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Poster 1

Herbal medicine use among Diabetes Mellitus patients in Lagos, Nigeria.

Amaeze, OU., Aderemi-Williams, RI., Anyika, EN., Ayo-Vaughan, MA., Ogumola, D., Ogundemuren, DA. Department of Clinical Pharmacy and Biopharmacy, Faculty of Pharmacy, University of Lagos, Nigeria,

Background: The current attraction to products of natural origin has re-awakened interest in herbal medicine use. There is thus an unprecedented surge in the consumption of herbal medicine globally as complementary or alternative healthcare; for prevention and treatment of diverse diseases 1, 2.

Objective/s: To assess the prevalence and correlates of herbal medicine use; as well as to determine the perceptions and beliefs about herbal medicine use among Type 2 Diabetes Mellitus (T2DM) patients in Lagos state, Nigeria.

Method: A cross sectional survey was undertaken with T2DM patients recruited from five (5) secondary health care facilities across Lagos state. Data was collected using a structured and standardized interviewer-administered questionnaire 3, which was adapted to suit our environment and pre-tested. Ethics approval for this study was obtained from the appropriate health research ethics authority; patients consent was also sought before commencing the interview. Prevalence and correlates of herbal medicine use was assessed using descriptive statistics, univariate and multivariate regression analyses.

Result: From a total of 453 patients who responded, 305 (67.3%) reported use of herbal medicine. Among these users, 108 (35.4%) use herbal and conventional medicines concurrently; 206 (67.5%) did not disclose use to their physician. Herbal medicine use was significantly associated with age (p = 0.045), educational level (p = 0.044) and occupation (p = 0.013). Bitter leaf, moringa seeds, efinrin and a mix of different herbs were the most commonly used medicines.

Discussion and Conclusion: The use of herbal medicine among diabetics is high in Lagos, Nigeria. Health care practitioners should always inquire about this from patients; this is very important for better management of their disease condition achievement of therapeutic outcomes. The need for health education as regards concurrent use of herbal and conventional medicines is also paramount.

References

Poster 2
Ward Based Surgical Pharmacy Technician Referral System

Dodridge, E; Flower, D; Wilmshurst, C, East Kent Hospital University Foundation Trust (EKHUFT), Margate

Introduction

Our surgical clinical pharmacy service has been redesigned as a clinical technician led system rather than a more traditional pharmacist based approach. This best utilises the skills of an experienced technician and frees up pharmacists time so that they are able to review the more complex patients.

The patients that have been reviewed as part of this new system would otherwise not have had the opportunity for any pharmacy input during their inpatient admission as the overall wards were not rated high enough on our Trust’s risk assessment to be allocated a pharmacist visit.

Objective

To provide surgical patients at EKHUFT with an appropriate level of pharmacy input based on the complexity of their needs.

Method

The pharmacy technician completes a medicines reconciliation (MR) on all new patients admitted and then if they meet the referral criteria they are reviewed by the pharmacist for further input. The referral criteria are as follows:

- Patients prescribed:
  - drugs that require therapeutic drug monitoring
  - high risk/critical medicines
  - total parenteral nutrition
  - restricted antibiotics
- Patients who:
  - have Early Warning Scores ≥ 3
  - are immunocompromised
  - have renal impairment

Results

Productivity data was collected and comparison as in Table 1

<table>
<thead>
<tr>
<th>Table 1:</th>
<th>April/May</th>
<th>November/December</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRs completed by entire pharmacy team for surgical patients (including 2 Band 6 pharmacists)</td>
<td>95</td>
<td>369</td>
</tr>
<tr>
<td>MRs completed by surgical technician</td>
<td>0</td>
<td>104</td>
</tr>
<tr>
<td>MRs for surgical patients by technician</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>MRs completed by referral pharmacist</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>MRs for surgical patients by referral pharmacist</td>
<td>0</td>
<td>55</td>
</tr>
<tr>
<td>MRs screened by referral pharmacist</td>
<td>0</td>
<td>73</td>
</tr>
<tr>
<td>No of referrals by technician</td>
<td>0</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>No of referrals reviewed by pharmacist</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>No of prescribing interventions from referral team</td>
<td>0</td>
<td>170</td>
</tr>
</tbody>
</table>

**Discussion**

This new way of providing the service at EKHUFT is in its infancy and is under on-going review.

The team have also established their role as a key part of the multidisciplinary team and there have been a number of added value tasks that we have been able to support, including incident investigations and controlled drug matters in a timelier manner. This in turn has led to positive feedback from our service users.
Poster 3
Investigating the Accuracy of Venous Thromboembolism Risk Assessments
Vanessa Kent. Supervisor: Dimitrios Karagkounis. Croydon University Hospital.

