were asked to complete a questionnaire designed to ascertain the number of missed ARV doses over the last month, then asked if they would consider switching from Atripla to Truvada and generic efavirenz. All patients, regardless of whether they switched, received the same routine follow up appointment and were asked to repeat the questionnaire. We also reviewed each patient’s VL, taken on the initial and follow up appointments.

Results
58 people were seen with 55 completing the baseline questionnaire. 30 agreed to switch and 25 declined. At the time of analysis 48 patients (27 switchers and 21 non-switchers) had completed their follow-up appointments and questionnaires. The study population (n = 48) had a mean age of 43.08 years, were predominantly white British (n = 43) and male (n = 41). n = 13 took other medications in conjunction with their ARV’s.

Statistical analysis was performed using the Fisher’s exact test, which showed no association between both groups and missed doses. The VL of patients in both groups remained undetectable (<40copies/ml).

Conclusion
This provides reassurance that changing from Atripla to Truvada and generic efavirenz did not affect adherence or VL in this small patient cohort.

Discussion
The study population was small and therefore we cannot confirm that the lack of association between the groups was not due to chance. The short data collection period may also be a confounding factor, not reflecting adherence and VL control in the long term.

References
The impact of an advanced pharmacist practitioner on prescribing and medication related outcomes in frail patients
Hindmarsh J and O'Neil H Pharmacy Department and Department of Elderly Medicine, City Hospitals Sunderland

Introduction:

The Advanced Pharmacist Practitioner (APP), working as part of the frailty team, provides an in-reach service to all frail patients that are admitted to the admissions unit. The aim of the team is to provide a comprehensive geriatric assessment,\(^1\) as outlined by the British Geriatrics Society,\(^2\) which has been consistently shown to improve patient outcomes. The role of the APP is to review all medications, offer expert advice, prescribe as per post take plans and to ensure pharmacological management is optimised according to the complex needs of the frailty demographic.

Objectives:

- To evaluate the impact of the APP on time to medicines reconciliation and review
- To quantify:
  - The number of items prescribed by APP
  - The classes of medications that are initiation and discontinuation by the APP

Method:

Prospective data was collected over a five month period, after which, 100 patients were selected at random for data analysis and interpretation.

Results:

Medicines reconciliation (MR) was undertaken within 24 hours for 100% of frail patients with the average time to MR being 11 hours and 4 minutes. Additionally, queries/discrepancies identified during the MR process were resolved by the APP at an average time of 11 hours and 45 minutes post admission.

The APP prescribed a total of 417 items; consisting of 212 new items and 205 regular medications, which is an average of 4 items per patient. Furthermore, using their own discretion the APP initiated 59% (n = 125) of new prescriptions and stopped 72% (n = 132) of discontinued medications (see Table 1).

Table 1: Medications stopped by APP

<table>
<thead>
<tr>
<th>The reason for medication discontinuation</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rationalisation/deprescribing</td>
<td>49</td>
</tr>
<tr>
<td>Acute Kidney Injury</td>
<td>18</td>
</tr>
<tr>
<td>Postural drops, low BP or bradycardia</td>
<td>14</td>
</tr>
<tr>
<td>Maintaining haemostasis</td>
<td>11</td>
</tr>
<tr>
<td>↓ C.diff &amp; antibiotic-induced diarrhoea</td>
<td>9</td>
</tr>
<tr>
<td>Adverse drug reaction</td>
<td>9</td>
</tr>
<tr>
<td>↓ anticholinergic burden</td>
<td>8</td>
</tr>
<tr>
<td>Drug-drug interaction</td>
<td>7</td>
</tr>
<tr>
<td>Risk of toxicity</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>132</strong></td>
</tr>
</tbody>
</table>
Discussion/conclusion:

No incidents relating to prescribing by the APP have been feedback, which correlates with other studies demonstrating accurate pharmacist prescribing. Overall, the APP's contribution allows for safe, effective and timely medicines management, with pharmacological therapy being appropriately initiated, discontinued and optimised according to the complex needs of frail patients.

Statements:

- This submission was presented at the British Geriatrics Society’s autumn meeting 2016.
- The abstract describes a workload audit project; therefore ethical approval was not required.

References:

Medicines Optimisation pharmacy Service (MOpS): The impact of domiciliary medication review


This project did not require ethics approval.

Introduction:
The Medicines Optimisation pharmacy Service (MOpS) was designed to address the sub-optimal use of medicines and evaluate the impact of a clinical pharmacy domiciliary medication review service in patients at ‘high risk’ of medicines related problems. The service was commissioned by West London (WL) CCG following the successful pilot.

Objectives:
- Ensure prescribing was safe and evidence based, to optimise clinical outcomes
- Improve patients’ adherence and optimise medication usage
- Reduce medicines wastage
- Reduce non elective hospital admissions.

Method:
Two band 8a Clinical Pharmacists completed level 3 domiciliary clinical medication reviews for 268 patients from April 2015 to September 2016.

