Friday PM Contents

Poster 1: lbumin Use Evaluation in Adult Patients in Medical, Surgical wards, and Intensive care units in Al Wakra Hospital

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Background and Introduction

- Crystalloids (lactated Ringer's and sodium chloride solutions) have been shown to be equally effective when compared with ALBUMIN for many indications.
- Human ALBUMIN (HA) is the most expensive non-blood plasma substitute, and It's widely used for volume replacement and used in many centers to correct hypoalbuminaemia.
- The benefits of ALBUMIN in the clinical setting are controversial (1,2),
- Cochrane reviews published in 1998 and updated in 2011 give no evidence that ALBUMIN reduces mortality when compared to cheaper alternatives such as saline (3,4).
- SAFE study showed no significant beneficial effect at 28 days of ALBUMIN with respect to either morbidity and mortality or days spent in ICU (5,6).
- However, 6S trial, and VISEP trial found a trend toward increased 90-day mortality among patients who received non-protein colloids (7,8)
- These studies, and the sepsis guidelines changes may also stand behind the in the increased use of ALBUMIN There is no clear protocol or guidelines that can restrict the albumin use to indications for which it is efficacious.
- in Al Wakra hospital, the of ALBUMIN 20% has been dispensed to 114 patients over 6 months (June 2015 till December 2015) with a total cost about 320.000 Qatari riyals.
- The most of ALBUMIN dispensed was in medical, surgical wards, and intensive care units to about 76 patients with a total cost about 221.000 Qatari riyals**.**

Aims and Objectives

We hypothesized that **ALBUMIN** is over-utilized in AWH and efforts are required to establish appropriate and efficient use of it.
For that we will evaluate the use of **ALBUMIN** in the adult patients in medical, surgical wards, and intensive care units at Al Wakra hospital concerning:

- Primary reason for prescribing albumin
- Details of albumin use
- Duration of therapy

Method

Study Design

Retrospective cross-sectional study, covering first 3 months of 2016 in AlWakra's Hospital-Qatar

Participants

All patients received ALBUMIN in medical, surgical wards, and intensive care units between 01/01/2016 till 31/03/2016.

Data Collection

A standardized data collection sheet was developed utilizing literature review, and elements of conducting Albumin studies
The tool was piloted on 10 random files

Outcomes Measures

The primary outcome measures were to assess the appropriateness of Albumin use by comparing the documented main reasons for the albumin use with the identified MUE-criteria for justification of Albumin use. (9,10)

Contraindications to crystalloids like fluid restriction, and electrolyte disorders were also used as other indications to determine the appropriateness of albumin therapy.
Data Analysis:
Data will be extracted from Cerner (electronic data base), and data for patients who had multiple admissions during the data collection period for the same indication were reported only once. Appropriate statistical tool will be used for the analysis using SPSS 20.0

Results and Discussion

- Data were collected from a total of 35 patients; 20 (57%) were male and 15 (43%) were female.
- The majority of **ALBUMIN** use was in medical, and surgical wards (72%) compared to (28 %) in intensive care units.
- The most frequent indication for albumin use was hypoalbuminemia with serum albumin of <2g/dl, comprising (27.0 %), followed by volume resuscitation for hypovolemia with fluid restriction, and cirrhosis and paracentesis, HRS, SBP with the same percentage (21%).
- Sepsis and septic shock indication accounting for (14%). Other conditions like thermal injury, serum albumin (2-2.5 g/dl), hypotension unresponsive to crystalloid) accounting for 14% (n = 4). Only one patient received albumin for nephrotic syndrome indication.
- The appropriate use of albumin occurred in the management of most patients (83 %) especially in patients diagnosed by hypoalbuminemia with serum albumin of <2g/dl, and sepsis and septic shock cases. The overall rate of inappropriate use among all units reviewed was approximately (17.0 %).
- Despite the existence of albumin usage guidelines and consensus statements, their impact on the appropriate clinical use of albumin remains negligible. Our data from AlWakra hospital revealed that the overall use of Albumin was appropriate regarding the identified indications.
- Crystalloids (lactated Ringer's and sodium chloride solutions) have been shown to be equally effective when compared with albumin for many indications, and for these indications in crystalloids should be used as first-line therapy, however, data showed that most of patient didn't receive crystalloids (51.4 %).

Conclusion

- Albumin was generally appropriately prescribed for 82 % of adult patients in medical, surgical wards, and intensive care units in AlWakra hospital.
- Formulating a hospital guideline or identified specific criteria for albumin use should consider individual patients' clinical criteria and the costs associated with the potential alternatives

References

1. Bisonni RS, Holtgrave DR, Lawler F et al. Colloids versus crystalloids in fluid resuscitation: an analysis of randomized controlled trials. J Fam Pract. 1991; 32:387-90.
2. Use of Albumin, British Journal of Anaesthesia 104 (3): 276–84 (2010))
3. Cochrane Injuries Group Albumin R. Human albumin administration in critically ill patients: systematic review of randomised controlled trials. BMJ. 1998;317(7153):235-40.

Poster 2: Utilising a novel electronic prescribing system (Epic) to minimise biologics waste on infusion unit by the Biologics Pharmacy Team

Denise Rosembert, Lead Pharmacist- Biologics and Epic application analyst & Maria Roe, Biologics Pharmacy technician Cambridge University Hospitals NHS Foundation Trust

Background and Introduction

In April 2015, biologics to the value of £100,000 were left in the infusion unit fridge, resulting in a proportion of the biologics unable to be used due to an escalation in temperature. Since then, the application of the fridge returns process has allowed the biologics pharmacy team to capture the quantity and value of biologics which remain in the fridge on a monthly basis. A workflow was designed by the Lead Pharmacist - Biologics to change the process of dispensing and verification.

Aims and Objectives

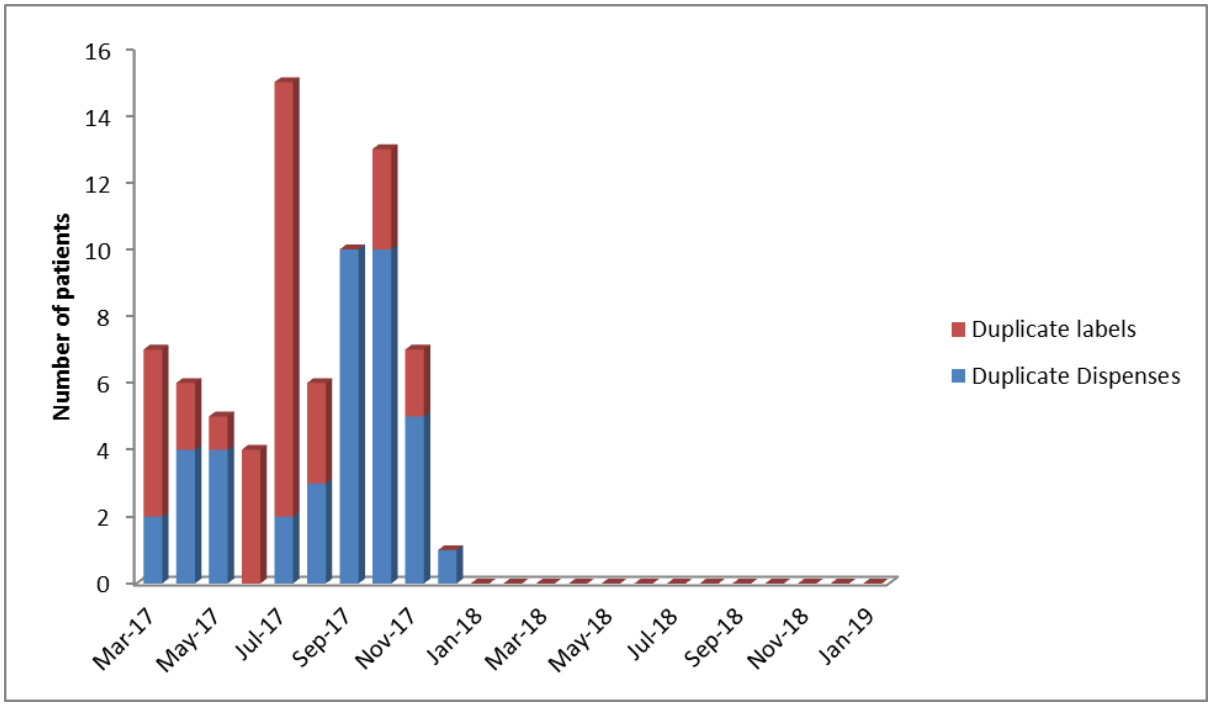
1. Reduce the number of duplicate labels and duplicate medication dispensed to the infusion unit
2. Reduce the number of returns to inpatient pharmacy to the infusion unit

Method

- The satellite dispensary on infusion unit to dispense selected biologics started November 2017.
- The bespoke dispense codes to drive the correct number of labels to be printed per patient was launched in January 2018.
- New processes were communicated via a pharmacy memo and educational training sessions.

Results

Graph 1: The number of patient dispenses where labels and dispenses are duplicated and sent to the infusion unit



Discussion and Conclusion

Clear communication to the teams within the pharmacy department has resulted in the successful introduction of the workflow changes. The decision to move Infliximab, abatacept & vedolizumab to be dispensed on the ward satellite dispensary reduced the number of duplicate labels and dispenses by 46% compared to October 2017, and 86% compared to December 2017. The update to the label build in Epic resulted in the cessation of duplicate labels and dispenses.

This change has had a direct effect on releasing nurse's time to care, reduction in phone calls to inpatient pharmacy to chase the supply of medicines, and is overall a more efficient method of supplying high cost drugs to the infusion unit in advance of a patients scheduled appointment. This change has been applied to the other infusion unit area(s).