Introduction
According to the National Institute for Health and Care Excellence (NICE), all patients should receive a venous thromboembolism (VTE) risk assessment upon admission to hospital. The risk assessment considers the patient's mobility, thrombosis risk factors and bleeding risks factors. The assessment is used with NICE and Trust guidance to determine the appropriateness of pharmacological and/or mechanical VTE prophylaxis. This audit intends to determine if VTE risk assessments are completed accurately at the Trust, within 24 hours of admission as per NICE guidance and if the accuracy of the assessment has an impact on the prescribing of appropriate VTE prophylaxis. This study did not require ethics approval.

Objectives
- Quantify the percentage of VTE risk assessments completed within 24 hours of admission
- Quantify the percentage of VTE risk assessments which accurately record a patient's thrombosis risk factors and bleeding risk factors
- Determine if the accuracy of a VTE risk assessment affects the prescribing of appropriate VTE prophylaxis

Method
The audit was conducted by collecting data on 100 VTE assessments completed by the medical team. Documented risk factors and contraindications were re-assessed by the pre-registration pharmacist. The two assessments were compared and discrepancies noted to determine accuracy. Appropriate VTE prophylaxis was evaluated by examining the patient's drug chart, in conjunction with the risk assessment, and whether the prescribing adhered to Trust/NICE guidelines for VTE prophylaxis.

Results
88% of VTE risk assessments evaluated during the audit were completed within 24 hours of admission. 38% of VTE risk assessments accurately recorded the patient's thrombosis and bleeding risk factors. In total, 77 inaccuracies were identified in 62 of 100 risk assessments. 85% of inaccuracies were related to thrombosis risk factors. The most prevalent cause for an inaccurate VTE risk assessment was failure to document one or more significant medical co-morbidities. 77% of all patients received the correct treatment outcome. An inaccurate VTE assessment did not affect the prescribing of appropriate VTE prophylaxis.

Recommendations and action plan
1. Pre-population of the assessment form with basic patient details
2. Ensure patients are weighed on admission.
3. Educating clinicians on VTE risk factors, specifically what constitutes a 'significant medical comorbidity' and considering the direct oral anticoagulants in the same category as warfarin when completing VTE risk assessments.
4. Encourage prescribing to be completed at the same time as the risk assessment. An automatic prompt on Cerner may be appropriate.
5. Pharmacists should actively identify patients that do not have appropriate VTE prophylaxis prescribed, particularly newly admitted patients
6. Stipulate clearer documentation of clinical decisions relating to thromboprophylaxis
A re-audit is also recommended to determine if the percentage of appropriate VTE prophylaxis prescribing has improved.
References

2. NICE *Venous thromboembolism: reducing the risk to patients* Clinical Guideline 92 (Last updated June 2015) Available at: http://guidance.nice.org.uk/guidance/cg92
Identifying Workplace Based Assessments for Pre-registration Pharmacist Trainees – an evaluation commissioned by Health Education England
Gifford A., Mills E., Maddock K., Keele University, Keele

Introduction
Training pre-registration pharmacists to ensure that the pharmacy workforce is able to respond to changing patient needs is a focus for Health Education England. Utilising workplace based assessments (WBA) with pre-registration pharmacists may be of benefit but there is little experience of using WBA tools in this group of trainees.

HEE commissioned Keele University to undertake an evaluation of the use of WBA with pre-registration pharmacists.

Objectives
The evaluation aimed to:

- identify WBA tools suitable for use with pre-registration pharmacist and evaluate their usability
- recommend suitable tools that can be used by pre-registration tutors

Method
A Rapid Assessment of Evidence, identifying review papers on the use of WBA in healthcare to update a review undertaken in Feb 2011.

Stakeholders from all areas of pharmacy practice were surveyed to determine the use of the identified tools in practice.

Telephone interviews were undertaken with a sample stakeholders to further understanding their use of WBA.

Ethical approval was not required for this evaluation project.

Results
The RAE identified 5 key types of WBA tool:

1. Direct Observation of Clinical Skills (DOCS)
2. Direct Observation of Practical Skills (DOPS)
3. Multi Source Feedback (MSF)
4. Peer assessment
5. Case Based Discussion (CbD)

Of these, DOCS, DOPS, MSF and CbD are all used with pre-registration pharmacists, but the tools and pattern of use varies between organisations.

Issues identified in relation to the use of the tools in pharmacy pre-registration training were in line with those identified in the literature.

Conclusion
The evaluation has identified WBA tools that have the potential to be used in pharmacy pre-registration training. It has provided useful information about the usability of the tools based on the evidence from the literature and practical experience.

References
Poster 5
Good use and evaluation of the use of LigaSure® and Harmonic®
Watel M, Lancel M, Avez N, Luyssaert B, Groupe Hospitalier Seclin Carvin, Seclin.