An adherence assessment was completed as part of the review and included the patient’s beliefs and preferences around their medicines. Further support was provided by the pharmacist including: medication counselling; lifestyle advice; inhaler technique; support with administration and ordering. The patient was involved in decisions about their medicines and their pharmaceutical care plan before recommendations were made to the GP and multidisciplinary team. Onward referrals were made where appropriate e.g. to case managers, district nurses, social care, community pharmacies.

Results:
A total of 1741 interventions were made for 268 patients, with 36 (2%) of grade IV (prevented harm or admission to hospital). A potential net cost savings of £34,328 was identified through reduction in polypharmacy. With an average cost of a non-elective admission as £3,571, the total potential saving for 268 patients was £162,884. 61 out of 64 patients (91%) were likely or extremely likely to recommend the service to friends and family.

Discussion:
The evaluation of the MOpS project suggests that providing a clinical medication review service for ‘high risk’ patients results in safe and effective optimisation of their drug therapy and clinical outcomes which contributes to reducing non elective hospital admissions.

References:
3. NWL ICP’s 2012-13 business case. 50th percentile cost of a non-elective admission
Audit on the use of antipsychotics in elderly patients
James, J, Barts Health NHS, London

Background
More than 50% of people with dementia experience behavioral and psychological symptoms of dementia (BPSD). A report stated that antipsychotics used as a first-line response to behavioral difficulty in dementia rather than as second-line treatment after non-pharmacological approaches have failed. Quality visit noted the lack of reviewing of antipsychotic prescriptions for elderly patients at Whipps Cross hospital. A new guideline on Use of Antipsychotics in the Elderly, which states antipsychotics are appropriate for short-term use to treat delirium when advised by psychiatry team, was produced.

Aim
To establish if antipsychotics are being prescribed safely and used correctly for delirium management in the elderly. To ensure antipsychotics are being regularly reviewed by the medical team. To highlight good practice where antipsychotics have been stopped and non-pharmacological therapies used.

Method
Conducted on care of the elderly wards at Royal London hospital. Inclusion criteria: patients older than 65 years with dementia or delirium. Audit tool used to screen patients with dementia or delirium from ward handover sheet and data analysed on Excel.

Results
4 out of 43 patients screened were on antipsychotics (Table 1). 9% of dementia patients and 8% of delirium patients were on antipsychotics. Non-pharmacological interventions were initiated before prescribing antipsychotics. Nursing documentation, ‘Forget Me Not’ tool for dementia and behaviour assessment tools identified non-pharmacological methods of treatment. Midazolam, lorazepam and promethazine being used to manage patients with agitation. As per delirium guideline, haloperidol and olanzapine, prescribed with recommendation from psychiatric team, reviewed every 24 hours and stopped after 48 hours in 2 patients. 2 patients on long-term antipsychotics prior to hospital admission.

Conclusion
A re-audit collecting data retrospectively, on different wards and sites of the trust over a longer period required. Non-pharmacological treatment requires monitoring via questionnaires and include dementia nurses to screen methods used.

Abstract describes an audit project therefore ethics approval was not required

References:


Table 1: Table showing non-pharmacological and antipsychotic treatment in elderly patients
<table>
<thead>
<tr>
<th>Condition</th>
<th>Gender</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>Dementia</td>
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<td>N/A</td>
<td>N/A</td>
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<td>N/A</td>
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<td>N</td>
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</tr>
<tr>
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<td>N/A</td>
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<tr>
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</table>

Total number of patients seen: 43
Total number of patients on antipsychotics: 4
Total Percentage on Antipsychotic: 9%
3 Dementia patients on antipsychotics out of 31
Percentage on Antipsychotic: 9%
1 Delirium patients on antipsychotics out of 12
Percentage on Antipsychotic: 8%
Poster 8
Reviewing the medicines contained in an emergency drug cupboard to ensure critical medicines are available in a timely manner.
Patel, K, Western Sussex Hospitals NHS Foundation Trust, Worthing & Chichester

Introduction

Western Sussex Hospitals NHS Foundation Trust comprises of three general hospitals of which two, Worthing (W) and St Richards (SRH), have an off site, on-call pharmacist (OCP) who can be contacted out of hours. There is also an emergency drug cupboard (EDC) in place at both sites that is stocked with critical medicines for emergency situations. However, the stock lists for both EDC’s have not been reviewed in many years leading to the potential of calls for critical medicines that are currently not contained within them.

Objective

To review and standardise the contents of both EDC’s, ensuring that critical medicines are available for patients in a timely manner.

Method

The two EDC stock lists were reviewed using the UKMi Critical Medicines List. The draft list was sent to all OCPs for review, comments were received, and a final list produced. The EDC’s were then updated. Ethics approval was not required because this was a service evaluation.

Results

Audits were undertaken pre-project and post the new EDC stock holding, evaluating a month of data. The results are in table 1 below:

Table 1: A table showing the number of times the OCP came into pharmacy, the number of times this could be prevented by the EDC and the difference made pre and post the new EDC stock list.