References

1. 2017, Rosembert D, Advanced supply of high cost drugs to the infusion unit via a therapy plan, Pharmacy departmental policy

Poster 3: Electronic Prescribing – A Pre- and Post-Implementation Audit of Compliance with Prescription Standards

Christopher McCorquodale, Royal Papworth Hospital NHS Foundation Trust; Claire Dalling, Royal Papworth Hospital NHS Foundation Trust; Nicola Parr, Cambridge University Hospitals NHS Foundation Trust

Background and Introduction

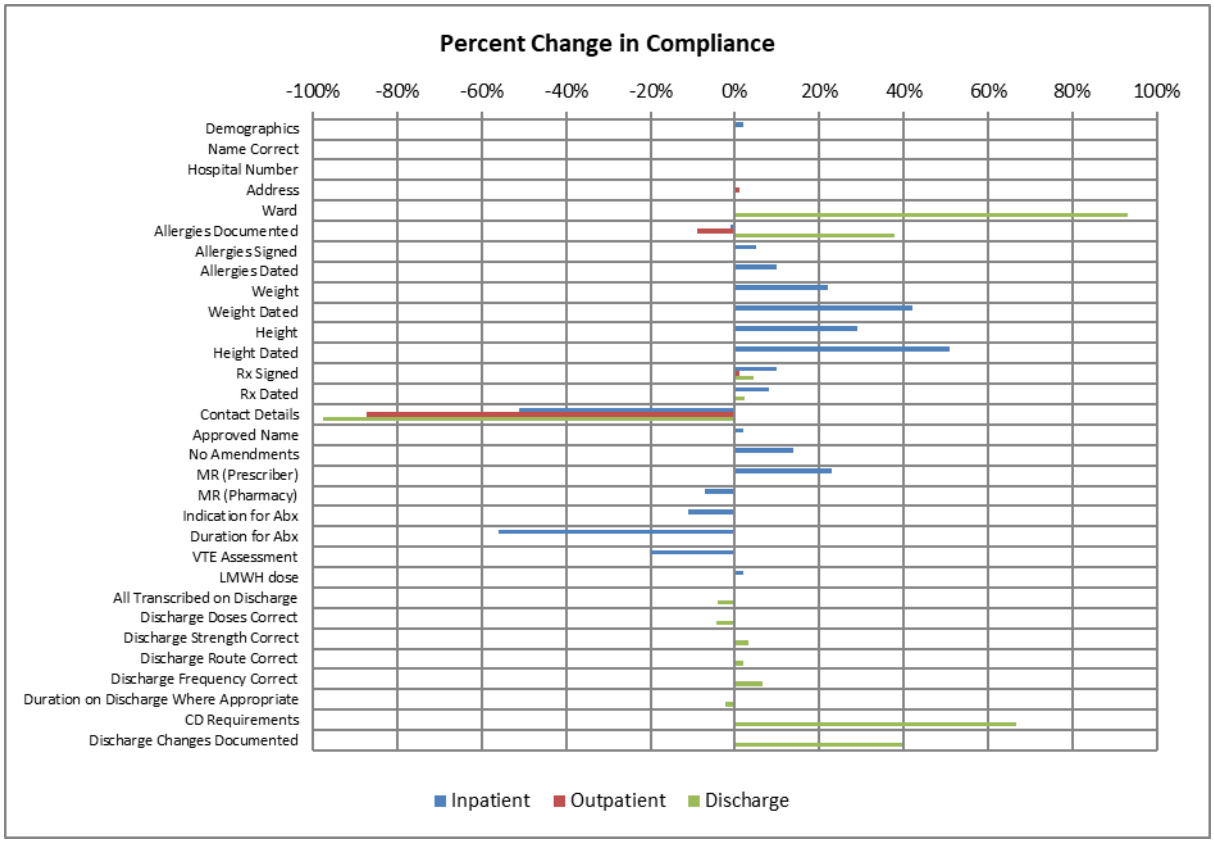
Royal Papworth Hospital implemented Electronic Prescribing and Medicines Administration (EPMA) in all areas except ITU in June 2017, using the EPMA modules of the Lorenzo electronic patient record (DXC Technologies). EPMA systems have been advocated as a mechanism to improve patient safety and reduce medication errors. One of the mechanisms by which electronic prescribing can promote safe prescribing is in supporting the production of unambiguous prescriptions for dispensing, administration and transfer of care.

Aims and Objectives

The aim of this project was to investigate changes in compliance with prescription writing standards following the implementation of an EPMA system. The objectives were to identify and assess prescriptions against specified standards before and after the implementation. The project was approved by the institution's audit department. Ethics approval was not required.

Results

There was improved compliance in nine of the thirteen discharge standards and thirteen of the nineteen inpatient standards. Of the six outpatient standards, two showed no change, two showed improvement and two demonstrated worsening of compliance.



Discussion and Conclusion

The implementation of EPMA improved compliance with some standards, but there were also examples of standards where compliance fell. Improvements were greatest where the system mandated compliance or enhanced a workflow to aid compliance with the standard. This was particularly relevant where the requirement is complex or time consuming, such as documenting

medication changes on discharge, or ensuring that prescriptions meet requirements for controlled drugs.

Review of the standards where compliance fell led to the identification of areas where the EPMA workflow was not optimal for the creation of prescriptions which met the prescribing standards. This included complexities in the processes for documenting allergies, medicines reconciliation by pharmacy staff, antimicrobial prescribing and recording contact details. A range of approaches are required to address this, including training, feedback to the software supplier, and local software configuration changes

Poster 4: Patient satisfaction with a pilot sore throat test and treat point of care service provided in community pharmacies in Wales

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Background and Introduction
The first NHS funded Sore Throat "Test and Treat" (STTT) has been piloted 57 pharmacies in two Health Boards (HBs) in Wales since November 2018. Patients ≥6 years old with acute sore throat self-presenting to a participating pharmacy are stratified on their likelihood of having Group A streptococcal infection using clinical scoring. For FeverPAIN>3 or CENTOR>2 an immediate Point of Care Test (POCT) is offered. Pharmacists can supply antibiotics to patients with positive POCT result.

Aims and Objectives
To explore patient satisfaction with the STTT service in Wales.

Method
Surveys including a mix of closed and open questions were distributed at the conclusion of each STTT consultation. Patients complete the survey online or in the premises and send via a pre-paid envelope, in English or Welsh. The project was registered with the Research and Development departments in both HBs.

Results
62 completed surveys (response rate: 13%) were received by 21st January 2019. 61 patients agreed/strongly agreed that they were satisfied with the service and that the pharmacist explained the aims of the STTT service well. Mean satisfaction (scale 1-5) with how the pharmacist checked whether a swab was needed was 4.82 (SD=0.42). If swab was taken (n=54), all patients were satisfied with how this was conducted. Of these,18 patients were supplied with an antibiotic and 28 were not (no data available for the remaining 8). If no swab needed (n=8), all patients stated that they were reassured about their condition. 61 patients felt more confident managing their sore throat post-consultation, and 60 stated they would return to the pharmacy instead of trying to see a GP next time they have a sore throat.

Discussion and Conclusion
The majority of patients were satisfied with the service itself and the way it was delivered by the pharmacist. Initial results imply that satisfaction does not depends on the resulting supply or not of antibiotics; more data is needed to provide a statistically significant result.

Poster 5: Prevention and Management Strategies of Glucocorticoid-Induced Osteoporosis in Systemic Lupus Erythematous patients

NG, YC, MPharm, MRPharmS, King's College Hospital, London, UK

Introduction:

Glucocorticoids, prednisolone in particular, plays an essential role in treating system lupus erythematous (SLE). However, long-term use of glucocorticoids is associated with significant loss of bone mass and increased risks in bone fractures.[1]

In the Rheumatology department at King's College Hospital (KCH), there have been incidents where patients were prescribed prednisolone and have sustained fragility fractures with no concurrent bone protection therapy prescribed.

Objectives:

To assess the adherence to national guidance regarding to assessment and management of fracture for patients who were prescribed prednisolone ≥ 7.5mg for ≥ 3 months

Methodology:

SLE patients identified on the electronic patient record system (EPR) at KCH, who were on prednisolone ≥7.5mg for ≥3 months as of December 2018, were included in the audit. All other data required for the audits, such as FRAX score, DXA scan results, blood profiles and drug treatments, were all obtained via EPR.

Results:

The number of SLE patients met the inclusion criteria for this audit was 31. 60% of the patients who were not on bone protection therapy have had bone assessments done within the past two years. 67% of the patients who are on bone protection therapy have had bone assessments done within the past five years. All the bone protection therapies prescribed are appropriate for patients (100%). None of the patients who had bone health assessed was osteoporotic.

Conclusion:

The results indicate the needs to increase the number of patients who are prescribed long-term glucocorticoids to have their fracture risks assessed. However, the team is actively prescribing vitamin D and calcium supplementation as prophylaxis to prevent the development of glucocorticoids-induced osteoporosis leading to no one in the audited cohort being osteoporotic.[2] When a bone protection therapy is prescribed, it is appropriate for the patient and is monitored effectively.

Ethics approval:

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

Reference:

1. Adachi J. Corticosteroid-induced osteoporosis. *The American Journal of Medical Sciences* 1997; **313**(1): 41-9.
2. Harold N Rosen M, Kenneth G Saag M, MSc, Clifford J Rosen M, Jean E Mulder M. Prevention and treatment of glucocorticoid-induced osteoporosis. *Up To Date* Update 2018.

Poster 6: Medical Gas Audit to Survey Understanding of Usage, Storage and Transportation of Medical Gases by Nurses

Hafsah Choudry, supervised by Wendy Pullinger

Background and Introduction
Nurses handle, administer and monitor medical gases, therefore require knowledge and adequate training. National patient safety alerts have highlighted the risks to patients associated with both the incorrect use of air flow meters due to universal tubing being mistakenly connected to air instead of oxygen and also incorrect use of oxygen cylinders. (1). Trusts Medical Gas Group therefore implemented safety measures to prevent this from happening, however following this, an event occurred where a patient in cardiac arrest was inadvertently given air instead of oxygen.(2) This prompted an audit to survey nurses' about their knowledge of medical gases and oxygen cylinders.

Aims and Objectives
To determine nurses understanding regarding usage, storage and transportation of medical gases.

Method
Data was collected using questionnaires. The sample population was student and staff nurses working at the Trust between the 12–16/11/18. 101 responses were collected on the wards and at the outpatient pharmacy staff hatch. Data from the ward was collected under the direct supervision of the auditor who ensured that the entire questionnaire was fully completed.

Results
Three major themes emerged after data analysis: 1. Lack of training and understanding of how to handle, transport and administer oxygen via a cylinder, 2. Lack of understanding of the implemented barriers with regards to air flow meters, 3. Understanding and recognition by nurses of the differences between oxygen and air.

Discussion and Conclusion
Overall awareness and understanding of safety barriers for piped medical gases and use of oxygen cylinders was less than optimal. Inability to differentiate between medical gases may result in the wrong one being administered. Going forward by implementing mandatory training, it would ensure that all nurses have the same level of knowledge and training. Appropriate information dissemination should occur to ensure memorandums are being received and actioned by the relevant staff members in light of high staff turnover.

References
1. News and alerts | NHS Improvement [Internet]. Improvement.nhs.uk. 2019 [cited 7 January 2019]. Available from: https://improvement.nhs.uk/news-alerts/
2. Learning from Never Events | Care Quality Commission [Internet]. Cqc.org.uk. 2019 [cited 7 January 2019]. Available from: https://www.cqc.org.uk/news/stories/learning-never-events

Poster 7: Exploring the impact of pharmacist-led feedback on insulin prescribing in an acute hospital setting

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3 Diabetes and Endocrinology Department, St. Helens and Knowsley Teaching Hospitals NHS Trust, Prescot, UK

Background and Introduction
Insulin prescribing errors are prevalent in hospital settings.[1] Pharmacist-led feedback has been proposed to improve prescribing elsewhere,[2] yet there is no known research exploring the impact on insulin prescribing.