Introduction/Background/Context:

The medical devices Ligasure used in surgery allow to carry out a tissue fusion thanks to two types of energy (electrical one and mechanical one). They allow the welding of the tissue. For the Harmonic® devices, they use ultrasonic energy to enable incisions in tissues (coagulation/section).

Objective:

These specific devices are expensive and it seemed useful to evaluate their good use in our hospital.

Method:

A slip is to be completed during the use of the device LigaSure® or Harmonic®. For this 4-month collection, 3 rubrics were due to be filled (date of intervention, patient identity and reference of the device). The filled slips allowed to make a link between the used devices and the surgical interventions via operative reports. The good use of the devices have been evaluated thanks to technical sheets and a matrix of providers’ indications.

Results:

On a 4 month-period, 50 devices were used. 2 of the 50 slips collected were incomplete and unworkable. The evaluation showed that 84% (42/50) of the LigaSure® and Harmonic® devices are used in accordance with the recommended indications. On the 6 uses which were not validated by the providers, 3 were about digestive surgery, 2 were about urology and one about gynecology.

Discussion/Conclusion:

In the current financial context, it is necessary to know the conformity of the use of expensive medical devices. The LigaSure® and Harmonic® devices allow a gain of efficiency and of time during operations. 84% of conformity in the use in accordance with recommended indications is a good result. The 6 uses which were not validated by the providers will be the object of a discussion with the surgeons, which will allow to consider a pertinent renewal of the range at the occasion of the next call for tender.

Ethics approval:

Ethics approval was not required.
Preparation of drugs: a jacket to lower task interruptions

Introduction/Background/Context:
Preparation of drugs is a key step in the medication care of patients. It can give birth to mistakes which could have harmful consequences. One of the sources of mistakes is the task interruption during this step.

Objective:
The aim is to find a way to lower interruptions during this preparation.

Method:
It was decided to assess the impact of wearing a jacket for the staff while preparing drugs on the interruption rate in a nursing home. Wearing the jacket is associated with several flyers and posters put in different places in order to inform that people who are wearing these jackets mustn't be interrupted. The assessment lasted 2 months, counting interruptions and their type: the first month without the jackets and the second one with jackets and posters. Forms were given to the staff in which they could write the number of interruptions and select their kind in a list already written.

Results:
During the first month, before wearing the jacket, 100 interruptions have been noticed and none of them were justified by an emergency: interruptions by non-medical staff (34%), by the phone (28%), by patients (21%), other kind (8%), by the family circle of patients (7%), by doctors (2%). During the second month, after the implementation of jackets and posters, only 36 interruptions have been observed. This shows a decrease of 64% of the interruption rate. The staff is less disturbed and can focus on its preparation activity.

Discussion/Conclusion:
The implementation of jackets and informative posters within the nursing home shows a clear decrease of the interruption rate while the preparation of drugs. The definitive implementation of this system will contribute to improve the patients’ safety. Its application to other departments (medicine, surgery and obstetrics) is under assessment.

Ethics approval:
Ethics approval was not required.
Introduction

An innovative project explored the impact of prescribing pharmacists on patient care at LTHTR.

Objectives

The audit involved data collection from prescriptions at admission and discharge to gain a comparative view of prescribing effectiveness of medical and pharmacy staff in terms of:

- Prescribing errors
- Accuracy of information captured
- Timeliness of prescribing
- Nature of errors and prescribing interventions

Method

Baseline data collection provided an insight to the effectiveness of the discharge process with medical staff prescribing in terms of:

- Prescribing errors
- Accuracy of information provided to GPs
- Time taken for each stage of the medicines management aspect of discharge

Data collected in stage 2 and 3 of the audit replicated that collected at baseline, but with the introduction of a prescribing pharmacist (replace medic) and satellite pharmacy respectively. A fourth stage of data collection focussed on admissions, and recorded interventions made by prescribing pharmacists with reasons.

Ethics approval was not required.

Results

The initial data collected on discharge demonstrated a reduction in prescribing error rate (22% medic vs 0.7% pharmacist), improved transfer of information (46% vs 99%), and reduced total time to discharge (8.5h vs 3.5h).

The admissions audit included 300 patients, with an average of 2.6 prescribing interventions made per chart; the results are displayed in figure 1.
Figure 1. Interventions made by prescribing pharmacists during the admissions audit.

Discussion

Prescribing pharmacists have led to an improvement in patient flow within the Trust as they have reduced prescribing errors, increased the accuracy of information transferred to primary care and significantly reduced the waiting time for discharges. The role of the prescribing pharmacist has enhanced multidisciplinary team working, and has directly released medical and nursing staff time for patient care.

The innovative work seen at LTHTR is reproducible through the introduction of prescribing pharmacists at other Trusts, which is imperative to support the current NHS challenges.