<table>
<thead>
<tr>
<th></th>
<th>Total number of times the OCP came into pharmacy</th>
<th>Total number of times coming into pharmacy could have been prevented by the EDC being correctly stocked</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SRH W</td>
<td>SRH W</td>
<td></td>
</tr>
<tr>
<td>Pre-project data (June 2016)</td>
<td>5 11</td>
<td>2 3</td>
<td></td>
</tr>
<tr>
<td>Post-change (Dec-Jan 2017)</td>
<td>4 11</td>
<td>1 1</td>
<td>-3</td>
</tr>
</tbody>
</table>

The continued high rate of coming in is due to the nature of the call received e.g. CD’s or for specialist items e.g. clozapine.

Conclusion

Review of the EDC has resulted in a reduction of the amount of times the OCP has had to come into a hospital to dispense an item. Regular review of the list is required to ensure that this continues. This is just one part of a larger project using Kaizen methods to look at accessing medicines out of hours. Having dealt with this aspect, we can focus on some of the other reasons why an OCP may have to attend the hospital, to ensure the right medicines are available in a timely manner, thus improving patient care.
References

An audit to assess compliance with the Trust pharmacy inpatient lithium checklist

Ong, K; Vasishta, R; East Kent Hospitals University Foundation Trust; Kent

Introduction

Lithium is licensed for use in treatment and prophylaxis of mania, recurrent depression, aggressive or self-harming behaviour and bipolar disorder. The minimum effective dose should be sought and maintained as it has a narrow therapeutic index (0.4mmol/L-1.0mmol/L). Lithium toxicity can lead to serious adverse effects including blurred vision, seizures and coma. Appropriate monitoring is important to improve patient care, with respect to both treatment efficacy and patient safety, in line with NICE guidance and the National Patient Safety Agency advice. The aim of this audit was to measure the compliance of pharmacy staff with using the lithium monitoring checklist correctly for inpatients receiving lithium therapy prior to admission.

Objectives

1. To increase staff awareness of the lithium checklist.
2. To assess compliance in using the lithium checklist and ensure that medicines reconciliation discrepancies were addressed within 48 hours.
3. To ensure that lithium levels were taken within 24 hours and followed up appropriately.

Method

Ethics approval was granted from the Trust's governance team and appropriate patients were identified using JAC (dispensing programme) over a 12 month period. Lithium levels were reviewed in conjunction with the medical notes and the lithium checklist.

Results

Table 1: Audit results

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Number of patients (Total = 46)</th>
<th>Percentage of patients (%)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of admissions seen by pharmacy</td>
<td>37</td>
<td>80.43</td>
<td></td>
</tr>
<tr>
<td>Total number of checklists completed within 48 hours</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Total number of checklists completed after 48 hours</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Total number of checklists completed correctly</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Total number of lithium levels taken on admission</td>
<td>20</td>
<td>43.48</td>
<td>Levels taken were within the first 24 hours</td>
</tr>
<tr>
<td>Total admissions with lithium levels taken every 72 hours</td>
<td>7</td>
<td>21.88</td>
<td>N=32 as 14 patients were discharged prior to 72 hours</td>
</tr>
<tr>
<td>Total number of interventions made</td>
<td>9</td>
<td>75</td>
<td>Some patients do not require intervention as their levels are within therapeutic range</td>
</tr>
</tbody>
</table>

Discussion/Conclusion
As shown in Table 1, no lithium checklists were completed despite patients receiving a pharmacy review. 43.48% of patients had levels taken within 24 hours of admission and 75% of patients with lithium levels out of therapeutic range received interventions.

Improving compliance in using the lithium checklist is pivotal to ensure effective and safe treatment as there is no specific antidote to lithium and toxicity can lead to serious harm.4

Clinical practice could be improved by working with other healthcare professionals and implementing a local lithium register to keep track of patients on lithium. This has been trialed in another Trust with promising results.5

References


An audit to assess the compliance of primary care healthcare professionals with the latest MHRA drug safety alert regarding the concomitant use of clopidogrel with proton pump inhibitors

Papachristou A*, Kotronias RA**
*Northway pharmacy, Frosts Ltd **Oxford University Clinical Academic Graduate School

Introduction

Recent studies have raised concerns regarding the concomitant use of Proton Pump Inhibitors (PPIs), especially omeprazole, with clopidogrel due to the diminished antiplatelet effect of the latter.¹,² In response, the Medicines and Healthcare products Regulatory Agency (MHRA) suggested in 2010 that: “Concomitant use of clopidogrel and omeprazole or esomeprazole is to be discouraged unless considered essential”². Pharmacists were also advised to check whether patients buying over the counter omeprazole are also taking clopidogrel².

Aim

To audit the compliance of primary care healthcare professionals to the MHRA advice on the concomitant use of clopidogrel and PPIs.

Standards

According to NICE/MHRA recommendations concomitant use of clopidogrel and omeprazole or esomeprazole should be discouraged (100%)

Method

Data were retrospectively collected from three community pharmacies in Oxfordshire covering April 2012 to November 2016, via a computerised information system and inputted on pre-formatted tables in Excel 2010.

Results

Omeprazole has been the gastro protective agent of choice (48%, n=140) in patients taking clopidogrel over the past four years, despite the MHRA advice. According to those findings, the audited standard was adhered in 50.3% of eligible patients compared to the desired 100%.