Aims and Objectives
The aim of this research was to explore the impact of pharmacist-led feedback on insulin prescribing in an acute hospital setting.

Method
This was a mixed methods study. Hospital pharmacists completed prospective prescribing audits over a four-week period for doctors on control and intervention wards. Individualised and group feedback on insulin prescribing was then provided to doctors monthly, both verbally and in writing, for three consecutive months by pharmacists trained in the delivery of insulin prescribing feedback. Insulin prescribing was then re-audited over a four-week period. SPSS was used for statistical analysis. Semi-structured interviews were conducted with doctors who had received feedback and volunteered to participate, using COMB (Capability, Opportunity, Motivation, Behaviour) as a theoretical analytical framework.

NHS research approval was obtained (IRAS248203).

Results
Prescribing data was collected on 370 insulin prescriptions. There was a significant reduction in insulin error frequencies in the intervention group (table 1) with an overall improvement of 51.6% between groups.

Table 1: Insulin prescription error frequencies pre- and post-feedback

Group	Number of doctors	**Pre-intervention**		**Post-intervention**		**Mean change (%)**	**Significance**
		Errors/prescriptions	Error rate (%)	Errors/prescriptions	Error rate (%)		
Intervention	12	69/115	60%	14/101	13.8%	-46.2%	χ^2=22.6, p=<0.05
Control	10	80/80	100%	78/74	105.4%	+5.4%	χ^2=0.54, p=0.816
Overall mean change between groups (%)						**-51.6%**	

Twelve doctors were interviewed. Feedback was described as educational and raised awareness of prescribing capability. The opportunity for feedback was valued and considered feasible whilst providing the social opportunity to engage with the pharmacist to consolidate learning. Doctors reported reflective practice with conscious plans to improve their prescribing. Automatic motivators reported included competitiveness with peers and a personal pride.

Doctors agreed that feedback could reduce error occurrence, reporting greater engagement and information seeking behaviour to inform their prescribing.

Discussion and Conclusion
This study demonstrates potential to enhance insulin prescribing outcomes from a novel feedback intervention that is now routine practice in priority ward areas. Although the reported influencing factors are complex and multifactorial, this provides exciting avenues for further research.

References
1. Grant P. Setting up an insulin safety group: a practical approach *Practical Diabetes.* 2012;29:160–62.

2. Lloyd M, Watmough SD, O'Brien SV, Furlong N, Hardy K. Exploring the impact of feedback on prescribing error rates in an acute hospital setting: A pilot study. *International Journal of Clinical Pharmacy*, 2017;

Poster 8: Evaluation of A Pharmacy Technician Led Medicines Optimisation in Care Homes (MOCH) service as Part of Enhanced Health in Care Homes (EHCH)

Mckay R, Sorial N, O'Kane C, Evans A, Philpot I, Avey W, Davies G, Pietzsch W, Brooks N, Smalley T, Mason E, Ho K. High Weald Lewes Havens Clinical Commissioning Group (HWLH), part of the Central Sussex and East Surrey Commissioning Alliance.

Background and Introduction
The Care Homes Use of Medicines study demonstrated that care home residents are at particular risk from medication related harm with an estimated 70% of residents experiencing at least one medication error.[1] MOCH has been shown to improve patient safety and reduce the risk of medication related harm. Medicines Optimisation Pharmacy Technicians (MOPTs) are ideally qualified to undertake efficient management of medicines within care homes to maximise the outcomes residents receive from their medicines. The following report assesses the impact of setting up a MOPT led MOCH service.

Aims and Objectives
1. To introduce a MOPT led medication review service into nursing homes within HWLH.
2. To improve patient safety in nursing homes by reducing inappropriate polypharmacy.

Method

The MOPT initially undertook medication reconciliation on all nursing home residents. Following agreed referral criteria, patients who required a clinical review were referred to the medicine optimisation pharmacists. The recommendations from these reviews were discussed at multi-disciplinary team meetings and with patients and carers. Agreed actions were documented in the general practitioners' (GPs) records and implemented. Additionally, the MOPT provided support to nursing homes with medicines ordering, staff education and medicine waste management. This study did not require ethics approval.

Results
Between April 2018 to Feb 2019, 451 residents across 17 nursing homes were reviewed with a total of 3,874 interventions recorded (*figure 1*).

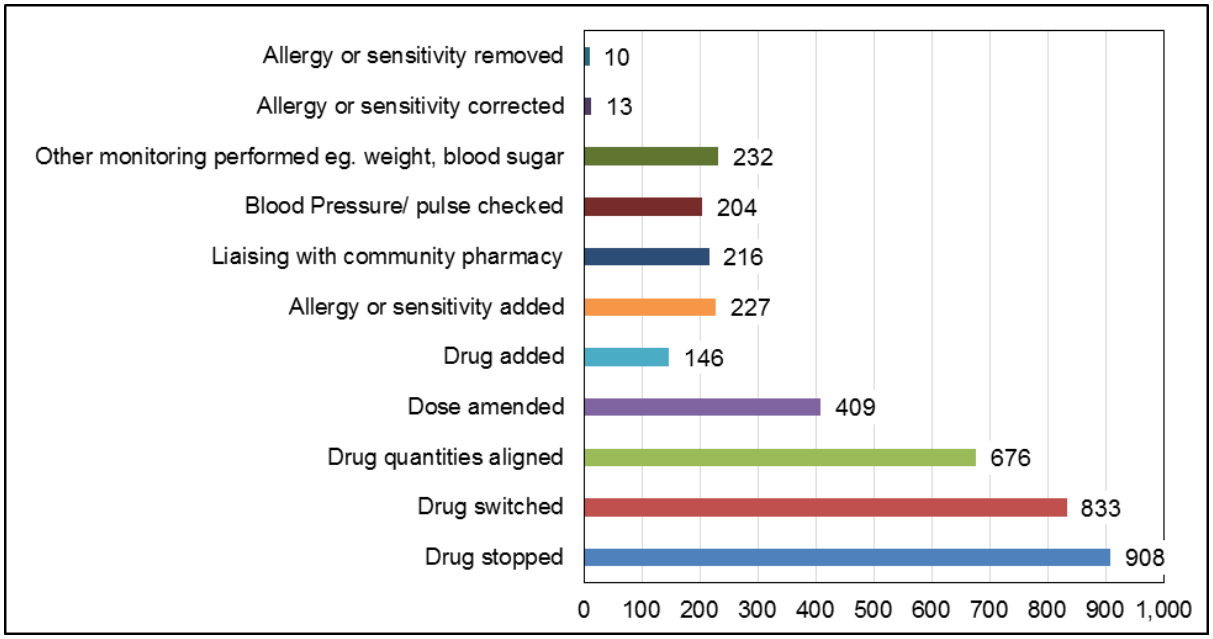

Figure 1. Breakdown of interventions recorded.

Discussion and Conclusion

Overall, the MOCH service reviewed and stopped 908 inappropriately prescribed medicines. A MOPT led MOCH service improved medicines management in nursing homes by working in partnership with GPs, pharmacists and nursing staff to reduce problematic polypharmacy. The presence of MOPT enabled the focus on medicines management processes, which realised other benefits, notably a reduction in queries to GP practices and supporting nursing homes to improve their medication ordering and wastage procedures.

References

1. Barber N D, Alldred D P, Raynor D K, Dickinson R, Garfield S, Jesson B, Lim R, Savage I, Standage C, Buckle P, Carpenter J, Franklin B, Woloshynowych M and Zermansky AG. *Care homes' use of medicines study: prevalence, causes and potential harm of medication errors in care homes for older people*. Quality & Safety in Health Care 2009; 18 (5): pp 341-346.

Poster 9: Investigation into the impact of patient beliefs about NOACs (Non-vitamin K Oral Anticoagulants), and educational counselling, on medication adherence

Matthew Galway (Cardiology Clinical Pharmacist), Michael Jackson (Lead Pharmacist for Cardiology and Cardiothoracic Service), Dr Yuenli Ong (Associate Specialist in Cardiology)- Belfast Health and Social Care Trust (BHSCT)

Background and Introduction

Non-vitamin K oral anticoagulant (NOAC) adherence rates are not extensively researched in literature. There is concern that lack of INR monitoring, and regular follow-up, may mask poor compliance[1]. Various factors, including educational counselling and medication beliefs, are known to affect medication adherence in general. However, little research has been carried out with NOAC medication adherence.

Aims and Objectives

To collect information on patient beliefs about their prescribed NOAC medication, and educational counselling received, in order to evaluate the impact each has on medication adherence. This

information could then be used to generate evidence-based recommendations for NOAC management improvements within BHSCT.

Method
Cross-sectional data collection research study, using a self-reported handwritten questionnaire consisting of validated research tools (Beliefs About Medicines Questionnaire[2]; Medicines Adherence Rating Scale[3]) and demographic questions. A total of 54 participants were recruited from BHSCT Royal Victoria Hospital adult inpatient wards, and Direct Current Cardioversion Outpatient Clinics. No ethical approval was required.

Results
A higher proportion of participants in the low-adherent group, had strong medication harm beliefs (p=0.0039). In addition, NOAC-specific concern scores for low-adherence patients were significantly higher than those in the high-adherence group (p=0.044). No other statistically significant links were discovered. Other relevant self-reported findings included: 9% were non-adherent with their treatment in the preceding 4-weeks; 26% were unaware of planned treatment duration; 7.5% did not receive any educational counselling on NOAC initiation. Only 57% of patients carried their NOAC alert card at all times.

Discussion and Conclusion
This research recommends the creation of a BHSCT NOAC counselling and review policy, which should address negative patient medication-beliefs- specifically general medication harm and NOAC-specific concerns. Some data trends did suggest potential links with other belief constructs and educational counselling, to NOAC adherence. Therefore, it is recommended that further work is carried out on a larger scale, to investigate these trends with greater statistical power.

References
1. RODRIGUEZ, R.A., CARRIER, M., WELLS, P.S., (2013) Non-adherence to new oral anticoagulants: a reason for concern during long-term anticoagulation? Journal of Thrombosis and Haemostasis, 11(2), pp. 390-394.
2. HORNE, R., WEINMAN, J., HANKINS, M., (1999) The beliefs about medicines questionnaire: The development and evaluation of a new method for assessing the cognitive representation of medication, Psychology and Health, 14(1), pp. 1-24.
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Poster 10: The Impact of an Independent Prescriber on Clinical Accuracy of Drug Charts

Zainab Jadawji

Background and Introduction
The concept of Pharmacist Independent Prescribers (PIPs) was introduced in the year 2000 (Department of Health, 2000). The potential impact that they could have on the time and even the financial strain presenting to the NHS could be game-changing.