References

1. Physick, A. Smolski, K. Mann, S. et al; Pharmacy innovation at discharge – impact of pharmacist non-medical prescribing on quality and streamlining processes; Journal of Medicines Optimisation; 2016; 2; 5-11.
Development of AdAPSS – an advanced acute prioritisation and safety screen prior to the post take ward round (PTWR) developed by the Advanced Practitioner Pharmacist (APP) team on an Integrated Assessment Unit (IAU).

Barron, A, Betts, R, Cranmer, P, Peacock, S. City Hospitals Sunderland Foundation Trust.

**Introduction/Background/Context**

The APP role includes participation on the PTWR, pharmacist led prescribing and patient review. Input to patient care 7.30AM - 8.30AM prior to morning handover was identified as a critical period for APP intervention from a safety, prescribing and prioritisation perspective, prompting analysis of input during this period.

**Objectives**

- Understand the potential for APP input/intervention prior to the PTWR.
- Define the screening process carried out 7.30AM-8.30AM to maximise impact on patient care and ensure reproducibility across team members.

**Method**

- All patients present on IAU at 7.30AM over a 6 day period had their electronic inpatient medication chart screened, utilising electronic sources available for review. Interventions were recorded and analysed by the APP team to define critical (e.g. interventions preventing significant harm or extended hospital stay) and non-critical interventions. Critical interventions were then further peer reviewed by the acute medicine consultant.
- Intervention data were then used to define the screening process in terms of the sources utilised and how to record and action interventions.

**Results**

Summary of results as follows in table 1.

<table>
<thead>
<tr>
<th>Interventions made during the AdAPSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients screened between 7.30AM and 8.30AM</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Period 30.9.16 and 3.10.16 – 7.10.16 (6 days)</td>
</tr>
</tbody>
</table>

*This figure only represents the number of items prescribed as a result of the critical interventions identified during the AdAPSS process. It does not include items prescribed/stopped as a result of non-critical interventions and other prescribing carried out as part of the PTWR.

Table 1: Interventions made during the AdAPSS process recorded over a 6 day period.
Discussion/Conclusion

The APP team are fully integrated into the MDT on IAU providing prescribing and medicines review support.

APP team impact on patient care prior to 8.30AM handover has been demonstrated to be significant by the volume and nature of interventions made in this short time frame.

The AdAPSS process has been defined and incorporated into daily service provision providing three key benefits:

- Timely intervention preventing harm to patients.
- Generation of key questions for discussion on PTWR.
- Prioritisation and targeting of medicines reconciliation.

The availability of a wide range of electronic sources allow for efficient screening of currently prescribed medicines in the context of relevant patient parameters.

Validation of the AdAPSS tool is recognised as an important future development.

**Ethics approval** – not required as audit only.

**Acknowledgments**

Dr Philip Jopson – Consultant Physician in Acute Medicine.
Evaluation of success of antibiotic therapy with some blood biomarkers in community-acquired pneumonia

Oyardı, Ö*1, Nebioğlu, D2
1 Istanbul University Faculty of Pharmacy, Istanbul, Turkey
2 Ankara University Faculty of Pharmacy, Ankara, Turkey

Background: Community-acquired pneumonia (CAP) continues to be a common health problem worldwide. Clinical pharmacists contribute to the practice of safe, appropriate and cost-effective drug treatment in CAP. Furthermore, the clinical pharmacist should take an active role in the monitoring of outcomes related to drug therapy and make suggestions regarding the change of drug treatment when necessary1. C-reactive protein (CRP), leukocyte count (WBC), neutrophil count, lymphocyte count, neutrophil:lymphocyte ratio (NLR), erythrocyte sedimentation rate (ESR), monocyte count and red blood cell distribution width (RDW) are blood biomarkers frequently used to identify CAP and to determine the accurate treatment regimen2. But, it is not clear yet which biomarkers need to be taken into consideration for the success of the treatment regimen.

Objective: Our objective is to determine which blood biomarkers could be used to monitor antibiotic therapy.

Method: We statistically analyzed the changes in the amount of CRP, WBC, neutrophil count, lymphocyte count, NLR, ESR, monocyte count and RDW in blood samples using SPSS 20.0 before and after 10 days of using antibiotic treatment in 79 patients who were hospitalized with the diagnosis of CAP in Ankara University Medical School chest clinics between 2011 and 2016 and successfully treated with antibiotics. The study protocol was approved by the Ethical Committee of Ankara University.

Results: The changes in the amount of CRP, WBC, neutrophil count, lymphocyte count, NLR and ESR were found to be statistically significant (p<0.05), while monocyte count and RDW were not statistically significant (p>0.05) (Table 1).

Conclusion: Clinical pharmacists can use CRP, WBC, neutrophil count, lymphocyte count, NLR and ESR to evaluate the success of antibiotic therapy.