Adherence to standard 1 is illustrated in the pie chart below
Discussion

Although the current regulatory position of the MHRA does not preclude the concomitant use of omeprazole and clopidogrel, it clearly discourages their combination. Our findings highlight the importance of reinforcing this message amongst primary healthcare prescribers.

Considering the overload of information that general practitioners receive on a daily basis, increasing pharmacist involvement is essential. An applicable way of identifying patients on both clopidogrel and omeprazole needs to be established, and we suggest a warning message appearing on the computerised system used for labelling.

References

1 British Medical Association, Pharmaceutical Society of Great Britain, and Joint Formulary Committee (Great Britain), (no date) BNF 72, September 2016 - march 2017.

#KnowYourDrops Eye Drop Compliance Campaign to Achieve Medicines Optimisation in Ophthalmology

The important Moorfields Pharmacy-led #KnowYourDrops campaign was launched to promote and encourage eye drop adherence, provide support to patients, carers and staff regarding best eye drop techniques, and demonstrate how compliance aids can help patients achieve medicines optimisation in ophthalmology. The examples of improved care and quality of life for patients/carers confirm the campaigns value to optimise medicines and patient outcomes.

All patients/carers surveyed state that the support helps improve the way they put in eye drops, and that they feel more confident in putting in eye drops than they did before, which helps demonstrates the positive impact on patient care. In addition, not only has supporting correct technique with or without a compliance aid heled improve medical outcomes, there have been several cases of improved QOL for patients and also carers.

A dedicated specialist ophthalmic pharmacist-led team provide a consultation for all outpatients for correct eye drop techniques and work alongside specialist nurses and Consultants to address any identified compliance-related issues. The International Glaucoma Association also supports this initiative with a specialist joining the team to help ensure a consistent and high quality level of service provided.

The case series’ supports that pharmacist-led compliance support is beneficial to help reduce barriers to poor compliance and to optimise medicines. Since initially launching in 6 sites (the Trust has 32 sites in total), the campaign has now been regularly replicated across the Trust to provide support to all patients, so can also be replicated in other Trusts where resources are available.

Overall, an important part of poor adherence is incorrect dosing technique, and this campaign shows how healthcare professionals can work collaboratively across all sectors, especially pharmacy teams in hospital and community settings, to help reduce both educational and non-educational barriers to ophthalmic non-adherence for all patients, for medicines optimisation.
<table>
<thead>
<tr>
<th>Table 1: Examples of Patient Case Studies</th>
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<tr>
<td><strong>Case Study 1</strong></td>
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<tr>
<td>• Discussion with daughter of an unstable glaucoma patient explains that her mother finds it difficult to squeeze the eye drop bottle so she administers the drops for her after her shift work which is a different schedule each day</td>
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<tr>
<td>• Unstable glaucoma is possibly due to inconsistent administration times and drug profile</td>
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<tr>
<td>• Technique and compliance aid assessment confirmed patient able to administer her own drops at a consistent 24-hourly regimen using a compliance aid instead of relying on her carer</td>
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<td><strong>Case Study 3</strong></td>
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<td>• Consultant referral for unstable glaucoma patient administering drops at random times in the middle of the night</td>
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<td>• Assessment identified that the patient was instructed to take the latter drops ‘at bedtime’ and goes to bed at various times through the night and so was inconsistent with using them at a fixed time</td>
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<tr>
<td>• Education given to administer the ‘bedtime’ drops at a fixed time – with the statin tablets taken at 11pm, and technique training to improve technique</td>
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<tr>
<td><strong>Case Study 4</strong></td>
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<tr>
<td>• Discussion identified that patient uses DIY pliers to open and squeeze bottles as has dexterity problems using the thumb, and finds it difficult to hold arm up high in the air to position the drop correctly</td>
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<tr>
<td>• Technique and compliance aid assessment confirmed patient was able to use a compliance aid to help open the bottles, and also a different compliance aid to correctly position the drop into the eye without raising the arm up. It also enables easy bottle squeezing with no thumb strength required</td>
</tr>
<tr>
<td><strong>Case Study 5</strong></td>
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<tr>
<td>• Assessment identified that patient is feeling the eye drop running down the back of her mouth and able to taste the eye drop</td>
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<tr>
<td>• Patient is administering drops with an unstable technique into the inner corner of each eye and was not using the punctual occlusion technique</td>
</tr>
<tr>
<td>• Education and technique training given to patient to improve technique and reduce this side effect to ensure full eye drop is absorbed into the eye to treat their condition</td>
</tr>
<tr>
<td><strong>Case Study 6</strong></td>
</tr>
<tr>
<td>• Assessment identified that patient finds it difficult to aim the single dose unit over the eye and keep her eye open so the drop often scratches her ocular adnexa, or drops run down her face. Patient also rubs her eye afterwards to ensure all the drop gets into the eye and this</td>
</tr>
<tr>
<td>• Technique and compliance aid assessment confirmed patient was able to use a compliance aid to help keep her eye open, position the drop correctly at the correct distance and angle, and also make squeezing the plastic easier. Full technique education given</td>
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Poster 12
Potassium Monitoring Following Hospital Initiation of Combined Spironolactone and ACEi / ARB Therapy
Davies, L. Chesterfield Royal Hospital NHS Foundation Trust, Chesterfield

Introduction

In February 2016, the MHRA drug-safety update highlighted the risk of fatal hyperkalaemia with concomitant use of spironolactone and an ACEi/ARB. Local heart failure guidelines recommend that biochemistry should be monitored 5-7 days following initiation, then again at 4,8 and 12 weeks. Following a few hyperkalaemia admissions this study was performed to determine guideline compliance.