Aims and Objectives
The aim of this audit was to assess the impact that a PIP had on the clinical accuracy of drug charts by comparing them to a ward which did not have a PIP.

Method
A total of 20 drug charts and 212 prescriptions were assessed for clinical accuracy across two surgical wards, one with a PIP present, and one without. Drug charts were assessed to note whether allergies had been recorded, oxygen had been prescribed, the Venous Thromboembolism (VTE) risk

assessment had been completed and VTE prophylaxis was prescribed. Prescriptions were also assessed to check if the drug duration, indication, route, formulation, frequency and dose were correct.

Results

	Number of Charts Complying to Trust Guidelines (%)	
Aspect of Chart/Prescription Analysed	Ward without PIP	Ward with PIP
Allergies Documented	100	100
VTE Form Completed	80	90
VTE Prescribed	100	100
Oxygen Prescribed	10	40
Correct Drug Duration	50	83
Correct Drug Indication	98	100
Correct Drug Route	100	100
Correct Drug Formulation	100	100
Correct Drug Frequency	98	100
Correct Drug Dose	95	100

Discussion and Conclusion

The positive impact of a PIP is clearly seen in terms of VTE form completion and oxygen prescribing. On both wards, allergies were documented, VTE prescribed and prescriptions for each drug had the correct route and formulation 100% of the time. In addition, the ward with the PIP had a slightly greater number of drug prescriptions which were clinically accurate and prescribed at the correct dose.

Even though oxygen prescribing was better on the ward with a PIP, it was still very low on both wards and this requires improvement to ensure it is readily available in emergencies. In addition the number of drugs prescribed for the correct duration (which mainly applies to antibiotics) was quite low. This is especially important as we have a role as antimicrobial stewards.

All these issues may be addressed by having more training available for doctors and recruiting more PIPs to ease the pressure which the doctors may face.

References

1. Department of Health (2000). *Pharmacy In The Future- Implementing the NHS Plan*. [online] Webarchive.nationalarchives.gov.uk. Available at: https://webarchive.nationalarchives.gov.uk/20121013030701/http:/www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4068204.pdf [Accessed 28 Feb. 2019].

Poster 11: The accuracy, legality and legibility of inpatient prescriptions in the Emergency Department

Author: *Najia Ahmad* ***Supervisor:*** *Melissa Paneandee*
Organisation: *St George's University Hospitals NHS foundation trust*

Background and Introduction

It is important for a prescription to be legible to enable the prescription to be interpreted accurately and safely. Medication errors can happen by writing an illegible prescription which can cause the incorrect medication and strength to be administered, and to even the wrong patient.

Aims and Objectives

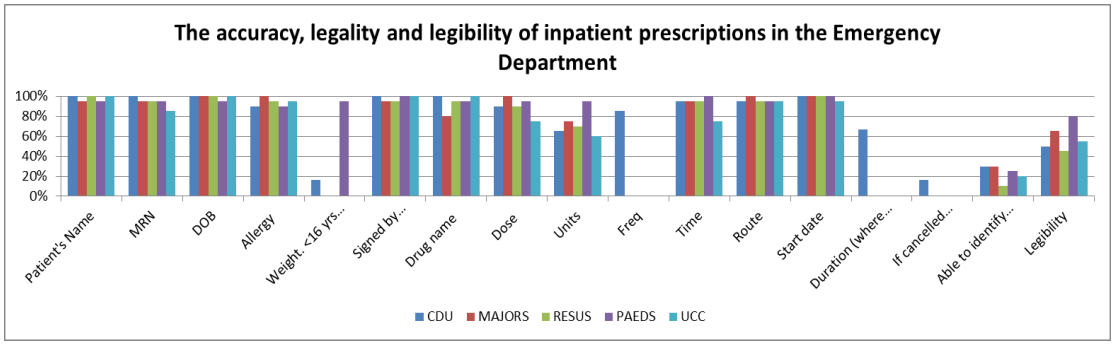
To determine if each inpatient prescription audited met the following elements:

- Prescription requirements including patient's name, MRN, date of birth, allergy status, weight (in children under 16 years or an adult prescribed any weight specific drugs), and prescribers signature in indelible ink.
- Medications are documented legibly with the drug name, dose units, frequency, time, and route of administration, start date and duration (if applicable).
- Any cancelled medications are signed and dated appropriately. [1]

Method

During the week of 03/12/2018 to 07/12/2018 data (as stated in the aims) was collected in ED from 9.15am to 5.35pm. 20 patients each from the 5 departments of ED; Clinical Decision Unit (CDU) Urgent Critical Care (UCC), Paediatric assessment unit, Majors and Resuscitation were collected.

Results



Graph 1 Inpatient prescription accuracy of CDU, Majors, Resuscitation, paediatrics and UCC

Discussion

The standard for prescription requirements was found to be 85%. Only 17% of weight was documented in CDU, 0% for majors and resuscitation, and 95% for paediatrics. The standard for legibility was found to be 87% with resuscitation (45%) having the lowest standard for legibility and paediatrics (80%) having the highest standard for legibility.

Conclusion

Legality had a standard of 85%, legibility 87%, signing and dating cancelled medication 6% and identifiable prescribers at 23%.

Recommendations included documentation of weight for weight based drugs, microgram and units to be written instead of abbreviations , units and strength to be written for co-dydramol, and including day of the week for weekly medications.

References

St George's Hospital (June 2016). Medicines management policy 7.0, Section 6.3 Safe Prescribing of Medicines; p33-36. [

Poster 12: An evaluation of the views of doctors and nurses on the delivery of a pharmacist-led Safe Insulin tiPS (SIPS) programme in an acute hospital.

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2 Pharmacy Department, St. Helens and Knowsley Teaching Hospitals NHS Trust, Prescot, UK
3 Diabetes and Endocrinology Department, St. Helens and Knowsley Teaching Hospitals NHS Trust, Prescot, UK

Background and Introduction
Insulin is a high risk medication with errors prevalent in hospital settings[1], with healthcare staff reporting a lack of knowledge and understanding of insulin[2]. Educational outreach can enhance knowledge[3] with potential to support the learning needs of staff in their clinical environment on safe insulin use.

Aims and Objectives

To evaluate the views of doctors and nurses on the use of a pharmacist-led safe insulin tips (SIPS) educational intervention.

Method
Twelve SIPS were developed by a multi-professional collaboration including patient and staff stake-holders, covering specific topics such as insulin prescribing, hypoglycaemia management, insulin dose adjustment, prescribing for surgery and common errors. These were e-mailed out weekly over 12 weeks to staff on selected hospital wards. Pharmacists also facilitated each tip verbally to consolidate learning, with SIPS designed to take under five minutes to deliver.

Surveys were distributed to participants to evaluate their views of the SIPS programme. Questions combined 5-point Likert-scale and open-ended statements. Agreement scores were calculated for statements on perceived usefulness, format, content, feasibility and potential benefits of the service. Ethical approval was not required as this was a service evaluation.

Results
203 individuals (103 nurses, 100 doctors) received the SIPS. Fifty-one staff members (25 doctors, 26 nurses) completed the survey (25% response rate) with sample responses presented in table 1. In general, staff agreed that the SIPS were useful, informed practice, were feasible, should continue and be developed for other medication groups with pharmacist delivery considered valuable.

Table 1: Example participant responses

Statement	Mean response	Corresponding response
I have found the SIPS to be useful	mean 4.6±0.6	Strongly agree
I believe that the SIPS have increased my awareness of insulin prescribing errors	mean 4.6±0.6	Strongly Agree
I believe that safe medication tips should be developed for other medications	mean 4.7±0.6	Strongly agree
Example nurse qualitative statement	"*Excellent idea. Perfectly bite size and supports our learning in practice. Should be developed for other drugs too*." (Nurse B)	
Example doctor qualitative statement	"*The tips are really good. There was one on a GKI [Glucose potassium Insulin infusion] recently and I've used that. I've used*	

	them on-call too when I access them on my phone." (Doctor 4)

Discussion and Conclusion

A programme of pharmacist-led SIPS is valued and considered feasible by staff to support learning in busy clinical environments. SIPS have potential to develop a community of practice through regular weekly learning. This work is scalable and transferrable with tips being developed for other areas of practice including antibiotics and anticoagulants, although further work is required to explore any potential impact on practice.

References

1. Grant P. Setting up an insulin safety group: a practical approach. *Practical Diabetes.* 2012;29:160–62.
2. Kelly NAA, Brandom KG, Mattick KL Improving preparedness of medical students and junior doctors to manage patients with diabetes. *BMJ Open Diabetes Research and Care* 2015;3:e000116
3. O'Brien MA, Rogers S, Jamtvedt G, *et al.* eductaionla outreach visits: effects on professional practice and healthcare outcomes.

Poster 13: Implementation of a pharmacist-led multi-professional simulation based training to support healthcare staff in the management of hypoglycaemia and diabetic ketoacidosis

Lloyd M[1,2] Rowson M[1], Michaels S[3], Cardwell J[3], Wilkinson A[2], Furlong N[3]
1 Clinical Education Department, St. Helens and Knowsley Teaching Hospitals NHS Trust, Prescot, UK
2 Pharmacy Department, St. Helens and Knowsley Teaching Hospitals NHS Trust, Prescot, UK
3 Diabetes and Endocrinology Department, St. Helens and Knowsley Teaching Hospitals NHS Trust, Prescot, UK

Background and Introduction

Hypoglycaemia and diabetic ketoacidosis (DKA) are diabetic emergencies with prompt recognition and management essential for patient safety.[1]

However, healthcare staff typically report low confidence and knowledge in managing these emergencies.[1] Simulation based training (SBT) is an educational tool that has been shown to enhance knowledge, confidence and preparedness of participants [2,3] with potential for application to diabetes emergencies.

Aims and Objectives

To evaluate the use of a pharmacist-led simulation training programme on staff knowledge and confidence in the management of hypoglycaemia and DKA.

Method

A pharmacist-led multi-professional, high-fidelity live-actor simulation event was designed in collaboration with specialist nurses, diabetologists, educationalists and pharmacists in 2018. The course was advertised and healthcare staff (doctors, nurses, healthcare assistants) invited to participate.

Effectiveness on knowledge of hypoglycaemia and DKA was measured using ten pre- and post-test multiple choice questions. Surveys were used to determine change in perceived confidence of staff in managing these conditions and evaluation of the SBT event.

Results were analysed using SPSS. Ethical approval was not required as this was a service evaluation.

Results
Forty-five participants have attended the course. Baseline mean knowledge scores were 4.8±2.0 increasing to 7.8±1.5 post-test, a mean increase of 3.0 (CI 2.4 to 3.6) t(44)= -10.1133, p<0.0001.

Confidence scores significantly (p<0.05) increased following the SBT for recognition and management of both hypoglycaemia and DKA for all staff groups. Participants agreed that SBT was a valuable learning experience, will improve the care of their patients, and that they would recommend the course to colleagues.