References:

Table 1. Statistical comparison of initial and final laboratory data

<table>
<thead>
<tr>
<th>Blood biomarkers</th>
<th>Z values</th>
<th>P values</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRP (MG/L)</td>
<td>-7,658</td>
<td>0,000</td>
</tr>
<tr>
<td>WBC (X 10⁹)</td>
<td>-3,607</td>
<td>0,000</td>
</tr>
<tr>
<td>Neutrophil count (X 10⁹)</td>
<td>-4,301</td>
<td>0,000</td>
</tr>
<tr>
<td>Lymphocyte count (X 10⁹)</td>
<td>-3,638</td>
<td>0,000</td>
</tr>
<tr>
<td>NLR</td>
<td>-4,742</td>
<td>0,000</td>
</tr>
<tr>
<td>ESR (mm/h)</td>
<td>-2,333</td>
<td>0,020</td>
</tr>
<tr>
<td>Monocyte count (X 10⁹)</td>
<td>-1,397</td>
<td>0,162</td>
</tr>
<tr>
<td>RDW (%)</td>
<td>-0,073</td>
<td>0,942</td>
</tr>
</tbody>
</table>
A Perfect Ward - An audit of prescription queries – comparison of a ward without any pharmacy input and with ward-based pharmacy staff.

Thursfield, P, Yates, D, & Price, A. Noble’s Hospital, Isle of Man

Introduction

Medicines reconciliation and other clinical pharmacy services are now well established practice in many British hospitals. We needed to design a project to demonstrate the patient safety benefits to our organisation’s management team. This was one aspect of the project that gave us unexpected results.

Ethics approval was not required as this was an audit style project.

Objectives

To audit the effect of pharmacy staff based full time on an acute medical ward and to demonstrate improved patient safety.

Method

We audited all the prescriptions that arrived in pharmacy from the project ward for 2 weeks prior to the project. During this time the ward received no visits from pharmacy staff and we did not see all the charts each day. We made a quantitative assessment of the requests for drugs, and also assessed the type and quantity of queries that we had to deal with remotely.

During the 2 week project, the same data was collected by a pharmacist and pharmacy technician whilst ward-based and the results were compared.

Results

When ward-based we saw every chart each day but there were fewer queries than anticipated, and some types of intervention were less frequent or not required at ward level. The exception to this finding related to duration of antibiotic therapy. This is demonstrated in the table below:

<table>
<thead>
<tr>
<th></th>
<th>Dose</th>
<th>Frequency</th>
<th>Route</th>
<th>Legality</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>7</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Project Period</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>17</td>
</tr>
</tbody>
</table>

Discussion/Conclusion

There were less prescriber errors and queries than expected when the pharmacy team was based on the ward. We suggest that this is because there was greater opportunity to resolve queries before drugs were prescribed. Pharmacist attendance on all possible ward rounds and the accessibility of pharmacy staff to the junior doctors pre-empted prescribing errors.

We need to repeat the audit of errors and queries, post project, to establish that this was not a one off event.

Reference

Northern Ireland Clinical Pharmacy Standards, 2013
Poster 11
Vancomycin audit – compliance with Trust guidelines
Kaur R, Smart H and Mistri, A, University Hospitals of Leicester NHS Trust, Leicester

Background

Vancomycin prescription errors can lead to over or under-dosing and harm to patients. Local trust guidance recommends a dedicated paper “vancomycin prescription chart” which includes guidance on dosing and administration, and allows documentation of serial doses. Introduction of an electronic prescribing and medicines administration (ePMA) system created a potential risk whereby doses could be specified electronically, without reference to the relevant guidance and potential duplicate dosing1.

Objective

To audit compliance of vancomycin ePMA prescriptions against the standard that should be no dose specified on ePMA and dose only documented on the dedicated paper chart. To implement a change to ePMA which would minimise clinical risk to inpatients receiving vancomycin, by avoiding duplicate dosing.

Method

Following multidisciplinary review of the ePMA and paper vancomycin prescription processes, a change was made to ePMA disallowing inclusion of a dose when prescribing vancomycin on ePMA. A pre-set order was created for vancomycin redirecting prescribers to specify the dose on the paper chart. Vancomycin prescriptions were reviewed for 5 day periods before (1st February to 5th February 2016) and after (15th February to Friday 19th February 2016) the intervention.

Results

14 ePMA prescriptions were audited before and 14 after the change was implemented. Concordance with guidelines standards was 0% (0/14) before and 86% (12/14) after implementation.

Conclusion

The ePMA pharmacist recognised a clinical risk and worked collaboratively with the antimicrobial pharmacists, governance advisor and software developers to develop and implement an effective intervention. The intervention resulted in a dramatic increase in guideline compliance, which is anticipated to reduce incidence of vancomycin-related dosing errors, thus improving quality of patient care.

A MDT approach was essential in terms of identifying risk and developing intervention to mitigate the risk. It is important to keep vigilant for clinical risks introduced by introduction of new clinical systems.