Objectives

- Analyse the time between initiation of concomitant therapy in hospital and subsequent follow-up potassium level monitoring in primary care.
- Analyse monitoring recommendations within discharge paperwork to primary care following hospital initiation of concomitant therapy.

Method

An electronic prescribing report identified inpatients newly prescribed combination therapy of spironolactone and an ACEi/ARB between 1st March and 31st May 2016. Patients’ potassium levels, accessed via ICE (Integrated Clinical Environment) were utilised to measure the elapsed time between initiation of therapy, discharge and follow-up at the GP surgery or as an outpatient. Discharge summaries were accessed to analyse follow-up monitoring recommended to primary care.

Results

Between 1st March and 31st May 2016, 28 patients were commenced on a combination of spironolactone and an ACEi/ARB. Of the 17 patients discharged, only 4(23%) had their potassium checked within 7 days.

Figure 1 shows the time elapsed between discharge and first potassium level check. 2 patients didn’t have a potassium level checked within the 2-month surveillance period.

![Figure 1 - Time between discharge from hospital to first U+E results in primary care after initiation of spironolactone and an ACEi/ARB](image)

Of the 27 discharge letters of patients commenced on the combined therapy, just 10(37%) recommended any GP follow-up electrolyte monitoring.
Discussion

The results of this study identified insufficient electrolyte monitoring following initiation of spironolactone alongside an ACEi/ARB. Pharmacy and medical staff have received educational reminders to ensure documentation of the requirement for potassium monitoring on discharge. Patients are now given an alert card and a blood test request form upon discharge, to prevent any delay within primary care and reduce re-admission due to hyperkalaemia.

*Ethics approval was not required as this was undertaken as an audit project

References


Introduction
The Accident and Emergency (A&E) Department at Royal Bolton Hospital is the second busiest emergency department in the North West. 6% of hospital admissions and up to 23% of emergency re-admissions are as a result of medicines related problems, an area which hospital pharmacists can use their expertise to prevent. Locally, we decided to pilot a pharmacist in A&E who was to focus on implementing a traditional clinical pharmacy service.

Aim
To determine whether a pharmacy service to A&E would improve patient safety, patient flow and reduce unnecessary expenditure for the Trust.

Method
Data regarding pharmacist input was collected between February and December 2016 Monday to Friday (49 days in total). Patients were prioritised and selected using Extramed or A&E referral. Pharmacy input ranged from medication reconciliation to providing advice for treatment and patient counselling. Ethics approval was not required.

Results
In total, 318 patients in A&E had some form of pharmacist input in their care. Previously, medicines reconciliation within A&E was 0%. During the pilot, this was completed for 75% of patients seen by the pharmacist. This released medical staff to perform other clinical duties such as discharges. 58% of patients seen by the pharmacist required an intervention. Cost avoidance through reducing missed doses and from incidents avoided was demonstrated using estimated cost avoidance per intervention. Requesting patient’s own medication from home also demonstrated savings. See Table 1.

Table 1: Estimated cost avoidance due to pharmacist input in A&E

<table>
<thead>
<tr>
<th>Incident category</th>
<th>Cost avoidance per incident</th>
<th>Estimated total amount saved per year</th>
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<tbody>
<tr>
<td>Severe (6%)</td>
<td>£1000</td>
<td>£218,400</td>
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<tr>
<td>Potentially significant (33%)</td>
<td>£150</td>
<td>£180,180</td>
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<tr>
<td>Minor (61%)</td>
<td>£6</td>
<td>£13,322.40</td>
</tr>
<tr>
<td>Number of omissions avoided per year</td>
<td>Cost avoidance per intervention for missed medication</td>
<td></td>
</tr>
<tr>
<td></td>
<td>£130</td>
<td>£432,040</td>
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<tr>
<td>Number of inhalers brought into hospital as per pharmacist request</td>
<td>Average cost per inhaler</td>
<td></td>
</tr>
<tr>
<td></td>
<td>£32*</td>
<td>£2,668</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>£846,630.40</td>
</tr>
</tbody>
</table>
**Conclusion**
The addition of two A&E pharmacists (Band 8a) to help bridge the gap between A&E and the wards and to work to improve medicines management in A&E.

**References**

2. Gallagher J, Byrne S, Woods N et al; Cost-outcome description of clinical pharmacist interventions in a university teaching hospital; BioMed Central;2014;14;1-8)

Poster 14

Bridging the gap between mental and physical health care
Amin, K and Outtandy, N, Camden and Islington NHS Foundation Trust, London

Introduction:

Schizophrenia is a mental illness associated with poor physical health\(^1\). The life expectancy of these patients is 20% lower than that of others\(^2\). There is a higher prevalence of risk factors such as smoking, alcohol and substance misuse with these patients.