Discussion and Conclusion
Multi-professional SBT can enhance the knowledge and confidence of healthcare staff on the management of hypoglycaemia and DKA. The course is now catalogued on the ESR portal with over 100 participants registered throughout 2019. Future studies are required to determine potential impact of the SBT on the management of these diabetic emergencies in clinical practice.

References
1. Kelly NAA, Brandom KG, Mattick KL Improving preparedness of medical students and junior doctors to manage patients with diabetes. *BMJ Open Diabetes Research and Care* 2015;3:e000116
2. Lloyd M, Watmough SD, Bennett N. Simulation based training and its application in clinical pharmacy. *Clinical Pharmacist* 2018;9(10)3-10.
3. Sarfati L, Ranchon F, Vantard N, *et al.* Human-simulation-based learning to prevent medication error: A systematic review. *J*

Poster 14: Ward based dispensing on an acute medical admission unit at the Princess Royal University Hospital

Roisin Ball, Hank Chang-Tse Du

Background and Introduction
Ward Based Dispensing (WBD) has been suggested as a possible approach to optimise patient flow, particularly in high flow admission/discharge areas, by reducing the processing time for discharge medication (TTAs).[1] The Acute Medical Unit (AMU) at the Princess Royal University Hospital consists of 56-beds and discharges on average 15 patients per day. A WBD service was piloted and its' impact on discharge medication processing time examined.

Aims and Objectives
The aim was to pilot WBD on AMU and its' objectives were to quantify and compare the medication processing time associated with WBD and main hospital pharmacy dispensing.

Method
Thirty most commonly dispensed medications for discharge over the preceding six-month period of the pilot were identified and included on the WBD stock list. The ward pharmacists and/or technicians dispensed any TTAs with ≤5 items and containing only medication listed on the WBD stocklist. All other TTAs were dispensed by the main hospital pharmacy as per normal practice. The time a TTA was clinically screened by a pharmacist to the time the medication arrived on the ward was recorded over two weeks (weekdays, 8.45-17.15). Other data recorded included patient identifiable, ward location and number of TTA items.

Results
A total of 93 TTAs and 675 items had been recorded, including 34 TTAs and 186 items which needed dispensed. WBD accounted for 37% (n=34) and 31% (n=57) of TTAs and items dispensed, respectively. Waiting times are summarised below:

	Average processing	Average processing

	time/TTA (minutes)	time/TTA item (minutes)
Main hospital pharmacy	92	34
Ward Based Dispensing	28	17
Processing time reduction (minutes)	64 (69% reduction)	17 (50% reduction)

Discussion and Conclusion

The results indicated a marked reduction in medication processing time with WBD compared to normal practice. The findings are comparable to results reported by similar WBD initiatives in other UK hospitals[1,2]. The absence of a 7-day ward pharmacy service means weekend discharges would not benefit from WBD and could lead to disparity in patient experience. Funding for additional staffing to support WBD is being sought to ensure long-term service sustainability.

References

1. NHS Improvement. Raid Improvement Guide to: Optimising medicines discharge to improve patient flow [Online]. Available at: https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2016/12/rig-optimising-medicines-discharge.pdf [Accessed: 05/03/2019]
2. Chaudry, A. Improving patient care through ward based dispensing [Online]. Available at: https://bit.ly/2VFAbXq [Accessed: 03/03/2019]

Poster 15: An Evaluation of a Clinical Pharmacist Medication Review Service within General Practitioner (GP) Clusters

Eoin Moroney, Kevin Pickavance, David Russell, Stacey Nelson, Marie Neville, Sephora Shaw, Edel Marshall, Neveen Sorial.

Brighton and Hove Clinical Commissioning Group (BHCCG) part of the Central Sussex and East Surrey Commissioning Alliance.

Background and Introduction

Caring for an aging population with complex co-morbidities is the single greatest challenge facing healthcare to date. It is estimated that 11% of unplanned hospital attendances are attributed to medication related harm[1]. The majority of these consist of elderly patients prescribed multiple medications which include high risk therapies[2]. By rationalising inappropriate polypharmacy within primary care, there are significant opportunities for improving patient safety by reducing the risk of medicine related harm.

Aims and Objectives

- To identify patients prescribed complex medication regimens at risk of potential medication related harm.
- To undertake holistic face-to-face medication reviews to improve patient safety via rationalising inappropriate polypharmacy.

Method

A referral criteria was developed in collaboration with local GPs to identify the target patient cohort through referrals from clinical practitioners, voluntary and social care services. Additionally, clinical searches were designed within the GP prescribing systems to identify patients at risk of potentially harmful polypharmacy using a set of safety indicators[1]. Medication reviews were carried out for patients across 39 GP surgeries by clinical pharmacists. Following a medication review the suggested recommendations were discussed with the relevant GP and patient. Agreed actions were documented within the patients' medical records and implemented. This study did not require ethics approval.

Results

From April 2018 to February 2019, 1,764 patients were reviewed with a total of 3,781 interventions reported, a mean of 2.0 interventions per patient.

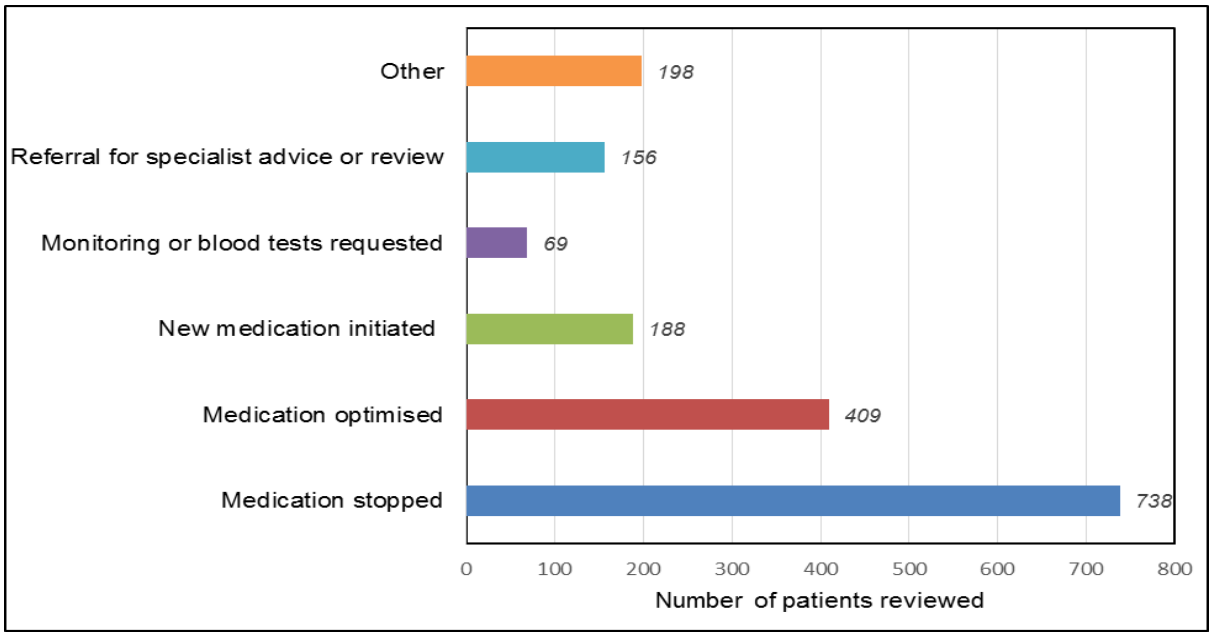


Figure 1: A summary of the clinical contributions reported during data collection period.

Discussion and Conclusion

Of the total patients reviewed, 77% were identified via clinical searches and 21% originated from referrals from GP or other healthcare professionals. High risk drugs (including antiplatelets and amiodarone) accounted for 24% of all medications that were deprescribed. In addition, 10% of all new medications initiated to manage previously unmet health needs were oral anticoagulants. Overall, the study identified patients who were prescribed potentially problematic polypharmacy. Undertaking comprehensive medication reviews in this patient cohort, improved patient safety via deprescribing.

References

1. Scottish Government Polypharmacy Model of Care Group. *Polypharmacy Guidance, Realistic Prescribing 3rd Edition, 2018*. Scottish Government.
2. National Institute for Health and Care Excellence (NICE). *Multimorbidity: clinical assessment and management*. NICE Guideline 56. London: NICE, September 2016. Available from: http://www.nice.org.uk/ng56 [Accessed 24th February 2019].

Poster 16: Minor Illness Training for Community Pharmacists – implementation and early evaluation

Kerry Street, Nicholas Haddington and Andrea Taylor
University of Bath, Bath, UK

Background and Introduction

Digital Minor Illness Referral Service (DMIRS) and General Practice-DMIRS have been developed and piloted across England[1,2] with the aim to reduce pressures on general practice, improve patient access to health professionals and draw on clinical expertise of community pharmacy. Hands-on training to enhance skills, practice and knowledge in minor illness diagnosis and support has been designed and delivered by the University of Bath in three locations across HEE South and London, supported by the Pharmacy Integration Fund.

Aims and Objectives

Aim: To evaluate the experiences of community pharmacists participating in postgraduate minor illness training

Objectives:

- Describe the background, prior experiences and exposure to DMIRS and GPDMIRS of community pharmacists participating in a Minor Illness training programme;
- Identify key minor illness areas currently supported by participants and frequency of interventions;
- Explore motivations, baseline knowledge and learning gain of participants

Method

A repeated measures, self-completion survey was administered to participants of Minor Illness training, delivered by University of Bath, at the mid module study day and on module completion. Ethical review provided by the University of Bath. Basic descriptive statistics of quantitative responses and thematic analysis of qualitative responses was completed.

Results

37 participants completed the first survey (15 Bath; 11 London; 11 South Coast). Demographics of participants, areas of current minor ailments activity, frequency of intervention by condition area, are described. Self-assessment of prior knowledge, previous training and learning gain are presented.

Discussion and Conclusion

Many respondents were motivated to complete training due to recent commissioning of minor illness services, and had completed previous training. All identified scope for further, future development. Key learning at the mid-point of the course included: importance of good history taking, appropriate examinations, motivational interviewing and identification of red-flag signs and symptoms. Further support and training is needed to fulfil the promise of community pharmacy as described in the NHS Long Term Plan (2019)[3].

References

1. NHS England (2019) Digital Minor Illness Referral Service (DMIRS) (https://www.england.nhs.uk/primary-care/pharmacy/digital-minor-illness-referral-service-dmirs/)
2. NHS England (2018) Blog - Why our successful pharmacy minor illness referral scheme pilot is being extended to three new areas (https://www.england.nhs.uk/blog/why-our-successful-pharmacy-minor-illness-referral-scheme-pilot-is-being-extended-to-three-new-areas/)
3. NHS Long Term Plan (www.longtermplan.nhs.uk), January 2019

Poster 17: Prescribing of Selective Decontamination of the Digestive Tract (SDD) on Freeman 37; an integrated general Intensive Care Unit (ICU).