References

1) University Hospitals of Leicester NHS Trust. ADULT (over 18 years old) VANCOMYCIN PRESCRIPTION CHART. Available at URL: http://insite.xuhl-tr.nhs.uk/antibiotic/ (Accessed January 2017)
Is the Neurology department following up patients on immunoglobulin treatment for grey indications?
Bhatti, P and Mathews, J. Barts Health NHS Trust, London

Introduction:
Intravenous immunoglobulin (IVIg) derived from human plasma is indicated in immunocompromised patients. Global shortage of blood donors and difficulties in mass production to maintain patient supply prompted the Department of Health (DoH) to commission IVIg responsibly by implementing the ‘Demand Management Programme’ (2008).

Grey indications within neurology include autoimmune encephalitis, PANDAS syndrome, neuromyotonia and others where clinical evidence on treatment outcomes is weak. Less priority is given for receiving IVIg due to their rarity compared to red/blue indications and an application for approval must be submitted for assessment.¹ No ethical approval was required.

Objectives:
- To undertake a literature search for the best patient outcome from IVIg treatment in grey indications
- To use patient notes to establish whether follow-up outcomes were recorded by the neurologist
- To review both patient notes and literature to define an outcome measure for each grey indication investigated

Methods and Results:
A Trust database of patients who receive(d) IVIg in neurology was searched to establish the grey indications for the audit. A literature search using Embase was conducted for each indication to explore post-IVIg treatment outcomes. These were compared alongside patient notes to determine the overall best measurable outcome.

Twelve patients were identified and 50% had follow-up notes recorded. 66% of these met the confirmed outcome measure.

Discussion and Conclusion:
This information should be stored on the National IVIg database to collate all measurable outcomes for IVIg use in grey indications. Recording the efficacy outcomes is beneficial as it provides post-treatment progress for conditions that often require continuous treatment. This should be encouraged to aid the decision to supply IVIg. If clinical evidence is successfully recognised, there is potential for grey indications to move to higher priority allowing greater patient access to IVIg. Clinical pharmacists have a role in monitoring IVIg therapy for long-term efficacy.

References
An evaluation of errors on discharge prescriptions and the impact of the drug listing pharmacist scheme at a large teaching hospital within a multi-site Trust


Introduction and objectives
Various studies have been carried out based on prescribing errors in hospitals. Error rates are significantly higher on discharge prescriptions (TTAs); according to the General Medical Council, the average error rate for TTAs is 19.24%\(^1\). To increase efficiency, the drug listing pharmacist scheme was implemented at a hospital within a multi-site Trust. This audit was carried out to compare local and national error rates and assess the impact of the scheme; ethical approval was not required.

Method and results
Data was collected for all TTAs written on one day on adult wards. Amongst the 65 TTAs recorded, a 37.18% error rate was found, a 7.93% increase since the last audit. Nevertheless, the proportion of TTAs with no medication errors increased from 9% to 37%. This demonstrates an improvement in prescribing practice through pharmacists’ involvement in training 5\(^{th}\) year medical students. However error rates remained high on TTAs with multiple medicines or complex medication regimes. This can be improved by continuing current schemes and investing further in junior doctor training.

Errors relating to the route of administration have nearly doubled since the last audit. As a result of this audit, prompts to indicate the route clearly have now been integrated into the electronic discharge summary template.

Pharmacist listed TTAs had an error rate of 16.33%; this was lower than that of doctor written TTAs (39.62%). This proves the need for established pharmacist transcribing services, which through previous studies have been shown to reduce the proportion of TTAs with one or more discrepancies by almost a half\(^2\).

Conclusion
With error rates on doctor written TTAs increasing since the previous audit, it is recommended that the drug listing scheme is continued and used as a training opportunity to reduce prescribing errors, whilst also increasing the efficiency of the discharge process.

References
**Poster 14**

**Increasing the number of Pharmacy Technicians, increases the clinical interventions made by Pharmacists.**

Patel, S. Mathews, J. and Kelly, D. (on behalf of the RLH pharmacy team), Barts Health NHS Trust, London

**Introduction**
Prescribing errors occur in a wide variety of inpatient settings; the EQUIP study showed that rates amongst junior doctors was 9%\(^1\). Pharmacists are relied upon to identify and correct errors before they can cause harm to patients. Interventions by ward pharmacists contribute to patient safety and cost savings by reducing spending on associated litigation costs.

**Method and results**
Details of interventions were recorded by the pharmacy team on one day across adult wards at one hospital within a multi-site Trust. Ethical approval was not required as this was an audit. 147 interventions were recorded, an increase of 83.75% compared to the previous audit. Approximately 40% of interventions related to high risk medicines. 24% of interventions were associated with antibiotics, due to an emphasis on stewardship. Furthermore, whilst the majority of interventions were classified as ‘minor’, several interventions of moderate significance were made. According to figures quoted in the Sheffield Model\(^2\), an estimated £14,497 of cost avoidance was achieved on the data collection day.