Objectives:

This audit aims to assess how well GPs and psychiatric teams at Camden and Islington NHS Foundation Trust monitor the physical health of clozapine outpatients and intervene where appropriate.

Method:

Data collection involved retrospective examination of electronic health records for physical health parameters, lifestyle habits and antipsychotic doses of 102 clozapine outpatients in 2016. Statistical analysis was completed using SPSS, Chi-square and Fisher’s Exact tests whilst Microsoft Excel was used to present data.

Results:

No clozapine clinics were 100% compliant with the monitoring of all physical health parameters and intervention of abnormalities (Fig.1) as recommended by guidelines \(^3,^4\). Significant associations were found between the clozapine clinic attended by patients and the monitoring of BMI (\(\chi^2 (2, N= 102) = 28.77, p < 0.001\)), heart rate (\(\chi^2 (2, N= 102) = 12.802, p = 0.002\)) and smoking habits (\(\chi^2 (2, N= 102) = 12.548, p = 0.002\)).

Conclusions:

The management of physical health falls below acceptable standards. Specialist physical health clinics with non-medical prescriber can improve coordination and follow-up. Further investment/training in such services should be considered to reduce mortality. Re-audit in six months will allow improvements to be identified.

This is an audit project so ethics approval was not required.
Figure 1: The number of clozapine outpatients at the Trust who had pharmacological, lifestyle, both or no interventions made for either normal (N) or abnormal (A) parameters

References:

4. NICE. Psychosis and schizophrenia in adults [Internet]. February 2015. [Accessed 10 November 2016];
Pharmacist Recommending Optimisation of Medicines Prior To Encounter for Discharge; a PROMPTED approach to patient discharge prior to admission

[Cooper, P], [Fhadil, S], [Wright, P], [Antoniou, S], Barts Health NHS Trust, Pharmacy, London, United Kingdom

Contact paul.cooper@bartshealth.nhs.uk

Introduction/Background

Barts Heart Centre (BHC) is the largest cardiac centre in the UK with over 700 elective admissions for angioplasty each year. Specialist pharmacists review patients in pre-admission clinic (PAC) prior to elective angioplasty to reconcile and document medication history, assess appropriateness of dual antiplatelet therapy (DAPT) with reference to bleeding risk, supply aspirin and / or clopidogrel against patient group directions (PGDs), counselling patients on new medications or changes to medication and advise on peri-procedural management of regular medications and make recommendations to optimise medications for management of coronary artery disease. Discharge medication is written in advance in PAC to minimise delays in discharge following the procedure. Recently an introduction of an electronic system has further streamlines PAC processes.

Objectives

Improve pharmacist productivity in PAC

Improve quality of information given to patients and general practitioners using electronic discharge summaries.

Improve workflow, being able to access information remotely.

Method

Following development of a protocol, approval by relevant governance boards and training, PAC processes where streamlined and recording of both medicines reconciliation prior to admission and discharge planning with a part completed electronic prescription was implemented. Average consultation time was used to assess productivity in PAC. Medication related incidents and medicines information enquiries were reviewed to assess the impact of implementation. Ethics approval was not required.

Results

Table 1. Metrics to assess service pre and post implementation of electronic discharge summaries

<table>
<thead>
<tr>
<th></th>
<th>Paper system</th>
<th>Electronic system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of patients reviewed by pharmacist daily in PAC</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Percentage of pharmacist recommendations implemented by interventional cardiologists</td>
<td>92% (n=100)</td>
<td>95% (n=100)</td>
</tr>
<tr>
<td>Medication related incidents associated with communication</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Average time pharmacist spend per patient in PAC</td>
<td>32 minutes</td>
<td>18 minutes</td>
</tr>
</tbody>
</table>
Conclusion

Adopting a PROMPTED approach electronically in PAC has improved pharmacist productivity. Increased patient numbers are seen whilst maintaining standard of recommendations; 95% implemented post-procedure. Recommendations are evidence-based including optimisation of statin doses, initiation of ACE inhibitors and anticoagulation bridging where indicated.

Significant time has been saved though use of electronic recording as opposed to paper based systems predominantly through duplication of documentation. Additionally information to patients and GPs is clearer and as a result, errors arising from miscommunication (or paper discharge summaries not reaching GPs) have resolved, largely though reduction in handwriting interpretations.

Feedback has been positive from service users; an assessment of the impact of electronic drug listing in PAC on ward staff during admission is planned.
Implementation of National Systemic Anticancer Therapy dose-banding tables at two NHS hospitals in London
Kantilal, K, Whittington Health NHS, London
Warner, M, Guy’s and St Thomas’ NHS Foundation Trust, London
Kantilal, K, Health Education England London and South East

Introduction/Background/Context
Chemotherapy is the single biggest spend within NHS England. Cost of systemic anticancer therapies (SACT) is growing rapidly, with annual increases of 8% (1). Body surface area (BSA) dosing is used for SACT but is associated with inter-individual variability. Dosing-band has been explored to optimise SACT preparation. Cancer units have been incentivised to implement national dose-banding (2). We describe approaches to implementing this national initiative at two London hospitals.