Lyndsey Young. Senior Clinical Pharmacist critical care, Newcastle upon Tyne Hospitals NHS Foundation Trust (NuTH)

Background and Introduction

SDD is administered to patients at high risk of ventilator-associated pneumonia & multi-organ dysfunction. It is designed to eliminate harmful aerobic Gram-negative bacilli and Candida species, whilst sparing endogenous anaerobic organisms.

NuTH has recently updated their regimen of topical, non-absorbed antibiotics used for SDD. The guideline and prescribing ICU SDD medication order set has been updated to reflect this.

Aims and Objectives

The aim of this audit was to investigate the prescribing of SDD on ward 37 to determine if:

- Prescribers were prescribing SDD prior to or on admission to ICU
- The medications are prescribed correctly

- Prescribers have used an order set
- Use of an order set reduces prescribing errors

Method
Drug charts were retrospectively reviewed via the electronic prescribing system to identify patients prescribed SDD during their ICU stay, within a two month period.

Results
17 patients were prescribed SDD during the audit period.

- Ten out of 17 patients had their SDD prescribed on admission to ICU by an ICU prescriber. Three patients had it prescribed prior to ICU; all were liver transplant patients.
- Pharmacists made 13 interventions for seven patients, including adding/ discontinuing medications, changing doses, frequency and duration
- For 15 of 17 patients, the prescriber had used a designated order set:
  - 13 used the ICU SDD Medication order set
  - Two used the ICU Liver Transplant order set
- Two prescribers didn't use any order set. These patients required pharmacist intervention on all aspects of the prescription.

Discussion and Conclusion
The prescription error rate was lowest when the ICU SDD order set was used. This reflected the newest guidelines and the ICU team have been educated in its use. The liver transplant set has since been updated following this audit. The highest error rate is when no order set is used (100%) However it is important that order sets are maintained to reflect current guidance.

References

1. Ramirez P et al. Measures to prevent nosocomial infections during mechanical ventilation. Current Opinion in Critical Care. February 2012. Vol 18: 1: P86-92.
2. Wolfgang A et al. Selective decontamination of the digestive tract. Current Opinion in Critical Care 2002, 8:139–144
3. Oostdijk EAN, de Wit GA, Bakker M, et al. Selective decontamination of the digestive tract and selective oropharyngeal decontamination in intensive care unit patients: a cost-effectiveness analysis. BMJ Open 2013;3:e002529.

Poster 18: Standardisation of Neonatal Parenteral Nutrition (PN) on the Neonatal Intensive Care Unit (NICU), King's College Hospital (KCH) using Standardised, Concentrated, Additional Macronutrient, Parenteral Nutrition (SCAMP).

Sze Yui Poon and Rebecca Elliott; King's College Hospital, Denmark Hill site

Background and Introduction

Many neonates require PN for prematurity and gastro-related complications. Historically, neonates were prescribed bespoke PN formulations which required outsourcing and wasn't available out-of-hours (OOH). In 2018, NHS London Procurement Partnership stipulated London Trusts must implement standardised neonatal PN[1].

Aims and Objectives
SCAMP was implemented at KCH between December 2018 and January 2019 by a multi-disciplinary team. Standardising PN aligns prescribing nationally, reduces expenditure, increases flexibility and accessibility of PN[2].

Method

Guidelines and prescriptions were developed, procurement and commissioning of stock was agreed and communications were distributed to staff. NICU staff were provided with teaching and training. Infants requiring PN were assessed for suitability of SCAMP based on guidelines, clinical condition, gestation and nutritional requirements. Data was collected on indication for PN, use and rationale of SCAMP vs. bespoke and expenditure. Ethics approval was not required.

Results

Over 2 months, 47 neonates required PN; 87% (n=41) were eligible for SCAMP, of which 93% (n=38) were initially prescribed it. On average, 41% and 49% of neonates requiring PN received SCAMP in December 2018 and January 2019, respectively. 30% (n=14) of these commenced SCAMP OOH. £33,358 was saved over 2 months.

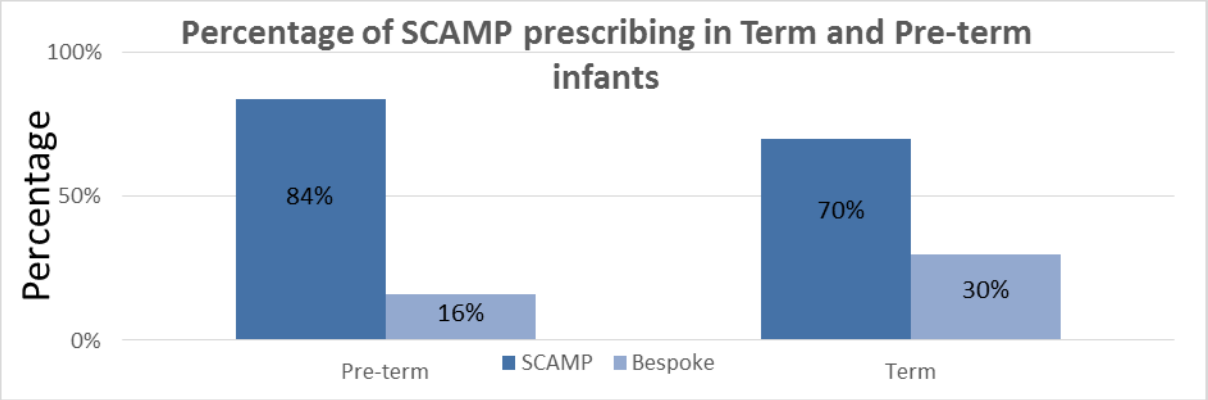


Figure 1 - Percentage of SCAMP vs Bespoke PN prescribing in term and pre-term infants from December 2018-January 2019.

Discussion and Conclusion

SCAMP can be started and modified OOH to meet neonates' requirements. Prescribing errors have reduced and the screening process has improved. SCAMP costs less than bespoke PN and fewer staff are required for releasing PN OOH hence reduced expenditure. Complications such as fluid restriction or multiple electrolyte corrections meant some neonates were switched to bespoke PN. SCAMP is not suitable for term infants because protein and vitamin contents exceed recommendations. The use of SCAMP increased since implementation and this will continue as prescribers become familiar with its use. SCAMP lipid syringes have short expiries therefore review into alternative products is advised. Evaluation across Trusts is needed to assess the impact of SCAMP on clinical and prescribing practice.

References

1. Morgan, C., Radbone, L., Birch, J. (2016). The Neonatal Parenteral Nutrition QIPP Toolkit. *NHS Networks*. Available from https://www.networks.nhs.uk [Date accessed: 12/11/2018].
2. Morgan, C., et al. (2011). SCAMP: Standardised, concentrated, additional macronutrients, parenteral nutrition in very preterm infants: a phase IV randomised, controlled exploratory study of macronutrient intake, growth and other aspects of neonatal care. *BMC Paediatrics,* 11:53. Available from https://bmcpediatr.biomedcentral.com/articles/10.1186/1471-2431-11-53 [Date accessed: 12/11/2018].

Poster 19: Prescribing and administration of intravenous phenytoin in status epilepticus at North Middlesex Hospital – is treatment in line with guidelines?

Shenal Gohil, Department of Pharmacy, North Middlesex University Hospital

Introduction

Status epilepticus (SE) is a life threatening neurological emergency, defined as prolonged seizure activity lasting five or more minutes with failure of termination [1]. According to NICE, phenytoin is recommended as an emergency treatment option in adults presenting with SE, however the need of an initial loading dose has been highlighted as a safety issue. A 2016 National Patient Safety Alert highlighted two fatal incidents following the use of injectable phenytoin relating to inaccurate dosing [[2], [3]].

Aims

To establish if patients prescribed phenytoin have been safely initiated according to Trust guidelines.

Method

Data was collected from 18/02/19 to 10/03/19, using the 'TRACE' function on JAC to identify inpatients on intravenous phenytoin. Dispensing of ward stock of phenytoin was closely followed, and ward pharmacists were informed to look out for phenytoin patients. Data was then analysed in Excel.

Ethics approval was not required for this study.

Results and discussion

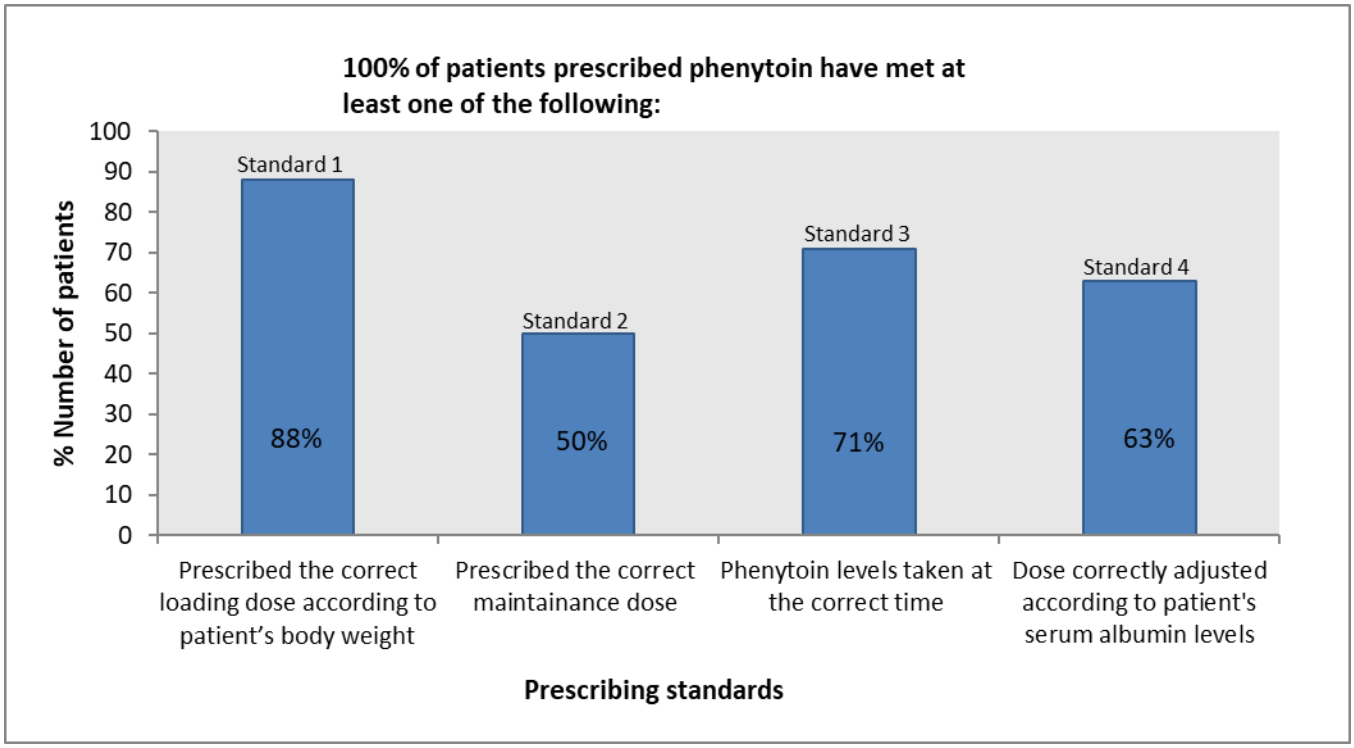


Figure 1: A graph showing the performance of standards in adult inpatients on phenytoin between 18/02/19 to 04/03/19, (n=10).