**Discussion and conclusion**
Since the last audit, there has been an increase in ward-based pharmacy technicians. This was to increase the efficiency of medicines management tasks and patient discharges. As a result, pharmacists have more time to carry out clinical tasks, including making interventions and acting upon medicines optimisation opportunities. This is reflected in the data collected as the number of interventions and their complexity has increased. This falls in line with recommendations made by the Carter review of ‘utilising more than 80% of pharmacists’ time for medicines optimisation, governance and safety remits’\(^3\).

Interventions can be made earlier and more frequently by continuing current schemes and creating new clinical roles for pharmacists. This will allow the pharmacy department to increase efficiency in medicines management.

**References**
An audit on the safe and secure storage of Insulin devices
Xavier T¹, Gulati A¹, Ara R¹, Hafiz I² Pharmacy Technician, St Thomas’ Hospital-cardiovascular wards

Ethics approval was not required

Introduction

The Audit set out to measure adherence to the Trust’s Medicines Policy where it refers to insulin storage requirements from an operational perspective. The policy requirements are in place to protect patients from errors, ensure patient safety as well as reduce waste.

Objectives

The Audit reviewed the storage of insulin across seven cardiovascular wards at St Thomas’ Hospital and measured adherence to the standards in the Trust Medicines Policy:

“Insulin pens/vials or cartridges” - Once opened, label with the date of opening and the patient's name. 28 days from date of opening stored at room temperature. Insulin can be stored at room temperature for 28 days from date of opening. For in-patients open and labelled insulin can be stored in individual patient bedside medicine unit

Methods

A tool was designed to measure standards set out in table 1. Prospective data was collected between 29/03/2016 and 12/04/2016.

All medication fridges and patients' medication lockers were checked on the cardiovascular wards.

Results

Table 1: the overall cardiovascular wards adherence to the audit standards

<table>
<thead>
<tr>
<th>Standards</th>
<th>Fridges</th>
<th>Lockers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 1</td>
<td>32%</td>
<td>14%</td>
</tr>
<tr>
<td>100%* must be stored in a locked cabinet whether fridge or bedside locker</td>
<td></td>
<td>Total: 31%</td>
</tr>
<tr>
<td>Standard 2</td>
<td>23%</td>
<td>72%</td>
</tr>
<tr>
<td>100%* in use must be labelled with date opened</td>
<td></td>
<td>Total: 27%</td>
</tr>
<tr>
<td>Standard 3</td>
<td>59%</td>
<td>57%</td>
</tr>
<tr>
<td>100%* in use must be labelled with patient’s name except multi-use stock vials</td>
<td></td>
<td>Total: 59%</td>
</tr>
<tr>
<td>Standard 4</td>
<td>Total: 20%</td>
<td></td>
</tr>
<tr>
<td>80%* in use should be stored in patients’ lockers except multi-use stock vials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 5</td>
<td>46%</td>
<td>29%</td>
</tr>
<tr>
<td>100%* stored in the patient’s bedside locker or fridges should NOT be expired</td>
<td></td>
<td>Total: 45%</td>
</tr>
</tbody>
</table>
Standard 6
100%* of used/in use found should have an active prescription including patients that have been discharged excluding multi-use stock vials

<table>
<thead>
<tr>
<th>40%</th>
<th>100%</th>
<th>Total: 45%</th>
</tr>
</thead>
</table>

**Conclusion**

All wards did not achieve the standards as seen in Table 1. This shows that the cardiovascular wards are not adherent to the Medicines Policy. Therefore, safe and secure storage of insulin is not being practiced on the cardiovascular wards. A total of £446.62 (including VAT) worth of Insulin devices were wasted as a result.

**References**

(1) Medicines Policy-code of practice for administration-chapter GSTT effective from 11/08/2016
(2) JAC pharmacy software 2016 for GSTT
(3) Medchart Electronic medication management software 2016 for GSTT
Poster 16
The effect of having a pharmacist in the Emergency Department
Shali S, Princess Alexandra Hospital NHS Trust, Harlow

Background
Medication errors are one of the main causes of adverse drug events during hospitalisation. Medication errors commonly occur in the Emergency Department (ED)\(^1\). Medicine reconciliation (MR) on admission can result in decreased medication errors and adverse events\(^2,3\). This study aims to assess if the ED pharmacist can prevent medication errors by documenting a medication history prior to the completion of an inpatient prescription chart by the doctors.

Methods
This retrospective study was carried out in the ED at The Princess Alexandra Hospital NHS Trust. In the pre intervention period, MR was undertaken by the research pharmacist after the inpatient chart was completed by the doctors. In the post intervention period MR was documented by the research pharmacist prior to completion of inpatient prescription chart by the doctors. In the pre intervention period, 100 patients were included and in the post intervention period 54 patients were included. Data were collected on number, type and potential severity of unintentional discrepancies using a proforma compiled from existing literature.

Results
Of the 154 charts reviewed, 24% (24/100) and 22.2% (12/54) of patients experienced at least one discrepancy on their drug chart with the majority of these being omissions (79.5% & 74.7%) in the pre and post intervention period respectively. In the pre intervention period, a total of 299 discrepancies were discovered, an overall mean of 2.98±0.25 discrepancies per patient. However, in the post intervention period, a total of 83 discrepancies were discovered, an overall mean of 1.53±0.31 discrepancies per patient. In the post intervention period, the discrepancies were most frequently categorised as potentially requiring increased monitoring or increased length of stay in the hospital.

Conclusion
ED pharmacist can identify and prevent potentially harmful medication errors. The intervention resulted in quality improvement in medicine related information and fewer errors in the initial inpatient prescription chart.

Ethical approval was not sought following agreement with the hospital that this was a service improvement initiative

References
Poster 17

The attitudes of community pharmacists towards dementia care education and training
Nishat, M*, Dr Yahyouche. A* and Dr Jalal. Z*

*School of Pharmacy, Institute of Clinical Sciences, University of Birmingham

Objective

To explore the nature of dementia services provided by community pharmacies and to determine the attitudes and opinions of community pharmacists towards current dementia education and training.

Methods

A questionnaire was developed and distributed to a total of 625 pharmacy premises (face-to-face, over the phone, by email and by post) across Birmingham, Coventry, Wolverhampton, London, Sheffield, Liverpool, Leeds, Bristol, Manchester and Portsmouth. Ethical approval was granted by The School of Pharmacy/University of Birmingham.

Results

A total of 178 respondents were received, with slightly over one fifth not providing any dementia care. In general, pharmacists reported high levels of contact with dementia patients and their carers within the community. In many cases care involved the provision of multicomartment compliance aids (89.2%) and encouraging competent patients to self-manage (76.4%). Some services were not fully utilised for example reducing brand substitution (42.9%) or modifying medication labels or packaging (41.3 %). Moreover, just under half of respondents rated dementia education and training as average, and 81.1% agreed to having to seek out their own dementia related training opportunities. A lack of collaboration between community pharmacy and dementia education and training providers was also noted and for the vast majority (77%) this lack of support underlined feelings of being underused.

Conclusions

Dementia continues to be a difficult topic for community pharmacists. Key findings indicate there remains no formal or mandatory dementia training for community pharmacists. With many of them feeling underused and under-supported, their potential in the field of dementia remains unharnessed. Suggestions to improve dementia education and training may enable them to provide better care and services.

References

1. Maidment. I.D, Aston. L, Hilton. A, et.al, Role of community pharmacists in the use of antipsychotics for behavioural and psychological symptoms of dementia (BPSD); a qualitative study; British Medical Journal Open; (2016); 6(3): 1-6

Poster 18

A study into pharmacy students’ perceived preparedness for pre-registration pharmacist training

Savickas V, Dehghan S, Conway A. University of Brighton

Introduction
A common route to registering as a pharmacist in Great Britain is a four-year Master of Pharmacy (MPharm) degree followed by 52-week-long pre-registration training (PT), however graduates may not be sufficiently prepared for the latter.

Objectives
This study aims to explore the perceived preparedness of final-year MPharm students at University of Brighton (UoB) to undertake their PT considering the academic knowledge, professionalism and clinical skills. It does reflect a project in 2016-2017

Method
Ethical approval was received from the UoB Centre for Learning and Teaching. Fifteen out of 146 final-year students responded to email invitations and completed pre-interview demographic questionnaires. Four 1-hour-long focus groups with 3-4 students each were facilitated by teacher practitioner at acute NHS Trust. Audio files were transcribed, coded and analysed using the framework approach identifying key themes and recommendations.

Results
Overall, students were satisfied with their knowledge of “science behind medications”, but would struggle to “put it into context” due to the lack of “clinical teaching.” They were confident about professionalism, yet were “worried about actually making a decision that could impact somebody” or interacting with others requesting more community pharmacy-related experience. Students felt that special clinical topic modules should be made compulsory whereas the final-year project created a “massive gap” prior to PT. The area of practice chosen for PT did not influence participants’ responses.

Discussion/Conclusion
The findings of this study compare to existing literature where the lack of “hands-on” experience and practical skills’ development are often emphasised as the key flaws of the undergraduate pharmacy courses. The themes identified by this study urge the MPharm course development team to consider including more community pharmacy-based experience, and reviewing the contents of 3rd and 4th years to ensure that students feel better prepared to step into PT. These recommendations may guide larger-scale investigations with students from the new UoB MPharm degree.

References