Objective
To reach 90% of prescribed SACT doses matching national dose-bands by March 2017.

Method
Clinical and governance approvals were sought. Ethics approval was not required.
Local targets assigned after baseline measurements.
Site 1: All dose-bands were updated on the electronic prescribing system (EPS) by July 2017. SACT most commonly used were prioritised to rapidly achieve compliance.
Site 2: Existing stockholding of dose-banded SACT reviewed. EPS dose-banding tables updated at regular intervals as stock decreased.
Percentage compliance was monitored to ensure targets were met to secure income.

Results
Quarterly percentage compliance was collated on a national template.
Table 1 tabulates dose-band percentage compliances at both sites.

Table 1: Compliance with national dose-banding tables across two London hospitals

<table>
<thead>
<tr>
<th></th>
<th>Site 1</th>
<th></th>
<th></th>
<th>Site 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target %</td>
<td>Actual %</td>
<td>Target %</td>
<td>Actual %</td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>25</td>
<td>66</td>
<td>5</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>40</td>
<td>97</td>
<td>30</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>70</td>
<td>TBC</td>
<td>75</td>
<td>TBC</td>
<td></td>
</tr>
</tbody>
</table>

Discussion/Conclusion
Implementation of this national initiative was influenced by local context at each site. One site had minimal stockholding therefore invested in updating the EPS system early and then monitored progress. Large quantities of existing stocks shaped the second site’s approach after collaboration with the aseptic unit. Regardless of approach, a similar improvement over time was accomplished. Experienced pharmacists led the implementation at both sites. Common barrier to implementation was time constraints. System-wide benefits of standardising doses may allow meaningful comparisons of cancer outcomes across England and enable the NHS to secure national procurement contracts. Local benefits include improved cancer patients’ experience by reducing waiting times, improved finances through greater use of outsourcing and decreased medicines wastage, and enabling care closer to home.
References


Poster 17
Atosiban effectiveness in preterm labor at a tertiary care hospital in Qatar: Retrospective Study
Ragab Ahmed [Pharmacy Department, AlKhor Hospital, Hamad Medical Corporation, Qatar], Pallivalapilla Abdulrouf, AlSaad Doua [Pharmacy Department, Women’s Hospital, Hamad Medical Corporation, Qatar], Al Anany Rasha, Aziz Hani [Department, Al Wakra Hospital, Hamad Medical Corporation, Qatar]

Background: Postponing delivery for 48 hours allows enough time for action of corticosteroids; to improve the neonatal outcomes. Atosiban is the latest tocolytic agent that inhibits oxytocin-induced uterine contractions.

Objective(s): To assess the effectiveness of the oxytocin antagonist Atosiban in the treatment of preterm labor at a tertiary care hospital in Qatar

Methods: Medical profiles of cases with preterm labor between 24– 34 weeks of gestation from 1st July 2015 to 31st December 2015 were reviewed. The primary outcome was to assess the tocolytic effectiveness in terms of the number of women delivered after 48 hours and seven days. Ethical approval was obtained from Hamad Research Centre- Ref No: MRC0932/2016.

Results: A total of 103 cases were included. The proportional of pregnant women successfully postponing delivery and did not require a second tocolytic agent was noted in 78.6% (n=81/103).

Figure: No. of Cases Per Delivery Time
About 10.7% of the patients did not respond to Atosiban within 6 hours. Data analysis showed no association between age, gravidity, and successes rate (P>0.05). However, there is a strong association between duration of Atosiban administration and success rates, and the differences were statistically significant (P<0.05).

Discussion/Conclusion: Although 10.7% of the patients did not respond to Atosiban within 6 hours, no rescue alternative tocolysis given. This raises concerns about the eligibility criteria of patients to receive Atosiban as tocolysis. Only 50% of our study population completed either first cycle of 18 hours (9%) or second cycle of 48 (41%) and rest of the population particularly representing the interval between 19 hours – 45 hours accounts to 39%. This clearly reflects noncompliance to Atosiban administration protocol that mandate to complete 48 hours of second cycle. In conclusion, Atosiban can effectively extend the pregnancy time, which confirms its clinical effectiveness as a tocolytic therapy.

References:
4. Hamad Medical Corporation guidelines, CG_10016_Manegment of preterm labour.
Poster 18
VTE Prophylaxis in Post-Natal Maternity Patients
Caryl Jones - Audit Supervisor: Dimil Patel

Background
Venous thromboembolism (VTE) is the leading direct cause of maternal death.\textsuperscript{[1]} It is crucial that mothers are screened for VTE risk factors following the birth of their child, to determine whether low molecular weight heparin is required or not. Incorrect prescribing and risk factors being missed have been identified by the pharmacists; therefore the need of the audit was discussed with the matron. No ethics approval was required to conduct the audit.