All patients except one were prescribed the correct loading dose. The one patient that had an incorrect dose prescribed was the result of an acute medicines junior doctor being unaware of the phenytoin guidelines' loading dose, and therefore prescribed a sub-therapeutic dose. Similarly in standard 4, three patients did not have levels corrected to albumin, but those who did were on critical care. Accuracy in treatment initiation can be due to the presence of senior pharmacists on those wards with specialist clinical knowledge compared to junior pharmacists on acute medical wards.

Conclusion

Generally, patients prescribed phenytoin on non-acute wards had accurate dosing and adjustment to serum albumin levels in comparison to acute medical wards.

Recommended action plans:

- EPMA system to have decision prescribing system for phenytoin warnings and recommend dose adjustments.
- Implement training on phenytoin in the induction plan for junior pharmacists.
- Phenytoin guidelines to be provided on the BNF formulary to increase accessibility.

References

[1] - Lesser, R. P., Johnson, E. (2019). *Status Epilepticus.* The British Medical Journal. Retrieved March, 3, 2019, from https://bestpractice.bmj.com/topics/en-gb/464

[2] – NHS Improvement. (2016). Patient Safety Alert: Risk of death and severe harm from error with injectable phenytoin. Retrieved March, 3, from https://improvement.nhs.uk/documents/496/Patient_Safety_Alert_-_Risk_of_error_with_injectable_phenytoin_v2.pdf

[3] – Bhaiji. Y. (2018). Guidelines for prescribing/administration of intravenous phenytoin in adults. North Middlesex University Hospital.

Poster 20: The Pharmacy Quality & Performance Dashboard - Driving Engagement, Improvement and Change

Champa Mohandas, Louise Dark, Roy Ebanks, Lewisham and Greenwich NHS Trust

Background and Introduction

All NHS organisations in England are required to improve the quality of care they deliver[1]. The ambition of the pharmacy department at Lewisham and Greenwich NHS Trust (LGT) is to drive quality improvement in services and patient care through staff engagement and better use of qualitative and quantitative data. As a department we have collaboratively developed a Quality and Performance Dashboard that allows efficient data collection enabling staff to make informed decisions to improve the quality of the services they provide.

Aims and Objectives

To create a dashboard that:

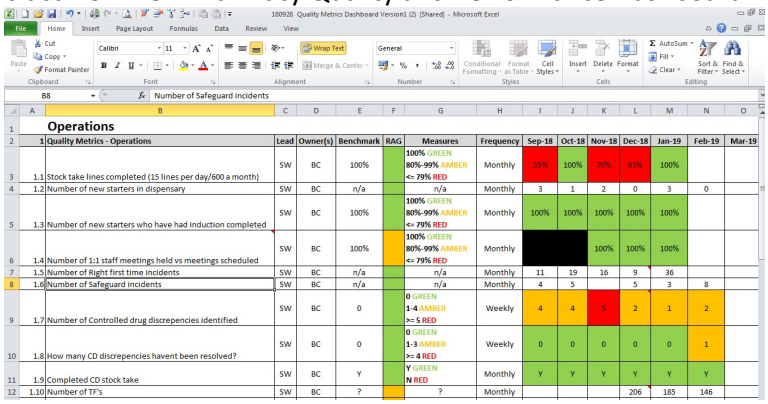
- allows us to use data to understand what good looks like, drive improvement and celebrate good practice
- is simple and smart to use and includes all of the services within the department
- detects trends and prompts earlier risk identification and intervention
- supports broad staff engagement and inclusion

Method

Each service area within pharmacy identified their relevant measures and markers for determining a quality, high performing service. Benchmarks were then added where relevant and the proposed service metrics reviewed by the Pharmacy Governance Committee and Senior Management Team. Monthly Performance, Quality and Review (PQR) Meetings (1 hour) were introduced. This allowed each area to present their data and encouraged a broad range of staff participation.

Results

Extract from LGT Pharmacy Quality and Performance Dashboard: LGT Pharmacy Operations:



Operations

	Quality Metrics - Operations	Lead	Owner(s)	Benchmark	RAG	Measures	Frequency	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
1.1	Stock take lines completed (15 lines per day/600 a month)	SW	BC	100%		100% GREEN 80%-99% AMBER <= 79% RED	Monthly	35%	100%	70%	63%	100%		
1.2	Number of new starters in dispensary	SW	BC	n/a		n/a	Monthly	3	1	2	0	3	0	
1.3	Number of new starters who have had induction completed	SW	BC	100%		100% GREEN 80%-99% AMBER <= 79% RED	Monthly	100%	100%	100%	100%	100%		
1.4	Number of 1:1 staff meetings held vs meetings scheduled	SW	BC	100%		100% GREEN 80%-99% AMBER <= 79% RED	Monthly			100%	100%	100%		
1.5	Number of Right first time incidents	SW	BC	n/a		n/a	Monthly	11	19	16	9	36		
1.6	Number of Safeguard incidents	SW	BC	n/a		n/a	Monthly	4	5		5	3	8	
1.7	Number of Controlled drug discrepencies identified	SW	BC	0		0 GREEN 1-4 AMBER >= 5 RED	Weekly	4	4	5	2	1	2	
1.8	How many CD discrepencies havent been resolved?	SW	BC	0		0 GREEN 1-3 AMBER >= 4 RED	Weekly	0	0	0	0	0	1	
1.9	Completed CD stock take	SW	BC	Y		Y GREEN N RED	Monthly	Y	Y	Y	Y	Y	Y	
1.10	Number of TF's	SW	BC	?		?	Monthly				206	185	146	

Discussion and Conclusion

Early informal staff feedback indicates a positive awareness and full 'buy in' across all staff groups. Visibility of metrics has contributed to improvements in medication safety e.g. closing of open incidents. Data entry has become less time consuming enabling staff to focus on interrogation and analysis. The meetings are well attended and inclusive of all staff, with dial in facilities enabling staff to participate from all sites. Outcome data and formal analysis on how the Quality and Performance dashboard and PQR Meetings have influenced positive change and engagement will be evaluated at 6 and 12 months.

References

1. https://www.kingsfund.org.uk/publications/making-case-quality-improvement

Poster 21: An Audit of the Availability of Emergency Drugs for Resuscitation at Barking, Havering and Redbridge University Hospitals Trust

Rachel Gomes, Pre-registration Pharmacist, Peter Rawcliffe, Resuscitation Officer, Sinead Tynan, Highly Specialist Pharmacist, Anaesthetics and Critical Care.

Background and Introduction

At Barking, Havering and Redbridge Hospitals Trust (BHRUT) every adult ward is equipped with a resuscitation trolley and at least one blue box containing the first line drugs for cardiopulmonary resuscitation. The national resuscitation committee provides guidance on the pharmaceutical contents of resuscitation trolleys, which has influenced the medicines and quantities included on the Trust resuscitation trolley stock list[1, 2]. The trolley is checked on a weekly basis, and following every emergency use, to confirm the stock list requirements are met and all medicines are in date[2].

Aims and Objectives

To ensure the pharmaceutical contents of the adult resuscitation trolleys in ward areas are compliant with Trusts Resuscitation Policy standards[2].

To assess the need for the blue box, due to potential duplication with contents in the resuscitation trolley.

Method

A data collection form was devised and the data collected by ward pharmacists over 2 days in February 2019.

Results

39 adult wards were audited, 38 had adult resuscitation trolleys present. One ward shared a resuscitation trolley with an adjoining ward in close proximity; therefore the results of this ward were excluded. Results are shown in table 1.

Table 1: Summarised data collection form with results

Questions	Results
Are all of the drugs on the	**10.5%** (4) of resuscitation trolleys did not meet the stock list standards. In

resuscitation trolley list present?	all cases Intralipid 20% was missing.
Are all of the drugs in the trolley in date?	**2.6%** (1) of resuscitation trolleys contained expired medicines. The one item was Glucose 5%.
Are there any additional drugs in the trolley?	**36.8%** (14) of resuscitation trolleys contained additional medicines not specified on the local stock list. All additional items were fluids: mannitol 20%, glucose 20%, glucose 50%.
How many blue boxes are kept in the clinical area?	**100%** (38) of clinical areas had at least one blue box. **36.8%** (14) of clinical areas had more than one blue box.
Where are the blue boxes kept on the ward?	**100%** (38) of clinical areas had at least one box in the resuscitation trolley.
Are all of the boxes in date?	**100%** (55) of blue boxes were in date.

Discussion and Conclusion

Intralipid 20% should be stocked in areas where large doses of local anaesthetic are used for regional blocks[1]. Local policy identifies four areas where Intralipid 20% should be stocked on the resuscitation trolley, but it was not available in any of these areas.

Gelofusine is an optional item on the Trust resuscitation stock list. 84.2% (32) of resuscitation trolleys stock gelofusine, however the UK resuscitation council no longer recommends the inclusion.

The majority of wards stored a blue box within the resuscitation trolley. Storage of the blue box outside of the trolley contravenes the safe storage and custody of medicines.

Recommendations:

- Intralipid 20% to be stored in the applicable resuscitation trolleys
- Remove gelofusine from resuscitation trolley stock list
- Remove blue boxes from ward areas, adjusting the resuscitation trolley stock list accordingly

Ethics approval was not required for this audit.

References

1. Acute care - equipment and drug lists [Internet]. Resus.org.uk. 2019 [cited 12 December 2018]. Available from: https://www.resus.org.uk/quality-standards/acute-care-equipment-and-drug-lists/
2. Resuscitation Policy. Essex: Barking, Havering and Redbridge University Hospitals; 2019. [cited 12 December 2018].

Poster 22: Evaluating the confidence and key knowledge base of pharmacy staff at Barts Health to support the delivery of the 'Preventing Ill Health from Tobacco and Alcohol' Commissioning for Quality and Innovation (CQUIN)

Nabila Malik, Barts Health NHS Trust, London
Christabelle Chen, Barts Health NHS Trust, London

Background and Introduction

Preventing ill health from alcohol and tobacco CQUIN was launched in April 2018 aiming to identify smokers and high-risk drinkers, provide advice and refer to specialists[1,2]. Pharmacy clinical services are ideally placed to support this due to the consistent medicines reconciliation process embedded within our practice. Despite Trust-wide teaching events, CQUIN targets were not achieved.

Aims and Objectives

1. Assess current practice and identify knowledge gaps among pharmacy staff which may present as barriers in the delivery of the CQUIN.
2. Address knowledge gaps through feedback to individuals after completing the questionnaire.

Table 1 Breakdown of performance to specific knowledge based questions and reported confidence

Question content	Question number and related question	Number of staff who answered correctly	Percentage of staff who answered correctly (%)
Smoking related	10) The three core elements of giving Very Brief Advice (VBA) to smokers	53	64.6
	11) Evidence shown the most successful approach to stopping smoking	76	92.7
	12) Smoking status if using e-cigarettes	39	47.6
Average			68.3
Alcohol related	13) Identifying questions on AUDIT-C	46	56.1
	14) For patients who score a 6 on AUDIT-C, which one of the following actions should be taken	54	65.9
	15) what is the UK Chief Medical Officer	63	76.8

	currently recommendation on drinking		
Average			66.3
Documentation and referral	16) Access to find NRT flowcharts and Audit C screening tool	68	82.9
	17) How and where identification is recorded	75	91.5
	18) Smoking referral pathway	74	90.2
	19) Alcohol referral pathway	79	96.3
Average			93%
		Before Feedback	**After Feedback**
Staff confidence Q1-4, 20, 21	Staff confidence in delivery of brief advice	63	84
	Staff confidence in documentation	46	84

Method
A questionnaire was designed to capture specific knowledge needed to deliver the CQUIN as well as staff confidence before and after feedback. Questionnaires were delivered face-to-face with immediate feedback over a 2-week period (19/11/18-30/11/18) on all adult inpatient wards (excluding critical care and maternity) across four sites.

Results
82 pharmacy staff were interviewed. Approximately half were consistent in identifying of smokers and high-risk drinkers during medicines reconciliation. Alcohol was not as widely screened as smoking (79% vs 86%).

As per Table 1, staff demonstrated excellent knowledge in the documentation and referral processes. Knowledge on smoking and alcohol were comparable with a slight edge on smoking (68.35 vs 66.3%). Staff had good knowledge on successful smoking cessation interventions (92.7%). Knowledge gaps were evident in the content of AUDIT-C and implications of using e-cigarettes.

Staff confidence in delivering VBA and documentation increased significantly after feedback. This 2-week intervention success was supported by an increase in reported identification and documentation across the Trust.

Discussion and Conclusion
Smoking and alcohol consumption identification still requires effort to embed into medicines reconciliation. Knowledge gaps may pose a barrier to the delivery of the CQUIN but seems to be unrelated to confidence. This work has shown to help increase staff confidence, translating into improved CQUIN activity.

Project did not require ethics approval.

References

1) *Public Health England. Health Matters: preventing ill health from alcohol and tobacco use. GOV.UK (2017) https://www.gov.uk/government/publications/health-matters-preventing-ill-*

health-from-alcohol-and-tobacco/health-matters-preventing-ill-health-from-alcohol-and-tobacco-use (accessed 6 March 2019)

2) *Public Health England. Guidance and information on Preventing ill health CQUIN and wider CQUIN scheme. GOV.UK (2018) https://www.gov.uk/government/publications/preventing-ill-health-commissioning-for-quality-and-innovation/guidance-and-information-on-the-preventing-ill-health-cquin-and-wider-cquin-scheme (accessed 6 March 2019)*

Poster 23: Anti-Fungal Stewardship with Specialist Transplant Integrated in the MDT Lung Transplant Unit: A Quality Improvement Initiative

Pauline Ly, Nicole Pagani, Melissa Sanchez, Martin Carby, Anna Reed, Haifa Lyster

Background and Introduction

Lung transplant (LTx) patients receive life-long immunosuppression, which can cause increased susceptibility to infections, such as fungal infections. The use of anti-fungal drugs are associated with a large healthcare burden in terms of cost, adverse effects and management of drug-drug interactions associated with azoles and immunosuppression. At our centre, no formal anti-fungal stewardship (AFS) pathway existed, with patients managed on an individual basis. Anti-fungal therapeutic drug monitoring was often conducted on an ad-hoc basis. Lack of rigor with treatment review dates; follow up thereafter and duration of treatment.

Aims and Objectives

1. Capture all patients on active anti-fungal treatment to AFS pathway; assign review dates to 100% of patients
2. 80% of patients achieving therapeutic levels within 7 days
3. 100% of patients achieving azole target range during treatment by end of QI project

Method

From Aug-Nov 2018 all LTx outpatients receiving anti-fungal treatment were collated. These were discussed and reviewed at a weekly MDT. Documentation following the MDT through stakeholder engagement was developed. A method for disseminating all azole levels processed in the lab was initiated to quickly identify those out of range for actioning.

Results

During the four-month period, 17 patients were discussed at MDT, all had an outcome with review dates documented. Nine patients were initiated on anti-fungal therapy; four achieved azole target levels within 7 days (44%). All patients who received azole therapy achieved therapeutic levels by the end of the project.

Discussion and Conclusion

A reliable AFS pathway was successfully implemented. Using QI methodology to focus on the achievable changes, this led onto more significant changes to optimise anti-fungal treatment in LTx patients. Only 44% of patients initiated on azole therapy achieved target levels within 7 days, more work is required following the dissemination of levels. This was a good start for the AFS pathway, when re-audited this figure is anticipated to improve.

Poster 24: An audit to determine the impact of 72-hour intravenous (IV) antibiotic review stickers on antimicrobial stewardship

Lad K, Fhadil S, Wright P, Antoniou S

Introduction

To improve antimicrobial stewardship, National Institute for Health and Care Excellence (NICE) recommend reviewing intravenous (IV) antimicrobial prescriptions at 48–72 hours to determine on-going need and whether an oral (PO) equivalent can be considered, if clinically indicated. [1] A 72-hour IV antibiotic review sticker has been piloted to facilitate antimicrobial review and optimise antimicrobial use. [2]

Aim

To assess the impact of 72-hour antibiotic review stickers on IV antimicrobial stewardship.

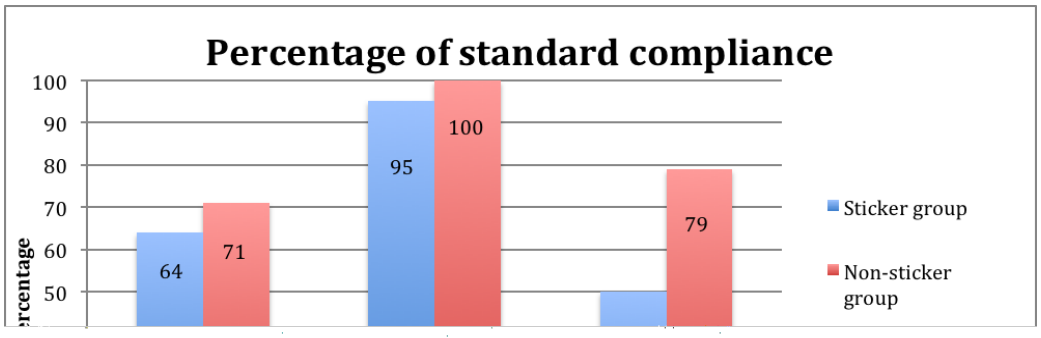
Objectives

- 100% of all IV antibiotic prescriptions have a documented review within 72 hours
- 100% of all antibiotic prescriptions have a documented indication
- 100% of all antibiotic prescriptions have a documented duration.

Method

Data on antimicrobial prescribing was collected between December 2018 to January 2019 for all patients prescribed IV antibiotics on a thoracic ward piloting the 72-hour antibiotic review sticker. This was compared to patients prescribed IV antibiotics on adjacent cardiothoracic wards, where 72-hour antibiotic review stickers are not in effect.

Results



Discussion

Results demonstrate that, the sticker had limited value in improving adherence in antibiotic stewardship. The documentation of the review was not always completed on the sticker suggesting that this may not be the element that prompts a review. All wards have pharmacy input on ward rounds and it is suggestive that pharmacist input on ward rounds contributes to regular reviews of antibiotics. There was an occasion of a missed dose and another, which caused a delayed dose due to misinterpretation of stickers. Although, intuitively the sticker should help support improvement of the stewardship when filled in completely, this was not demonstrated in this pilot. Further work is required to refine the sticker and further optimise staff training to assess the value of this intervention to improve antimicrobial stewardship.

References

1. NICE CG 15 (2015) Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use

2. Barts Health NHS Trust. (2018) Trust corporate policy- 72 hour antimicrobial safety sticker policy. London: Barts Health NHS Trust (Internal document).

Poster 25: Staff Opinions of A Daily Safety & Operational Huddle for the Clinical Pharmacy team (CPT)

Katherine Cullen, Bradford Teaching Hospitals NHS Foundation Trust, UK

Background and Introduction
Huddles are increasingly being used in healthcare to improve team communication around patient safety and operational issues.1,2

A daily short, 15 minute huddle was introduced for the CPT allowing real time sharing of operational issues within the department and organisation, sharing key information and discussing patient safety issues.

Aims and Objectives
To determine the opinions of the CPT on the daily huddle.

Method
The CPT were asked to complete a short 10 question online anonymous questionnaire asking their opinion of the huddle and allowing them opportunity to detail ways to improve it.

Results
45 staff (90%) completed the questionnaire. 67% of respondents were pharmacists, 22% were pharmacy technicians.

80% of respondents reported that they agreed the huddle informed them about safety issues. 71% agreed that the huddle helped improved their knowledge around pharmacy activities and issues. 75% of respondents felt confident to speak up in the huddle.

The free-text box yielded the most useful information. Several respondents expressed the huddle brought the team together on a daily basis and gave a positive start to the day. 6 respondents reported that information was not cascaded if they were unable to attend. 8 respondents reported that they would like a second huddle early in the afternoon to plan the afternoon workload.

Discussion and Conclusion
Following on from this survey several changes were made:

1. A suggestions box introduced that those who were not confident enough to speak up in person.
2. A daily email summary shared with the whole team by 10am.
3. An information board that summarises the purpose of the huddle was put in the meeting area.
4. Team leads asked to introduce 2pm huddles for their smaller teams to plan the afternoon.

Overall the huddle has clearly had a positive impact on the team. A further questionnaire will be distributed after these changes have been implemented to gauge opinion further.

References

1. Institute for Healthcare Improvement; ihi.org/tools, accessed Feb 2019
2. Komoroy KM et al. (2018) Assessment of the Daily Safety and Operations Huddle of a Pharmacy Department. Universal Journal of Public Health 6(3): 153-160.