Objectives
The aim is to assess the accuracy of the risk assessment carried out by maternity staff and ensure that the patients are given the appropriate treatment if necessary. Objectives include: to assess if the post-natal VTE risk assessment forms in at least 50 patients have been filled out correctly. Identify the accuracy of the staff's recognition of the need for treatment for patients. To assess if the patients requiring treatment have the correct dose and duration of dalteparin identified (via documentation) and prescribed. If applicable, identify if the choice of treatment is accurate. To finish collecting data to complete the objectives within 5 days. Standards include: 100% of patients must have all their risk factors correctly identified. 100% of patients who require dalteparin have been identified for its need. 100% of patients who need dalteparin have had it correctly prescribed (i.e. correct treatment length and the dose corresponding to their weight).

Method
The research department of the trust approved the audit. A data collection form was put together using the trust’s prophylaxis assessment form. A midwife who previously did this audit showed her spreadsheet which proved to be useful, and it was felt that a pilot was not necessary. Audit participants were discharged patients within 2 weeks of the time of data collection from the post-natal maternity ward. Data was collected over a 5-day period, with a midwife. Quantitative data was collected retrospectively. A score would be put together from reading notes and compared to the post-natal risk assessment form in their documentation on the systems. Data was analysed using Microsoft Excel.\textsuperscript{®} Patients who had not had their post-natal VTE risk assessment done were excluded from the audit.

Results
50 patients risk assessment forms were analysed. Only 82% of patients had all their risk factors correctly identified. Only 92% had the need for dalteparin correctly identified. Four patients (8%) were contacted to return to the hospital to have their supply of prophylaxis treatment. Six patients (12%) had their dalteparin incorrectly prescribed.

Conclusion
Improving the staffs’ accuracy in identifying risk factors is to firstly re-train staff on what risk factors to look out for, what the commonly missed risk factors are, and to re-iterate the importance of doing the risk assessment correctly through a teaching session. This will be done within 4 weeks. A poster containing the guideline to prescribing VTE prophylaxis can be created so that they can be placed in doctors' offices as a useful guide. This will be done within 6 weeks. An additional audit following application of some of the recommendations may be essential to confirm advances have been made in 3 to 6 months’ time. Pharmacists screen the patients’ prescriptions on discharge, therefore the audit can be useful to highlight common possible errors in the prescribing process to them and increase their awareness on the importance of post-natal VTE risk assessments. Improvements must be made to ensure that 100% of our patients’ risk factors are identified each time a risk assessment is done. Hopefully, with interventions implemented, improvements may be seen.

References
An Audit on Antibiotic De-escalation Based on Urine Sample Sensitivities
Chandni Patel, Supervisor: Helen McGowan, Trust: Croydon University Hospital

Introduction:
Antibiotic resistance is a significant threat to treatment outcomes, leading to increased medical costs, prolonged hospital stays, and increased mortality\(^1\). Antibiotic de-escalation aims to reduce antibiotic resistance and is a key element of CQUIN and the antimicrobial stewardship program, Start Smart – Then Focus\(^2\). This audit has not been carried out at Croydon University Hospital, identifying a need to obtain a baseline of practice. This study did not require ethics approval.

Objectives:
The aim was to identify the occurrence of antibiotic de-escalation based on urine sensitivities. The objectives were to determine the incidence of:
- urine samples taken if UTI, pyelonephritis, or urosepsis was suspected (100%)
- urine samples taken before antibiotics administered in those with a UTI diagnosis (100%)
- antibiotic de-escalation from urine sensitivities returned (100%)
Exclusion criteria included patients without a definite documented diagnosis, on antibiotic treatments for multiple infections, and on antibiotic STAT doses (i.e., for surgical prophylaxis).

Methods:
This audit was retrospectively conducted on patients with a diagnosis of UTI, pyelonephritis, or urosepsis (n=100) between 01/09/16 to 15/09/16 using data obtained from an electronic prescribing system. Data collection was carried out by a pre-registration pharmacist using an Excel data collection form. A pilot (appendix 1) was conducted on 15 patients to which minor amendments were made (i.e., time of antibiotic administration) to form appendix 2. Appendix 2 was used to carry out the audit from 05/12/16 to 09/12/16. Excel was used for quantitative data analysis.

Results:
53 out of 100 patients had a urine sample taken. 40 out of 69 patients with a UTI diagnosis had a urine sample taken before antibiotic administration (58%). 16 out of 53 patients who had a urine sample taken had cultured sensitivities reported (30%), to which none were de-escalated based on the sensitivity results.

Conclusion:
None of the standards were met in this audit. This could be attributed to the low number of samples obtained, antibiotics administered before a sample was obtained, duration of time for sensitivity results to be returned, and the number of no growth and mixed growth results. Limitations include small sample size, accuracy of documented times compared to the definite times, exclusion criteria not eliminating patients in whom de-escalation may not be appropriate, and incomplete sensitivity results. Findings of this audit and antibiotic resistance importance should be presented to the pharmacy department, doctors, and nurses (within 6 months). An IT tool should be implemented to ensure those with a UTI diagnosis flags up a reminder to obtain a sample before proceeding with antibiotic administration (within 6 months). A re-audit should be conducted in 12 months.

References: