

Saturday AM: Contents

Poster 1: A Novel Approach to Pharmacist-led Repeat Prescribing for Paediatric Patients Taking Melatonin in an Outpatient Pharmacy Setting	3
Poster 2: The Introduction of a Pharmacy Team to the Surgical Admissions Lounge at St James's University Hospital, Leeds to Improve Medicines Reconciliation Rates.....	4
Poster 3: An Audit of the Compliance with Ward Drug Trolley Checklist.....	6
Poster 4: Longitudinal ward placements as part of hospital pre-registration pharmacist training: a novel model for education and training	7
Poster 5: Review and implementation of an effective business continuity plan (BCP) for the electronic prescribing system at Barts Health NHS Trust following IT failures during 2017	8
Poster 6: General Practice placements for hospital pre-registration trainee pharmacists: Evaluation of learning support tools and outcomes.....	9
Poster 7: An Innovative Recruitment Method for Pharmacy Dispensary Assistants and Pharmacy Technician Trainees Provides a Robust Supply of Qualified Staff.....	10
Poster 8: Exploring the perceptions and experiences of hospital clinical pharmacists of the provision of optimal and suboptimal pharmaceutical care using qualitative methods	11
Poster 9: Pharmacist Led Emergency Department Improvements	12
Poster 10: Development and use of existing software to improve clinical pharmacy team performance in follow up of patients.	13
Poster 11: Development and use of existing software to improve clinical pharmacy team performance in follow up of patients	14
Poster 12: Redesigning the Pharmacy weekend service at North Bristol NHS Trust to improve patient safety and quality through a more efficient use of resources.....	16
Poster 13: Treating Acute Pain in Pregnancy.....	17
Poster 14: The Benefits of Implementing Clinical Prioritisation Pharmacy Technicians at North Bristol NHS Trust (NBT)	18
Poster 15: Implementation of an Innovative, Wholly-NHS-Owned Subsidiary Pharmacy Model to Improve Outpatient Care	19
Poster 16: Delay in Venous Thromboprophylaxis Initiation: Evaluation of the main causes	21
Poster 17: The potential role of community pharmacists in supporting patients with mental health conditions.....	22
Poster 18: Identification and assessment of delirium on Intensive Care Unit at Harefield Hospital to improve patient experience on Critical Care	23
Poster 19: A Green Sustainable Pharmacy	25

Poster 20: Use of newer oral P2Y12-receptor antagonists (ticagrelor and prasugrel) as a second antiplatelet agent in obese patients undergoing elective percutaneous coronary intervention (PCI) as compared to clopidogrel.....	26
Poster 21: Implementation of a Clinical Prioritisation Tool for Inpatients within a Mental Health Trust	28
Poster 22: Medicines optimisation with biosimilars: A person-centred approach to switching.....	30
Poster 23: Analysis of the resource requirements of an environmentally driven transition from pressurised metered dose inhalers (pMDIs) to dry powder inhalers (DPIs).....	31
Poster 24: What is the impact of an enhanced pharmacy team on the short stay model?	32
Poster 25: What is the impact of an enhanced pharmacy team on the short stay model?	33

Poster 1: A Novel Approach to Pharmacist-led Repeat Prescribing for Paediatric Patients Taking Melatonin in an Outpatient Pharmacy Setting

Zahin Ali (Prescribing Clinical Pharmacist, Hospital Pharmacy Services Nottingham Limited), Guy Wilkes (Managing Director, Hospital Pharmacy Services Nottingham Limited), Sadia Rajah (Superintendent Pharmacist Prescriber, Hospital Pharmacy Services Nottingham Limited), Dr Rosemary Gradwell (Consultant Community Paediatrician, Nottingham University Hospitals NHS Trust)

Background and introduction:

Melatonin is prescribed to treat sleep disorders in children and young people with neurodevelopmental conditions¹. Secondary care is responsible for repeat prescribing locally. Pharmacists identified that the existing repeat prescribing of melatonin was sub-optimal: taking up to several weeks to obtain further supplies; prescriptions being 'lost in transit' resulting in duplication, lack of treatment optimisation due to time constraints for paediatrician/patient interaction, and difficulties faced by pharmacists when contacting paediatricians. Such problems resulted in significant anxiety to patients and caregivers^{2,3}. A redesign was proposed by the pharmacists.

Aims:

To provide a more responsive, reliable, and efficient prescribing service whilst optimising medicines usage, freeing up clinical administrative time and ensuring cost effective prescribing.

Method:

A pilot scheme was launched from November 2017 to June 2018. Two Pharmacist Independent Prescribers (0.7WTE) operated twice daily telephone clinics from the pharmacy premises. Ongoing treatment efficacy, patient experience, and use of non-pharmacological measures were reviewed. Dosage and formulation were adjusted where necessary within agreed parameters. All prescriptions were generated and dispensed within 24 hours.

Results:

2,029 consultations were held for 1,262 patients. Of these, 27% resulted in an intervention to improve patient care. The processing time was reduced from 10 days to within 24 hours. 89% of caregivers surveyed rated the service as 'very good' or 'excellent' and recommended continuation of service.

Medicine usage was optimised reducing the cost of prescriptions by 14%. Time was freed up within the clinic (0.5PA clinician and 0.2WTE administrative) for other patient facing activities.

Discussion and conclusion:

Operating a clinic from within the outpatient pharmacy premises brought significant benefits to patient experience. Clinicians benefited from reduced workloads and additional clinical administrative time, whilst pharmacists benefited by utilising their prescribing and consultation skills for medicines optimisation. Following the success of the pilot funding has been put in place for its continuation.

References

1. Oliviero Bruni, Daniel Alonso-Alconada, Frank Besag, Valerie Biran, Wiebe Braam, Samuele Cortese, Romina Moavero, Pasquale Parisi, Marcel Smits, Kristiaan Van der Heijden, Paolo Curatolo . Current role of melatonin in pediatric neurology: Clinical recommendations. *European Journal of Paediatric Neurology* 2015; 19(2): . <https://www.sciencedirect.com/science/article/pii/S1090379814002086> (accessed 16/02/2019).
2. Michael B. Wasdell, James E Jan,, Melissa M. Bomben, Roger D. Freeman, Wop J. Rietveld,, Joseph Tai,, Donald Hamilton, Margaret D. Weiss. A randomized, placebo-controlled trial of controlled release melatonin treatment of delayed sleep phase syndrome and impaired sleep maintenance in children with neurodevelopmental disabilities. *Journal of Pineal Research* 18 October 2007; 44(1): . <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1600-079X.2007.00528.x> (accessed 16/02/2019).
3. Ruth A. Keenan, Matt R. Wild, Irene McArthur, Collin A.Espie. Children with Developmental Disabilities and Sleep Problems: Parental Beliefs and Treatment Acceptability. *Journal of Applied Research in Intellectual Disabilities* 22 August 2007; 20(5): . <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-3148.2007.00382.x> (accessed 16/02/2019).

Poster 2: The Introduction of a Pharmacy Team to the Surgical Admissions Lounge at St James's University Hospital, Leeds to Improve Medicines Reconciliation Rates

Bradshaw, E. E., Blow, S. E., Smith, C. E.

Pharmacy Department, Leeds Teaching Hospitals NHS Trust, Leeds

Background and Introduction

Medicines reconciliation (MR) involves compiling an up-to-date list of a patient's medication to resolve any unintentional discrepancies. NICE recommend that MR should be completed within 24 hours of hospital admission.^[1] At St James's Hospital, Leeds, most patients who are admitted for elective surgery fail to have their MR performed within this period as pharmacy staff only access the patient after their surgery. Doctors on the admissions lounge (JAL) often do not have time to prescribe regular medication. It has been shown that pharmacist independent prescribers (PIP) are able to focus on the patient and their medication, and their prescribing is associated with lower error rates ^[2].

Aims and Objectives

To increase the number of elective patients with completed MR within 24 hours of admission.

To improve the quality of the prescribing of regular medication through reduced error rates.

Method

The trial took place over two weeks; the first week, a pharmacy technician (PT) completed patient drug histories prior to surgery. In the second week, a PT and PIP performed MR and prescribed regular medication as appropriate.

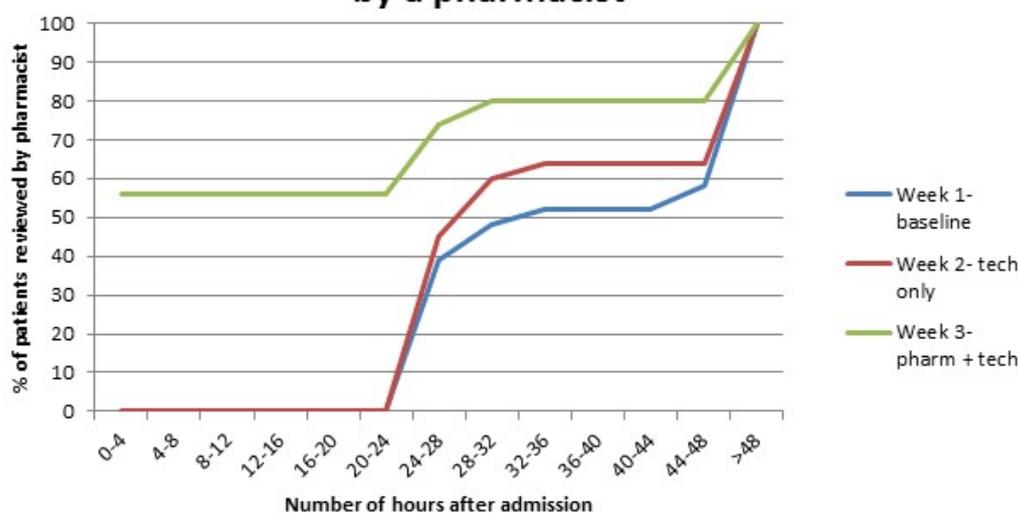
The drug history process involved discussion with the patient/carer, collating that information with the patient's Summary Care Record, their medication (if accessible) and obtaining information from other sources if required.

Any significant interventions were noted and retrospective data from these weeks was collected to compare the amount of completed drug histories and MR at 24 and 48 hours.

Results

- Drug histories within 4 hours of admission rose from 0% to 63% with a PT
- MR at 24 hours increased from 0% to 66% with PT and pharmacist
- Doctors' errors corrected such as co-amoxiclav prescribed with penicillin allergy and duplicate prescription of tinzaparin.

A graph to show how a pharmacy service on JAL affects the time taken for a patient to be reviewed by a pharmacist



Discussion and Conclusion

A prescribing pharmacist on JAL significantly increased MR rates within the recommended 24 hours from admission ensuring patients on high risk medication were managed appropriately during the perioperative period.

References

1. National Institute for Health and Care Excellence. (2015). *NG5: Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes*. Available: <https://www.nice.org.uk/guidance/ng5/resources/medicines-optimisation-the-safe-and-effective-use-of-medicines-to-enable-the-best-possible-outcomes-pdf-51041805253>. Last accessed 01/03/2019.
2. Baqir W, Crehan O, Murray R, Campbell D, Copeland R. Pharmacist prescribing within a UK NHS hospital trust: nature and extent of prescribing, and prevalence of errors. *European Journal of Hospital Pharmacy*. 2014;22(2):79-82

Poster 3: An Audit of the Compliance with Ward Drug Trolley Checklist

Natasha Whitley, Pre-Registration Pharmacist, St George's University Hospital NHS Foundation Trust, London

Background and Introduction

Drug trolleys are a common and well used method of administering medicines within a hospital environment. It is of paramount importance that due consideration is given to the safe operation and use of these drug trolleys. Cavell ward at St George's Hospital have recently introduced two new static drug trolleys in order to facilitate timely medicine administration. To ensure safe and appropriate use, these drug trolleys are to be checked twice daily against the drug trolley checklist. This checklist was created and approved by the Trust's Medicines Optimisation Group using the Standard Operating Procedure B 06.06 (1) for the use of Drug Trolleys.

Aim

To assess compliance with the drug trolley checklist on Cavell ward.

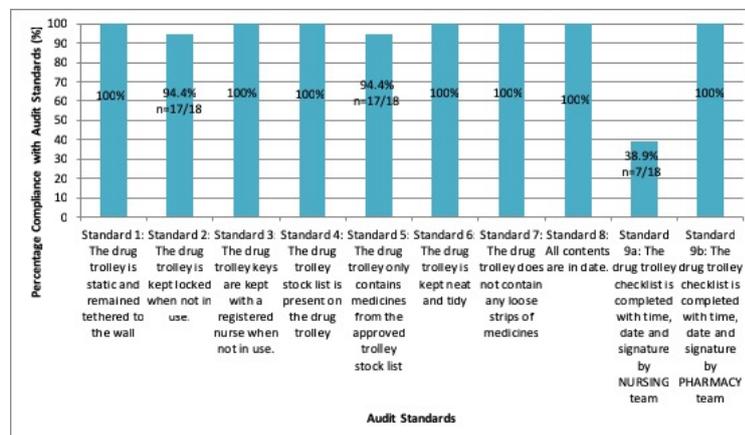
Objectives

- To evaluate whether the drug trolleys are being used appropriately, safely and in line with the SOP.
- To investigate whether the drug trolleys are being checked daily by both nursing and pharmacy team.

Method

Using the standards created from the drug trolley checklist, an audit data collection tool was formed. This was a questionnaire that was completed out on Cavell ward in front of the two drug trolleys. The audit tool was used to collect data over a 2-week period (11/12/18 - 21/12/18, not including the weekend). The data was then inputted onto an excel sheet for analysis and evaluation.

Results



Discussion and Conclusion

Overall, the results from this audit showed that the drug trolleys in Cavell ward are being used appropriately and in accordance with the SOP and the checklist. There are still improvements to be made however, as nurses are not regularly checking the drug trolleys, which could impact the safety of their use. Nevertheless, with improved training the implementation of drug trolleys on additional wards could significantly influence the way that medicines are administered across the whole Trust.

References

1. B 06.06 (1) Standard Operating Procedure for the use of Drug Trolleys
2. Cavell Drug Trolley Stock List

Poster 4: Longitudinal ward placements as part of hospital pre-registration pharmacist training: a novel model for education and training

Hannah Kinsey, Maria Christou, Jeremy Sokhi, David Wright, University of East Anglia, Norwich

Background and Introduction

Current hospital pre-registration pharmacist training often consists of short block-rotations (<3 weeks) in technical and clinical areas which may lack the significant patient facing experience required to meet the Carter agenda (Carter of Coles, 2016). Evidence supporting longitudinal placements (>13 weeks) in the same setting, reports students better prepared for multi-disciplinary practice (Thistlethwaite *et al.*, 2013). Stakeholder engagement and 'Communities of Practice' social learning theory informed the design of a 13 week longitudinal ward placement for hospital pre-registration pharmacists (Wenger, 1999).

Aims and Objectives

- Determine acceptability and perceived effectiveness of placement design for pre-registration pharmacist learning
- Evaluate placement implementation by key stakeholders

Method

Longitudinal qualitative analysis will be undertaken on the perceptions of pre-registration pharmacists (n=3) who will be interviewed five times; prior to placement, at weeks 4, 8 and 14 and post-registration. Thematic analysis, utilising a trajectory approach, will be undertaken. Ward staff will be interviewed at the end of the placement and data will be analysed thematically.

Results

Data collection and analysis is ongoing, initial results suggest pre-registration pharmacist's experiences of their longitudinal placement were beneficial for learning, with reported improvement in confidence, clinical knowledge and relationship building. The placement was described as consisting of two sections; the first 3 weeks to orientate oneself, the following 10 weeks to support knowledge and skill development.

Discussion and Conclusion

Hospital pharmacists are undertaking more patient-facing roles and there is a need to reflect this in the education of pre-registration pharmacists. The short block rotational model may not be the best fit for education and training, as results suggest it takes several weeks to orientate oneself onto a ward. Initial analysis of this research supports the evidence-base surrounding longitudinal placements as a model for enhancing the learning experience and skills, of trainee healthcare professionals.

References

1. Carter of Coles, Lord (2016) *Operational productivity and performance in English NHS acute hospitals: Unwarranted variations – An independent report for the Department of Health by Lord Carter of Coles.*
2. Thistlethwaite, J. E. *et al.* (2013) 'A review of longitudinal community and hospital placements in medical education: BEME Guide No. 26', *Medical Teacher*, 35(8), pp. e1340–e1364. doi: 10.3109/0142159X.2013.806981.
3. Wenger, E. (1999) *Communities of practice: Learning, meaning, and identity.* Cambridge : Cambridge University Press, 1998 (Learning in doing). doi: 10.2277/0521663636.

Poster 5: Review and implementation of an effective business continuity plan (BCP) for the electronic prescribing system at Barts Health NHS Trust following IT failures during 2017

Christopher Watson, Rajinder Nijjar, Melissa Nankoo - Barts Health NHS Trust

Background:

Local IT system failures and the 2017 global cyber-attack highlighted deficiencies in the business continuity plan (BCP) for our systemic anti-cancer therapy (SACT) electronic prescribing system (ARiA). This led to a system outage of 6 weeks. Existing BCPs were insufficient to maintain effective functioning of the service under such a challenge.

Objectives:

Ensure readiness to respond to potential future major IT challenges to ARiA and associated systems thereby assuring the maintenance of on-going, safe care for patients requiring SACT.

Method:

Current BCPs were reviewed by an MDT. They considered all potential scenarios and designed protective measures. The major improvements identified were:

- Review of backup processes to allow rapid recovery of the ARiA database following catastrophic data loss
- Ensure offline access to prescriptions, pharmacy records, and resources required for prescription verification
- Ensure patient schedules are available offline and on more than one platform
- Future-proofing and maintaining BCPs

Results:

Following review, the following mitigations were implemented:

- Database regularly backed up remotely
- Prior to the outage, all scheduling was done on ARiA. In February 2018, 97% of patient appointments were booked in two locations
- Paper copies of scheduling for the subsequent 4 week period are available
- Template prescriptions available on paper
- Regular testing of BCP to ensure it is fit for purpose using an audit tool

Discussion:

Prior to our process improvements, our level of protection was not dissimilar from other sites we contacted subsequently. The risk that we and others were carrying prior to the incident left our organisations vulnerable.

Conclusion:

E-prescribing systems have made prescribing of SACT safer and more efficient. Robust BCPs are essential to ensure safe and effective service during downtime. Dedicated resource should be directed to developing and continuously testing BCPs. Given the small number of systems in use within the UK a collaborative approach may be of benefit.

Poster 6: General Practice placements for hospital pre-registration trainee pharmacists: Evaluation of learning support tools and outcomes

Gill Shelton, Meb Walji, Mohamed Jawad Dungersi, Hannah Kinsey, Maria Christou, Rina Matala, David Wright

Background and Introduction

General practice pharmacy is fast becoming one of the established career options for registered pharmacists in the United Kingdom (UK) (NHS England, 2016). Accordingly, there is a need to embed relevant training opportunities in the initial education of pharmacists, to prepare the future workforce for new expanding roles in general practice. This study seeks to evaluate pre-registration trainee pharmacists' perspectives on a novel, flexible placement model in general practice.

Aims and Objectives

To determine the usefulness of newly developed educational support tools and evaluate trainees' perspectives of their learning experiences in general practice.

Method

Hospital trainees in Cambridgeshire were placed in different General Practices for either four or eight weeks during 2017 and 2018. All trainees followed a structured training programme which met regulatory requirements (General Pharmaceutical Council, 2018). Learning was guided and supported via a workbook and on-line resources. Stakeholder meetings with the trainee pharmacists were conducted on completion of their placements and the data thematically analysed (Braun & Clarke, 2006). Ethical approval was granted for the placement.

Results

Trainee feedback indicated that the learning support tools provided were useful but needed to incorporate more guidance relating to 'entrustable' activities, supervision and indemnity. Identified individualised benefits included: increased confidence in communicating with patients and greater understanding of holistic patient care across different settings. There was diversity in terms of the quality of trainees' learning experiences, achievement of competences and level of integration within general practice teams.

Discussion and Conclusion

Structured placements in general practice have clear benefits for individual pre-registration trainee pharmacists, patients and the pharmacy profession. The learning support tools were positively received, but further development is required to optimise educational support tools in order to standardise and further enhance the quality of learning in this environment.

References

1. Braun, V. & Clarke V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101
2. General Pharmaceutical Council. (2018). Performance Standards (online). Available at: <https://www.pharmacyregulation.org/performance-standards> Accessed 22nd January, 2019
3. NHS England. (2016). General Practice Forward View (online). Available at: <https://www.england.nhs.uk/wp-content/uploads/2016/04/gpfv.pdf> Accessed 22nd January, 2019

Poster 7: An Innovative Recruitment Method for Pharmacy Dispensary Assistants and Pharmacy Technician Trainees Provides a Robust Supply of Qualified Staff

Sue McKitterick, Clinical Pharmacist with Staff Development Responsibilities, Hospital Pharmacy Services Nottingham Ltd

Guy Wilkes, Managing Director, Hospital Pharmacy Services Nottingham Ltd

Background and Introduction

This pharmacy provides outpatient dispensing and other services within an acute NHS Trust using a workforce of 85 staff. To provide high quality patient care pharmacies need a well-trained and motivated technical team¹.

Like many pharmacy employers², recruitment to new and vacated Dispensary Assistant and Pharmacy Technician roles proved unreliable. Internal training was associated with dropout rates and slow progression, despite significant support. Subsequent skill-mix gap impeded service delivery.

Previously, this pharmacy used the traditional selection method of advertisement and panel interview. In 2017, it developed a new method to provide a robust supply of qualified staff.

Aims and Objectives

- To meet the skill-mix requirements by providing a reliable supply of qualified staff,
- To ensure that trainees have the necessary skills, attributes³ and commitment needed for successful course completion,
- To provide fair and transparent opportunities for development.

Method

A “taster programme” was established and utilised to identify candidates as suitable, or not yet suitable, for training. Candidates spent 4 days, over 4 weeks;

- Shadowing qualified colleagues, with set tasks and observations, demonstrating a range of skills,
- Completing written tasks mimicking coursework,
- Reflecting, supported by a manager, on their experience,
- At week 4, undertaking a detailed, structured self-evaluation against the person specification, alongside the manager.

Results

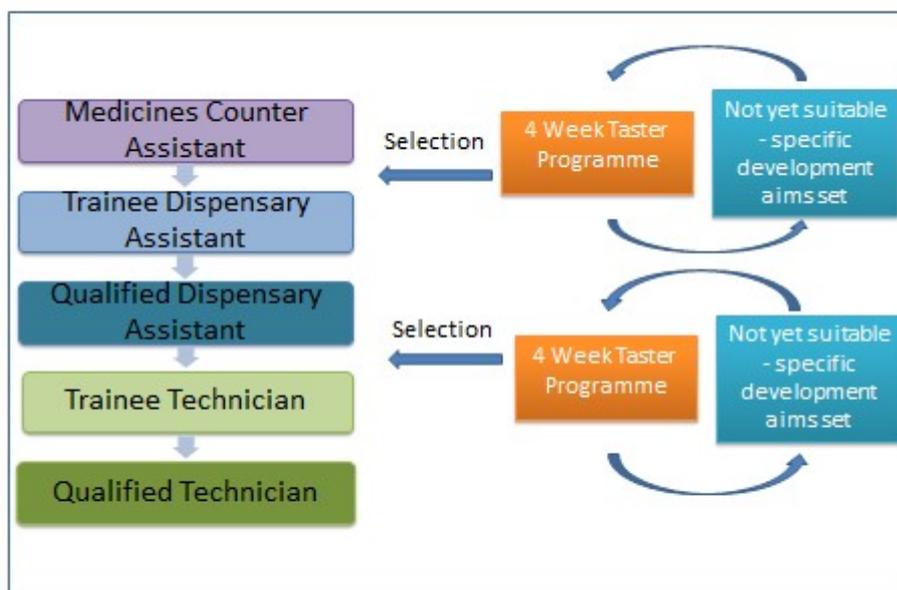
Ten trainees have been enrolled from fourteen candidates over 19 months, meeting the workforce requirements. With a shared understanding of the trainees’ strengths and weaknesses before commencement, none have quit.

Discussion and Conclusion

This method has provided a robust, predictable supply of qualified staff. Candidates were more self-aware and committed. Several candidates deemed not yet suitable went on to address the issues identified and were successful at a later enrolment.

The rate of staff qualifying is aligned to the workforce plan, reducing reliance on the external market. The programme has received positive feedback by providing a clear pathway for progression (figure).

Figure: Staff progression using a Taster Programme for internal selection



References

1. Health Education England. Facing the Facts, Shaping the Future – a draft health and care workforce strategy for England to 2027. Available at <https://www.hee.nhs.uk/sites/default/files/documents/Facing%20the%20Facts,%20Shaping%20the%20Future%20%E2%80%93%20a%20draft%20health%20and%20care%20workforce%20strategy%20for%20England%20to%202027.pdf> (Accessed February 2019)
2. Health Education England. The Community Pharmacy Workforce in England 2017. Survey report July 2018. Available at <https://www.hee.nhs.uk/sites/default/files/documents/The%20Community%20Pharmacy%20Workforce%20in%20England%202017%20-%20survey%20report.pdf> (Accessed February 2019)
3. NHS Health Careers. career- tech PS. Available at <https://www.healthcareers.nhs.uk/explore-roles/pharmacy/roles-pharmacy/pharmacy-technician> (Accessed February 2019)

Poster 8: Exploring the perceptions and experiences of hospital clinical pharmacists of the provision of optimal and suboptimal pharmaceutical care using qualitative methods

Amanda McLean, Elaine Rankine, Caroline Souter (NHS Lothian) Derek Stewart (Robert Gordon University) Vibhu Paudyal (University of Birmingham)

Background and Introduction

A qualitative study was undertaken to explore the concept of suboptimal pharmaceutical care following the observation that there were few formal reports made.

Aims and Objectives

The research aim is to explore the perceptions and experiences of NHS Lothian hospital clinical pharmacists in relation to optimal and suboptimal pharmaceutical care.

The research objectives are,

1. To explore their experiences of the provision of optimal and suboptimal pharmaceutical care within practice.
2. To explore the behavioural determinants involved using the Theoretical Domains Framework (TDF)

Method

A qualitative study design was adopted. Focus groups were conducted with purposively selected clinical pharmacists of different bands from five NHS Lothian pharmacy departments. One to one in-depth interviews semi-structured around the TDF domains, were carried out with 10 of the focus group participants. Interviews were audio recorded and transcribed

Results

A total of 20 participants took part in the focus groups. These generated 78 statements that were mapped against TDF. The majority were in the domain 'environmental context and resources'. This was exemplified by statements like "no clear area to record medicines reconciliation". Interviews, carried out with 10 participants, were mapped to TDF. The domain most frequently populated was 'social and professional role and identity'. This was exemplified by statements like "I think within pharmacy we're maybe not as good at sharing our negative experiences".

Discussion and Conclusion

There was understanding amongst focus group participants of the term suboptimal pharmaceutical care. It was seen as describing when care as planned could not be provided. Interview participants were able to describe instances of suboptimal pharmaceutical care, and these were mapped to the TDF which allows behavioural determinants to be identified. This can be used to plan process changes that will facilitate the shared learning from experiences of suboptimal pharmaceutical care.

References

1. Kitzinger, J. **Introducing focus groups.** *BMJ* 1995; 311; 299-302
2. Cane, J., O'Connor, D. and Michie, S. **Validation of the theoretical domains framework for use in behaviour change and implementation research.** *Implement Sci.* 2012; 7; 27-35

Poster 9: Pharmacist Led Emergency Department Improvements

Siobhan Abrahams, A&E Pharmacist, Northampton General Hospital

Background and Introduction

A Pharmacist role was created within A&E in Northampton General Hospital at the end of October 2016, primarily to prescribe critical medication for patients within the department. The managers in ED were unaware of the improvements that could be made within medicine management by a pharmacist including security, safer prescribing, cost savings, and staff support.

Aims and Objectives

To embed the pharmacy service within A&E, focussing on safety and security.

Method

The pharmacist assessed all areas of the department looking at safety of medicines, staff and patients. This was done through a number of audits and trials of working. Highlighted areas were storage, prescribing, policies, PGDs and training.

Results

Cost savings of 6.6% last year despite an increase in attendances by 9.2% (Cost per patient from £3.05 to £2.58); admission avoidance.

Security: Closer monitoring of FP10s has decreased the usage in ED by 38%, Omnicell daily monitoring and feedback to users and prescribers.
Audits: Safer prescribing in pregnancy, IV pantoprazole use, antimicrobial stewardship, oxygen prescribing, paracetamol infusion to oral.
Safety: Datix reviews and action plans from patterns, electronic prescribing implementation, Medicine Reconciliation completed quicker, alternatives for unavailable products.
Staff support: Positive feedback from staff about the support from the pharmacist, especially in high pressured scenarios.

Discussion and Conclusion

The role of the ED pharmacist is wide and varied. The department sees over 122k patients per year and it is impossible for the pharmacist to see all the attending patients so medicine management systems were put in place to try to ensure that they are as safe as possible 24 hours a day. These systems are then regularly monitored to ensure they are both practical and appropriate for the department. These results have been achieved by 1.0 WTE Band8a pharmacist and now expansion of the pharmacy team is being explored.

References

1. Henderson KI, Gotel U, Hill J (2015) Using a clinical pharmacist in the Emergency Department BMJ 32:12
2. Sinclair A (2014) Pharmacists in the Emergency Department, Kings Fund, Emergency Medicine Pharmacy Development Group
3. Andalo D (2016) Placing Pharmacists in Emergency Departments could help 36% of patients. Pharmaceutical Journal

Poster 10: Development and use of existing software to improve clinical pharmacy team performance in follow up of patients.

Marianne van-de-l'Isle, Lead Clinical Pharmacist, NHS Lothian; Jenny Scott, Advanced Pharmacist, NHS Lothian; Fiona McIntyre, Lead Clinical Pharmacist, NHS Lothian

Background and Introduction

In the context of rising demands and patient complexity it is vital that patients who will benefit most from clinical pharmacy services are clinically prioritised. Utilisation of existing business intelligence software and the TRAK patient management system supported clinical pharmacy teams to better identify high risk and unstable patients in hospitals through the use of technology and coding systems.

Aims and Objectives

To improve identification and follow up of patients at high risk of medication adverse events within an agreed timeframe and access electronic performance data on clinical pharmacy activity. Introduce triage coding for pharmaceutical care issues and a technician referral system, recording this electronically in the TRAK patient record.

Method

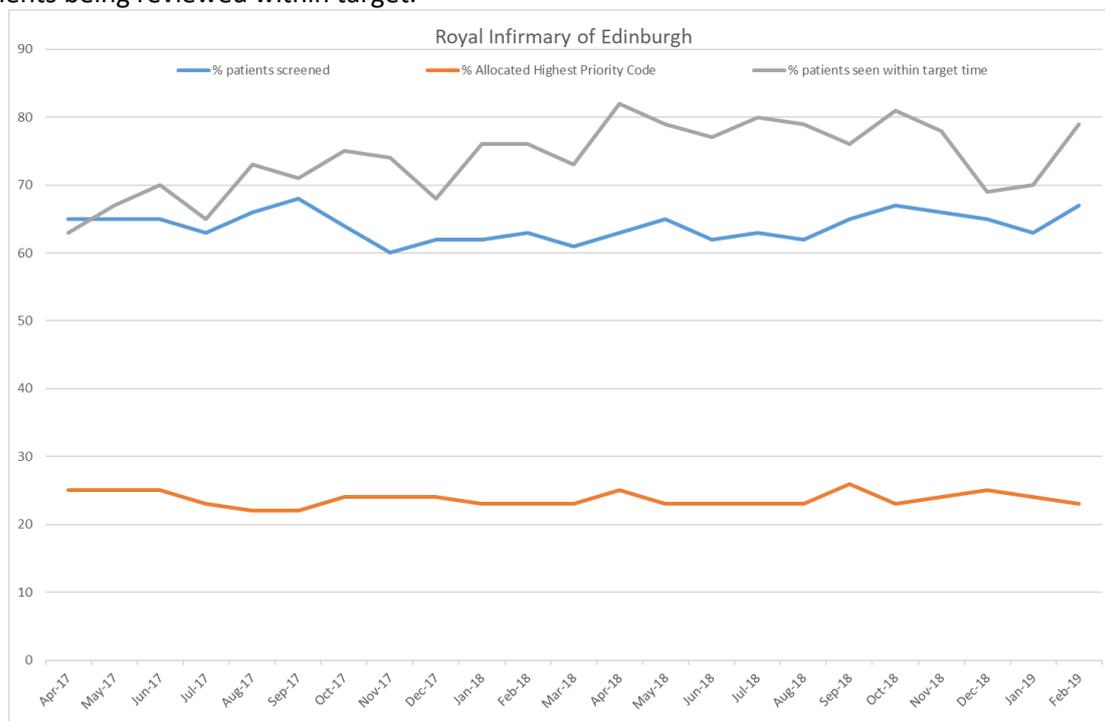
Staff reviewed current service delivery, shared developments and considered ways to reduce unwarranted variation in practice. Using tools developed by other services the group tested, refined and implemented a pharmacy technician referral tool and agreed a priority coding scale for patients. A Business Objects report was created from TRAK that details three key workflows:

- patients allocated a priority code by pharmacist (split by code 1-4).
- patients referred for review by the pharmacy technician (code T).
- patients with no TRAK entry requiring screening by pharmacy team.

Reports are automatically generated and emailed to the clinical pharmacy team daily.

Results

Since 2017, data demonstrates the continuous improvement in the proportion of patients screened by the pharmacy team and of those allocated the highest priority code, a steady increase in those patients being reviewed within target.



Discussion and Conclusion

Standardisation of processes, utilisation of tools and existing technology have shown improvement in the number of patients screened for pharmaceutical care issues by pharmacists; and an improvement in reviews being conducted within agreed time. The use of this tool has also improved communication and transfer of pharmaceutical care between and across hospital sites within the Health Board area.

References

1. Cook G, Lowdon K, Thomson G. Targeting Clinical Pharmacy services to High Risk Hospital Patients. *Pharmacy Management* 2012;28(1):13-16.
2. Saxby KJE et al. Pharmacists' attitudes towards a pharmaceutical assessment screening tool to help prioritise pharmaceutical care in a UK hospital. *Eur J Hosp Pharm*. Published Online First 20 December 2016 (Publication).
3. Hickson RP et al. Evaluation of a pharmaceutical assessment screening tool to measure patient acuity and prioritise pharmaceutical care in a UK hospital. *Eur J Hosp Pharm* 2016;10:1136.

Poster 11: Development and use of existing software to improve clinical pharmacy team performance in follow up of patients.

Marianne van-de-l'Isle, Lead Clinical Pharmacist, NHS Lothian; Jenny Scott, Advanced Pharmacist, NHS Lothian; Fiona McIntyre, Lead Clinical Pharmacist, NHS Lothian

Background and Introduction

In the context of rising demands and patient complexity it is vital that patients who will benefit most from clinical pharmacy services are clinically prioritised. Utilisation of existing business intelligence software and the TRAK patient management system supported clinical pharmacy teams to better identify high risk and unstable patients in hospitals through the use of technology and coding systems.

Aims and Objectives

To improve identification and follow up of patients at high risk of medication adverse events within an agreed timeframe and access electronic performance data on clinical pharmacy activity. Introduce triage coding for pharmaceutical care issues and a technician referral system, recording this electronically in the TRAK patient record.

Method

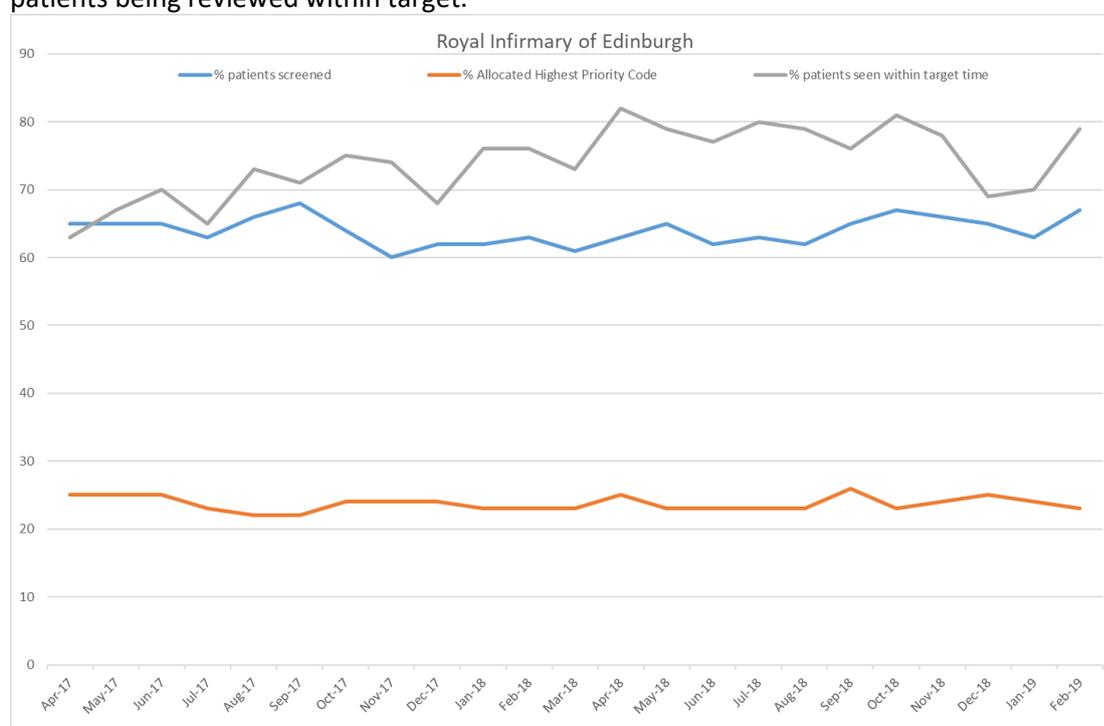
Staff reviewed current service delivery, shared developments and considered ways to reduce unwarranted variation in practice. Using tools developed by other services the group tested, refined and implemented a pharmacy technician referral tool and agreed a priority coding scale for patients. A Business Objects report was created from TRAK that details three key workflows:

- patients allocated a priority code by pharmacist (split by code 1-4).
- patients referred for review by the pharmacy technician (code T).
- patients with no TRAK entry requiring screening by pharmacy team.

Reports are automatically generated and emailed to the clinical pharmacy team daily.

Results

Since 2017, data demonstrates the continuous improvement in the proportion of patients screened by the pharmacy team and of those allocated the highest priority code, a steady increase in those patients being reviewed within target.



Discussion and Conclusion

Standardisation of processes, utilisation of tools and existing technology have shown improvement in the number of patients screened for pharmaceutical care issues by pharmacists; and an improvement in reviews being conducted within agreed time. The use of this tool has also improved communication and transfer of pharmaceutical care between and across hospital sites within the Health Board area.

References

1. Cook G, Lowdon K, Thomson G. Targeting Clinical Pharmacy services to High Risk Hospital Patients. *Pharmacy Management* 2012;28(1):13-16.
2. Saxby KJE et al. Pharmacists' attitudes towards a pharmaceutical assessment screening tool to help prioritise pharmaceutical care in a UK hospital. *Eur J Hosp Pharm*. Published Online First 20 December 2016 (Publication).
3. Hickson RP et al. Evaluation of a pharmaceutical assessment screening tool to measure patient acuity and prioritise pharmaceutical care in a UK hospital. *Eur J Hosp Pharm* 2016;10:1136.

Poster 12: Redesigning the Pharmacy weekend service at North Bristol NHS Trust to improve patient safety and quality through a more efficient use of resources

Alison Staples, Associate Director of Pharmacy Clinical services; Emyr Morgan, Principal Pharmacist Division of Neurosciences and Musculoskeletal; Julie Hamer, Lead Clinical Pharmacy Technician Medicines Management; Lynne Lane, Dispensary Manager

Background and Introduction

Traditionally, at weekends, all requests for missed doses and discharges (TTAs) were sent from the wards to the dispensary. The proposal was to get those pharmacists and medicine management technicians (MMTs) working at weekends, albeit in reduced numbers, to be on the wards, rather than dispensary based. The optimisation of resources would enable the clinical pharmacy team to manage and process the work at ward level and improve service delivery.^{1,2}

Aims and Objectives

The aim was to improve efficiency, quality and patient safety.

The objectives were

1. The drug chart stays on the ward
2. Pharmacists and MMTs to resolve issues, in person, on the ward
3. Reduce phone calls and free up ward staff time
4. Patient's medication stays in the locker

Method

Using PDSA cycles the new service was started on one ward and then rolled out by one ward each week until all wards in the main hospital received a pharmacist and MMT visit (March to August 2018). Changes were made during the process to optimise the service.

Before each ward went live pharmacy met with the ward manager to ensure that there was engagement from the ward and a point of contact for feedback.

Each ward was provided with a 'pharmacy' yellow tray in to which they were asked to place all requests for missed doses and discharges. The wards were given specific weekend bleeps numbers.

Results

	March to August 2017	March to August 2018
Average no. TTAs per shift	34	42
Average no. items dispensed	116	106
Average no. mins over finish time of 2pm	23	27

All drugs charts in the main hospital now stay on the ward. Despite processing more TTAs fewer items are dispensed.

Discussion and Conclusion

All of the objectives were met. The change in service delivery was positively welcomed by ward and pharmacy staff.

References

1. Operational productivity and performance in English NHS acute hospitals: Unwarranted variations. An independent report for the Department of Health by Lord Carter
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499229/Operational_productivity_A.pdf
2. NHS England – Transformation of 7 day clinical pharmacy services
<https://www.england.nhs.uk/wp-content/uploads/2016/09/7ds-clinical-pharmacy-acute-hosp.pdf>

Poster 13: Treating Acute Pain in Pregnancy

Siobhan Abrahams, A&E Pharmacist, Northampton General Hospital.

Background and Introduction

At a parent panel for the baby loss charity 'Saying Goodbye' the feedback was that pain relief in miscarriage is lacking, which the patients interpret as an absence of care. Anecdotally, the women offered pain relief have less mental health issues post loss. Women also fed back that they were nervous of taking pain relief as they were still hoping for a successful pregnancy, so it was important to develop any guideline to look at the safest medication available for each stage of viable pregnancies. Miscarriage happens to 1 in 4 pregnancies and about 100 women per month attend the A&E department each month with either threatened or inevitable miscarriage.

Aims and Objectives

To improve the management of acute pain in pregnant women within the Emergency Department with new guidelines and measure change.

Method

The notes of pregnant women attending A&E with PV bleeding or other conditions (including non-pregnancy related issues) at NGH were audited over 1 week at three stages:

1. Baseline (Pre-guideline launch) June 2018
2. Post-guideline launch December 2018
3. Following additional multidisciplinary team training February 2019

Data collection reviewed pain scores and whether these were acted on appropriately.

Results

A total of 84 patients were audited at three stages. The gestations ranged from 3 weeks to 27 weeks.

	Baseline	Post Guideline Launch	Post Education
Appropriate Pain Relief	47%	62.5%	85% (for patient managed by ED and Obs&Gynae staff) 100% (for patients only managed by ED staff)
Offered medication but decline.	9%	37%	23%

Number of pregnant women audited	25	32	26
----------------------------------	----	----	----

Discussion and Conclusion

The results showed a significant improvement of the pain management of this group of women. Most surprising was the increase in patient declining the pain relief. This could be that the patients felt more reassured that they could have pain relief if necessary or could be that they are still not confident in taking pain relief in pregnancy. Further study will examine this, if there are barriers to accepting pain relief and how they can be overcome. More education about the new guideline is also needed for the Obstetrics and Gynaecology teams.

References

1. NSAIDs/Paracetamol/Codeine or Dihydrocodeine/Morphine in pregnancy UK Teratology Information Service Version 2 (Accessed via Toxbase www.toxbase.org/ 20/6/18)
2. UKMI (2017) Can opioids be used for pain relief in pregnancy Medicines Q&A
3. RCEM Best Practice Guideline (2014) Management of Pain in Adults

Poster 14: The Benefits of Implementing Clinical Prioritisation Pharmacy Technicians at North Bristol NHS Trust (NBT)

Mary J Carter MPharmT, South West Pharmacy Medicines Optimisation Training Programme Director, Pharmacy Workforce Development South (PWDS); Julie Hamer, Medicines Optimisation Lead, North Bristol NHS Trust; Rachel Smith, Clinical Prioritisation Pharmacy Technician, North Bristol NHS Trust

Background and Introduction

Pharmacists and 'clinical' pharmacy technicians need to spend more time on clinical services than other activities¹ and increase capacity to deliver the NHS Long Term Plan². Clinical pharmacy services can be transformed by optimising the skill mix of the pharmacy workforce to ensure high risk patients and medicines are prioritised to improve outcomes and reduce risk³. The clinical prioritisation training programme develops new skills enabling pharmacy technicians to meet the demands for this evolving clinical role. This QI project did not require ethical approval.

Aims and Objectives

Evaluate the benefits of utilising pharmacy technicians with clinical prioritisation skills at NBT by:

- Comparison of ward time taken by clinical pharmacist with and without a clinical prioritisation pharmacy technician
- Quantifying interventions made by clinical pharmacy technicians
- Feedback from pharmacists and pharmacy technicians

Method

Pharmacist activity data (including patients reviewed and time taken) was collected before (2017) and after (2018) implementation of the new role on an elderly care ward. Clinical Prioritisation pharmacy technicians applied a Red, Amber and Green ranking tool to prioritise patients for the pharmacist and recorded the interventions they identified. Feedback from pharmacists and pharmacy technicians new to the role was obtained.

Results

Pharmacist clinical activity data		Week 1	Week 2	Week 3	Week 4	Week 5
Ward Time (minutes)	Before (2017)	690	780	920	635	600
	After (2018)	360	580	530	495	625
Patients Reviewed	Before (2017)	114	161	140	141	114
	After (2018)	91	134	85	94	118
Occupied Beds	-	190	190	190	190	190
Clinical pharmacy technician interventions data –After (2018)		Number of interventions made - Week 1 to 5 After (2018)				
Bloods eGFR and Creatinine		16				
Bloods other		6				
Body Weight		7				
Drug Interactions		4				
Prescription		5				

Discussion and Conclusion

Pharmacy technicians with clinical prioritisation skills were able to identify, manage and refer a number of significant interventions. The time taken for the clinical pharmacist to undertake a ward visit was reduced when working with a clinical pharmacy technician, allowing them to focus their time on complex patients and roles requiring their specialist clinical knowledge.

Feedback shows the introduction of pharmacy technicians with clinical prioritisation skills brings benefits to pharmacy skill-mix and job satisfaction.

- 'Reduces the number of patients that the pharmacist needs to see and flags clinical problems'*
- 'Gives me the confidence to have greater clinical input, reigniting my passion as a pharmacy technician'*

References

1. Operational productivity and performance in English NHS acute hospitals: Unwarranted variations. An independent report for the Department of Health by Lord Carter
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499229/Operational_productivity_A.pdf
2. NHS England – The NHS Long Term Plan <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf>
3. NHS England – Transformation of 7 day clinical pharmacy services
<https://www.england.nhs.uk/wp-content/uploads/2016/09/7ds-clinical-pharmacy-acute-hosp.pdf>

Poster 15: Implementation of an Innovative, Wholly-NHS-Owned Subsidiary Pharmacy Model to Improve Outpatient Care

Guy Wilkes, Managing Director, Hospital Pharmacy Services Nottingham Limited

Background and Introduction:

Outpatient dispensing services are typically provided by hospital pharmacy departments or outsourced to homecare, a third party or wholly-NHS-owned subsidiary¹. Lord Carter recommends

that Trusts consider outsourcing to drive optimal value and outcomes from medicines². There is limited experience and evidence of the benefits and opportunities of adopting a wholly-NHS-owned subsidiary model of service.

Aims and Objectives:

To describe the experience, scale and scope of a subsidiary with 6 years maturity and the patient care benefits that have been achieved.

Method:

This large, acute, teaching hospital has a busy A&E, tertiary specialties and an oncology centre. It appraised the options for reconfiguring its outpatient pharmacy, considering the high-risk dispensing requirements and a desire to retain strategic influence, as well as achieving value for money.

A subsidiary was identified as the preferred option and was established in 2012. A contractual relationship governed service delivery. The Trust retained oversight at board and shareholder levels. The subsidiary and Trust collaborated to develop services to maximise patient care benefits.

Results:

By retaining the deep knowledge base of the Trust and utilising clinically trained pharmacists, this subsidiary provided all outpatient dispensing services from day 1. It has expanded in scale and scope:

	Number of outpatients attending the pharmacy	Total number of dispensed items	Turnover
Year 1 (2012/13)	72,685	202,976	£12.6m
Year 6 (2018)	94,448	351,428	£29.6m

Savings were reinvested, creating new retail and waiting areas. Waiting times were reduced by 42% through lean improvement and introducing robotics. Patients reporting a satisfactory experience increased from 35% (in 2012) to 65% (2018).

Further benefits to patient care, through service expansion, include;

- Clinically integrated home-based services
- Independent Prescribing Pharmacists of 'hospital-only' medicines
- FP10 dispensing 100 hours/week
- TTO dispensing
- Urgent medicines supply
- Sexual health services
- Travel clinic

Discussion and conclusion:

This Trust has found that a wholly-NHS-owned subsidiary not only enables cost effective dispensing, but also retains strategic influence and drives innovation. It has shown that this model of outsourcing is very effective in maximising benefits for patient care.

References:

1. NHS Benchmarking Network. Pharmacy and medicines optimisation benchmarking 2018, summary report; 2018. Available at: <https://www.nhsbenchmarking.nhs.uk/news/2018-pharmacy-and-medicines-optimisation-project-results-published> (accessed February 2019)
2. Lord Carter of Coles. Operational productivity and performance in English NHS acute hospitals: Unwarranted variations An independent report for the Department of Health by Lord Carter of Coles; 2016. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/499229/Operational_productivity_A.pdf (accessed February 2019)

Poster 16: Delay in Venous Thromboprophylaxis Initiation: Evaluation of the main causes

Noushin Mashatan¹, Farzaneh Dastan², Jamshid Salamzadeh², Babak Sharif-Kashani³

¹ Student Research Committee, School of Pharmacy, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

² Department of Clinical Pharmacy, School of Pharmacy, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

³ Department of Cardiology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Background and Introduction

Venous thromboembolism (VTE) includes Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE) which causes morbidity and mortality (1). Most hospitalized patients are at risk of VTE (1). An accurate prevention of VTE is vital to avoid fatal acute complications of VTE, long-term complications of post phlebitis syndrome and pulmonary hypertension. It is also important to avoid unjustified anticoagulation therapy due to the risk of bleeding.

Aims and Objectives

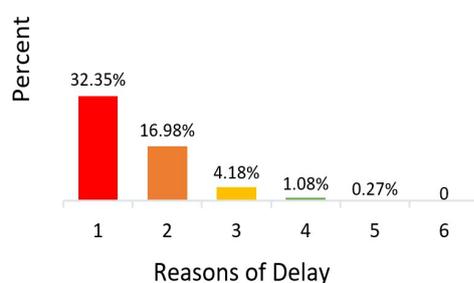
This research was done to determine the rate of delay in VTE prophylaxis initiation and evaluation its causes.

Method

In this study which was done in 2017, necessary medical records of 742 patients were admitted to internal medicine and CCU wards of Masih Daneshvari hospital, were gathered through a valid checklist; it was developed based on the expert's opinion which was consisted of some sections such as demographic data, past medical history, Caprini score table, bleeding risk factors and main reasons of delay in the VTE prophylaxis initiation. According to guidelines (2), first six hours after admission is the golden time for thromboprophylaxis initiation. The medical records were reviewed by investigators and were analysed by SPSS software version 23.

Results

The patients had the same distribution pattern in term of demographic parameters ($P > 0.05$). Based on Caprini score %34.3 and %50.1 of patients had high and very high VTE risk respectively. Also,



1. Delay in medication prescription by the physicians

2. Delay in drug administration by the nurses

3. Delay in visit by the physicians

4. Delay in cardiologist consultation

5. Delay in reorder

6. Lack of the medication in the stock

based on HAS-BLED score, %4.9 of patients had high bleeding risk, so were excluded from the study. However, among patients with high and very high VTE risk and without high bleeding risk, %53.23 had delay in thromboprophylaxis initiation; about its causes:

Discussion and Conclusion

This study revealed that delay's main reason in starting thromboprophylaxis was the delay in prescribing it by the ward doctors. Hence, by implementing an up to date hospital guideline, involving clinical pharmacist's consultation and making sure all the doctors are aware of and have access to the guidelines, VTE and its complications will decrease significantly.

References

1. Sharif-Kashani B, Mohebi-Nejad A, Abooturabi SM. Estimated prevalence of venous thromboembolism in Iran: Prophylaxis still an unmet challenge. *Tanaffos*. 2015;14(1):27.
2. Alldredge BK, Kimble K, Anne M, Lloyd Y, Kradjan WA, Guglielmo BJ. 2009. *Applied Therapeutics: The Clinical use of Drugs*. Wolters Kluwer Health/Lippincott Williams & Wilkins: Philadelphia.

Poster 17: The potential role of community pharmacists in supporting patients with mental health conditions.

Authors: E. Scarpato¹, P Clarke², A Husband¹

1. School of Pharmacy, Faculty of Medical Sciences, Newcastle University.
2. Pharmacy Department, Northumberland Tyne and Wear NHS Foundation Trust

Background/Introduction:

Community pharmacy has a huge public health role and is highly valued by patients. Following the 2018 publication of the document 'No Health without Mental Health' by the Royal Pharmaceutical Society¹ the potential for community pharmacy to be more involved in the care and support of patients with mental health disorders was outlined.

Aims and Objectives:

To examine the potential role of community pharmacists in supporting patients with mental health conditions and the barriers preventing this.

Method: A combination of an online survey, semi structured interviews and a focus group carried out with community pharmacists in the North East.

Results:

- 34 community pharmacists participated in the study.
- Identified need to help support this group of patients is important especially around physical health interventions, medication reviews
- Funding, staffing and time were major barriers.
- Adequate local guidelines to support the additional services are required.
- Lack of expertise, training and experience in mental health were concerns.
- Key is to further integrate community pharmacy into care systems so that patients can be referred easily. The use of PharmOutcomes[®] for referrals was supported.
- There is still a stigma evident from some respondents in terms the risk that patients with mental health pose e.g. violence.

Discussion and conclusion:

Community pharmacy clearly has a key place in the care and treatment of patients with mental health conditions. Pharmacists want to offer this support but there are barriers to overcome in terms of knowledge, confidence, adequate funding models and crucially the stigma.

Reference:

1. Royal Pharmaceutical Society. No health without mental health: How can pharmacy support people with mental health problems? (Internet). 2018 Jun. Available from: https://www.rpharms.com/Portals/0/Documents/RPS%20mental%20health%20roundtable%20report%20June%202018_FINAL.pdf?ver=2018-06-04-100634-577

Poster 18: Identification and assessment of delirium on Intensive Care Unit at Harefield Hospital to improve patient experience on Critical Care

Nisha Bhudia, Dr S Noronha, Virginia Kendle, Adam Rowland, Sheila Matharu, Dr Alex Rosenberg, Mr Sunil Bhudia. Royal Brompton and Harefield NHS Foundation Trust

Background and Introduction:

Delirium is one of the greatest problems in modern intensive care practice affecting up to 80% of all patients admitted to Intensive Care unit (ICU). Experiencing delirium can be extremely distressing and can have a profound negative impact on the patient and their families.

Aims and Objectives

Aim for the project is to reduce the incidence of delirium, have a plan in place for patients who are increased risk of delirium. To achieve this, we aim to complete the following:

- Ensure that assessment of delirium is completed and documented at least once in a 12hour shift
- Capture 100% compliance on documentation of delirium assessment
- Ensure documentation on smoking and alcohol intake is documented on our electronic records as these are factors that contribute to delirium postoperatively

Method

Meeting set up with nurses and doctors to establish current practice and how to improve assessment and documentation of delirium

Tools added by each bed space to prompt and complete the assessment in systematic order, this included flash cards and electronic copies by bed space

Education and teaching session delivered to all nursing staff on assessment and treatment of delirium

Documentation of history of smoking and alcohol intake to be completed in the medical admission notes for all patients on critical care

Results

Completion of delirium assessment and documentation continuously monitored on each shift on electronic system and data extracted by Clinical Data Warehouse.

Figure 1: Percentage of CAM ICU assessment documented on ICCA

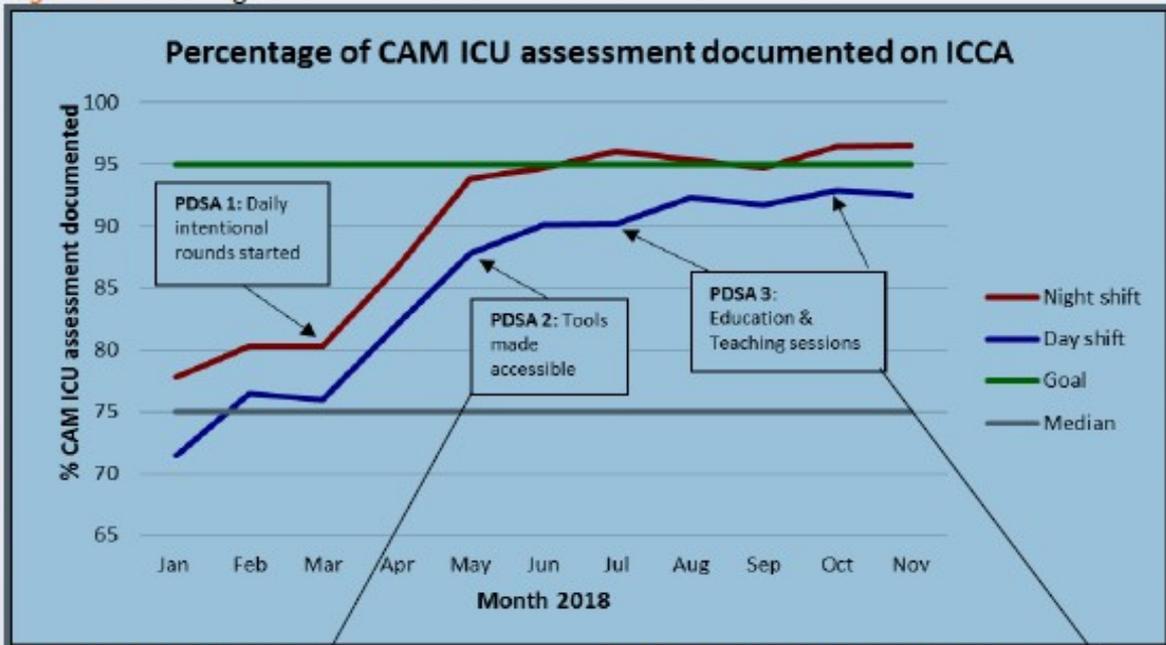


Figure 2: CAM ICU tool

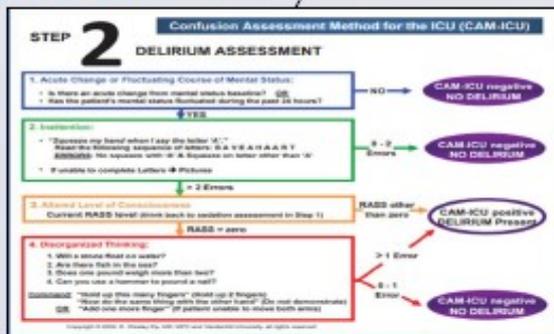
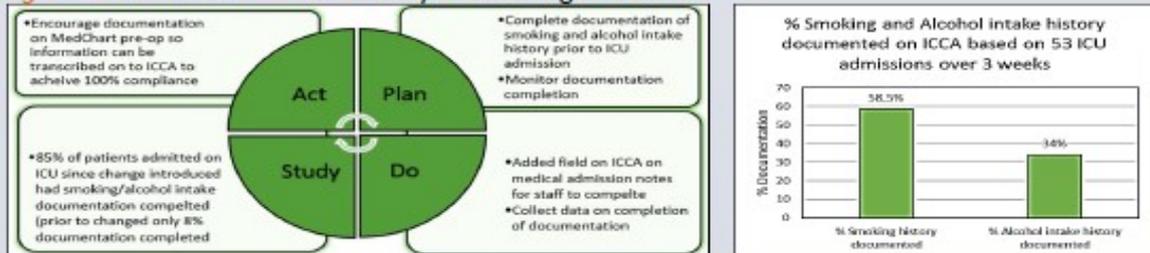


Figure 3: Education and teaching session



Figure 4: Documentation of history of smoking and alcohol



Discussion and Conclusion

- 43% increase in assessment and documentation of delirium on ICU from March 2018 to November 2018 (overall).
- Trend towards achieving 96.4% (night shift) and 92.9% (Day shift) delirium assessment done and documented by November.
- 58.5% (smoking) and 34% (alcohol intake) of patients admitted to ICU had documentation completed medical admission note.
- Completing delirium assessment and documentation leads to timely and appropriate treatment for patients, and potential reduction in ICU and hospital stay.

References

1. Delirium: prevention, diagnosis and management (CG103). NICE guidelines. Published 28 July 2010
2. Delvin et al. Clinical Practice Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU. September 2018, Volume 46, Number 9. Online special article.

Poster 19: A Green Sustainable Pharmacy

Sam Coombes Higher Level Pharmacy Technician, Worthing Hospital, Western Sussex Hospitals Foundation Trust

Every year the world is using up to 500 billion plastic bags (1) which are contributing to an ecological disaster and affecting every living organism. Research has shown that the NHS is responsible for 1 in every 100 tonnes of landfill rubbish (2). In context, between April 2015 and April 2018, the Pharmacy Department at Western Sussex Hospitals NHS Foundation Trust (WSHfT) used over half a million items of single-use plastic costing on average of £21,000 annually.

Aims and Objectives

- 1). Identify all single-use plastic within the Department
- 2). Reduce the amount of plastic dispensed by the Department
- 3). Educate staff to understand the problem and work in collaboration to encourage alternative solutions.

Method

- Using electronic order records to identify plastic used within the Department
- Understand real world usage
- Select major areas of plastic usage
- Research effective environmental friendly solutions

Results

This will result in a total annual reduction of single use plastic by 68,159 items

Original plastic usage	None plastic option	Annual reduction in number of plastic bag used
Grey plastic bags	paper bag and or reusing cardboard boxes	13,993
TTO plastic bags	TTO paper bags	25,833
Patient-own plastic bags	Inserting frosted Perspex into the front of the locker	24,333
Fridge bags:	reusable canvas antimicrobial coated bags	4,000

Discussion and Conclusion

- ❖ Replacing clear Perspex with frosted Perspex windows in all patient own medicines lockers, to maintain confidentiality; green patient-own plastic bags are no longer required.
- ❖ Grey Transport bags replaced by reusing cardboard boxes, as well as using more of the small paper bags previously underutilised.
- ❖ Fridge plastic bags replaced with plastic coated canvas reusable bags penetrated with an antimicrobial coating.
- ❖ The plastic TTO bags switched to paper only taking a matter of months to degrade.

It was essential to understand how each of the products was being used so that the solution met real world demands. Once the item for change had been chosen it was then a matter of finding cost-effective environmental friendly solutions.

There was a small investment at the outset of £6628 that will be cost neutral to the Trust after 3 years and thereafter **saving £2783 per annum.**

References

- (1) <http://www.emro.who.int/ceha/ceha-news/world-environment-day-2018-a-call-to-beat-plastic-pollution.html> Geyer, R., Jambeck, J. R., & Law, K. L. (2017). Production, use, and fate of all plastics ever made. *Science Advances*, 3(7), e1700782.
- (2) Taking the Temperature-Towards an NHS response to Global Warning, 2007. London: NHS Confederation and NEF.

Poster 20: Use of newer oral P2Y₁₂-receptor antagonists (ticagrelor and prasugrel) as a second antiplatelet agent in obese patients undergoing elective percutaneous coronary intervention (PCI) as compared to clopidogrel.

Patel, R, Fhadil S, Wright P, Antoniou S. Barts Health NHS Trust, London

Background and Introduction

Dual antiplatelet therapy with aspirin and a P2Y₁₂-receptor antagonist, is prescribed for a defined period following elective percutaneous coronary intervention (PCI). Clopidogrel is the guideline agent of choice. In patients presenting with an acute coronary syndrome (ACS) event, ticagrelor and prasugrel improve ischaemic outcomes through greater platelet inhibition, but are associated with an increased bleeding risk.⁽¹⁾ Ticagrelor and prasugrel are only licensed in ACS patients.

Studies show higher levels of platelet aggregation in obesity with a reduced response to antiplatelet agents.⁽¹⁾ Currently no guidelines exist on optimal antiplatelet prescribing following elective PCI in obese patients (body mass index (BMI) >30kg/m²).

Aims and Objectives

To appraise evidence on use of oral P2Y₁₂-receptor antagonist therapy in obese patients following elective PCI.

Method

Relevant literature was obtained through searching EMBASE, Medline, Pubmed and Cochrane. Three studies comparing the effects of P2Y₁₂-antagonists on platelet inhibition in obesity were analysed. As a research topic, ethics approval was not required.

Results

Table 1: Main findings from the studies included in the review.

<i>Trial</i>	<i>Main Findings</i>
--------------	----------------------

Olivier et al ⁽¹⁾ (2016)	Recruited 238 patients between 50-120kg post PCI after ACS. Platelet reactivity after administration of clopidogrel varies with body weight ($p<0.001$) which was not present with prasugrel ($p=0.354$) nor ticagrelor ($p=0.382$). Levels of platelet aggregation in the clopidogrel group was highest in patients with a BMI between 30-34.9kg/m ² , this was not seen in patients treated with ticagrelor or prasugrel.
Deharo et al ⁽²⁾ (2014)	Recruited 186 patients after ACS (77 overweight patients (BMI 25-29.9kg/m ²) and 46 obese patients). Platelet inhibition by ticagrelor is not affected by BMI, no difference was observed in obese patients and non-obese patients ($p=0.2$). Patients on prasugrel had higher levels of platelet reactivity in obese patients compared to non-obese patients ($p<0.01$).
Pankert et al ⁽³⁾ (2014)	Recruited 1542 patients post PCI (1206 non-obese patients (BMI<30kg/m ²) and 336 obese patients) Increased BMI is associated with higher platelet reactivity regardless of antiplatelet therapy. Incidence of high platelet reactivity was higher in obese patients ($p<0.05$ for all regimens). Obese patients had a lower incidence of bleeding complications.

Discussion and Conclusion

Multiple P2Y₁₂ inhibitors are available allowing individualised patient regimens that weigh up thrombotic and bleeding risks. Several factors affect platelet inhibition in obesity, which require consideration. Specific recommendations for antiplatelet regimens in the elective obese cohort are not currently available.

Data suggests a reduced response to clopidogrel at extreme body weights. Efficacy of ticagrelor is consistent across different weights, when compared to clopidogrel and prasugrel. This demonstrates ticagrelor as an effective antiplatelet option in obesity.

The recommendation would be to offer ticagrelor to elective obese patients (BMI >30kg/m²). Studies determined the impact of body weight on platelet inhibition, but did not assess clinical outcomes (e.g. stent thrombosis), hence need for further evaluation. Through its increased potency, ticagrelor is associated with a greater bleeding risk. An individualised approach is required in obese patients identified as having a high bleeding risk.

References

1. Olivier CB, Schnabel K, Weber S, Zhou Q, Bode C, Moser M, et al. Platelet reactivity after administration of third generation P2Y₁₂-antagonists does not depend on body weight in contrast to clopidogrel. *Journal of Thrombosis and Thrombolysis*. 2016;42(1):84-9.
2. Deharo P, Pankert M, Bonnet G, Quilici J, Bassez C, Morange P, et al. Body mass index has no impact on platelet inhibition induced by ticagrelor after acute coronary syndrome, conversely to prasugrel. *Int J Cardiol*. 2014;176(3):1200-2.
3. Pankert M, Quilici J, Loundou AD, Verdier V, Lambert M, Deharo P, et al. Impact of obesity and the metabolic syndrome on response to clopidogrel or prasugrel and bleeding risk in patients treated after coronary stenting. *Am J Cardiol*. 2014;113(1):54-9.

Poster 21: Implementation of a Clinical Prioritisation Tool for Inpatients within a Mental Health Trust

Miss Joanne Hainsworth, Leeds & York Partnership NHS Foundation Trust, University of Leeds

Background and Introduction

National drivers from Lord Carter of Coles (2016) indicate there is a need for complex pharmaceutical input into the community mental health teams (CMHT). To achieve this, effective prioritisation and time saving measures should be introduced the inpatient setting.

Aims and Objectives

- To investigate advantages and disadvantages by obtaining feedback from key stakeholders, through use of brainstorming, surveys and a focus group meeting
- To design and pilot a clinical prioritisation tool on an electronic prescribing system
- To continue to review the effectiveness of the tool via ongoing audit

Method

A stakeholder analysis was carried out to identify the stakeholders who would be of highest impact and to be able to take their viewpoint into consideration. Stakeholders of lower impact were contacted via email and invited to take part in a survey. Higher impact stakeholders were invited to a focus group, using the Six Thinking Hats® tool (de Bono, 2018). From this feedback, a guideline was written, and this was implemented using a plan, do, study, act (PDSA) cycle (NHS Improvement, 2018)

Results

A small PDSA pilot cycle using the guideline was implemented on 3 separate psychiatry wards over a period of 2 weeks. This reported an average time saving of 12 minutes per day for each ward, as well as economic savings. The pharmacy team involved fed back anecdotal evidence that the tool was useful to increase safety when handing over clinical information, and it was felt that it did aid identification of patients with the greatest pharmaceutical need.

Discussion and Conclusion

The clinical prioritisation tool was effective for time saving and for prioritising patients in terms of clinical need. Further PDSA cycles are required to review effectiveness of the clinical prioritisation tool which will be implemented within the trust.

References

1. Lord Carter of Coles (2016) NHS Operational Productivity: Unwanted Variations (Mental Health Services, Community Health Services). [Online]. [Date Accessed 31/10/2018]. Available from: <http://nhsproviders.org/media/4929/nhs-providers-otdb-nhs-operational-productivity-in-mental-health-and-community-health-services.pdf>
2. NHS Improvement (2017) Quality, Service Improvement and Redesign (QSIR) Tools by Stage of Project [Online]. [Date Accessed 02/11/2018]. Available from: <http://improvement.nhs.uk/resources/quality-service-improvement-and-redesign-qsir-tools-stage-project/#start>
3. De Bono (2018) Six Thinking Hats. *The de Bono Group, LLC*. [Online] [Date Accessed 12/11/2018]. Available from: http://www.debonogroup.com/six_thinking_hats.php
4. NHS Improvement (2018) Plan, Do, Study, Act (PDSA) cycles and the model for improvement. [Online]. [Date Accessed 22/03/2019]. Available from: <https://improvement.nhs.uk/resources/pdsa-cycles/>

Copy of Pilot Study Guideline for Reference

Leeds and York Partnership 
NHS Foundation Trust

Clinical Prioritisation Tool for Inpatient Pharmacy Services

On admission to hospital, all inpatients should be assessed by the pharmacy team using the clinical prioritisation tool to give a priority rating as part of medicines reconciliation process. This process ensures appropriate handover between the pharmacy team, minimises the risk of adverse drug reactions and ensures that patients are reviewed at a time appropriate to their pharmaceutical care plan.

Inpatients may be designated as being either 'standard' or 'high' risk. If a patient is identified as 'high' risk at the beginning of their admission, this should be documented by assigning a 'pharmacy review' on the EPMA system. This should specify both the date, and actions required at the next review. Any relevant information for handover should also be added using the 'comment' function on the inpatient's 'Level 2' on EPMA to form part of the ongoing pharmaceutical care plan.

As the inpatient progresses through their admission, their priority status may change depending on clinical need. As a 'pharmacy review' is acknowledged, the patient should be re-assessed to check whether the patient is 'standard' or 'high' risk. Note that this guideline should not replace the need to review 'standard' risk patients on a regular basis appropriate to the inpatient setting.

If a patient is deemed to be of 'high' risk but does not fit into the criteria below, a pharmacist can delegate a patient as 'high' risk as deemed clinically appropriate. If the date for 'pharmacy review' for a patient falls on a weekend, this should be handed over to the weekend staff for appropriate follow up and review.

The following patients would be classed as 'high' risk and therefore should be assigned a pharmacy review:

- Patients with acute renal impairment (AKI \geq 1)
- Patients with acute hepatic impairment (LFT $>$ 3 times upper limit)
- Patients with chronic severe renal impairment (Stage 4 or 5 CKD) or chronic hepatic impairment
- Patients with abnormal blood results requiring further intervention including, but not limited to red results for clozapine, high CK for antipsychotics (risk of NMS) and lithium levels higher than suggested normal range
- Patients receiving medications which require intensive therapeutic drug monitoring (TDM) including, but not limited to clozapine, lithium, phenytoin and carbamazepine
- Patients receiving 'high risk' and/or 'time critical' medications including, but not limited to insulin, methotrexate, zuclopenthixol acetate, Parkinson's medications and warfarin
- Patients who have returned from acute hospital following period of leave for physical health intervention
- Patients requiring high dose antipsychotic monitoring (HDAT) that is overdue
- Patients with new swallowing difficulties
- Patients receiving electro-convulsive therapy (ECT)
- Patients on the palliative care pathway
- Patients over the age of 65 or at risk of cognitive impairment with an anticholinergic burden (ACB) score $>$ 3

Written by: Joanne Hainsworth, Band 7 Clinical Pharmacist	Checked by: Joanne Goode, Deputy Chief Pharmacist	Approved by: To be reviewed by Medicines Optimisation Group (TBC)
Date of Approval PILOT STUDY USE ONLY	Implemented from December 2018	Review Date TBC

Page 1 of 1

Poster 22: Medicines optimisation with biosimilars: A person-centred approach to switching

Kalveer Flora, Nina Barnett, London North West University Healthcare NHS Trust (LNWUHT), London.

Background

A biosimilar is a biological medicine produced by a manufacturer other than originator, with the same safety and efficacy as the original biologic. Their use has been promoted across the NHS¹ to save costs in turn, improving access to other treatments such as cancer. The adoption of biosimilar usage supports the NHS Long term plan² in relation to medicines optimisation. Previous successful biosimilar switches were based on engagement with patients and addressing concerns prior to switching³.

Objectives

Exploring patient views, knowledge and thoughts on biosimilars to optimise consultations.

Method

From April 2018, patients receiving treatment with Humira® (originator) who attended appointments at the Arthritis Centre were verbally informed about a potential future change to their Humira®. In December 2018, once the allocated biosimilar for London was known, patients were sent an information letter detailing the switch to Hyrimoz® (biosimilar). Simultaneously, those patients who attended clinic appointments were informed face to face. A questionnaire was devised for use with patients during their “switch” consultation. All patients were asked if they were willing to complete the questions as part of research. This study did not require ethics approval. Information from previous patient preference studies³ was included in the questionnaire which was devised following a pilot, at a scoping meeting for experts in shared decision making. The patient responses were reviewed and analysed grouping the responses into themes.

Results

Between 14th November 2018 and 20th February, 50 patients received the questionnaire and of whom 48 switched to a biosimilar, 2 did not – all results were included (intention to treat). No patients refused to complete the questionnaire. Approximately half of the patient (48%) had no knowledge on biosimilars. Most patients had questions around administration, including the device, storage, site reactions and potential pain. 45% of patients asked about efficacy and whether the drug would work the same as Humira®. When patients were asked about any concerns they had when switching from Humira® to Hyrimoz®, 50% reported they had no concerns. In contrast, the other 50% reported they had specific concerns such as disease remission, their personal welfare and side effects. When patients were asked how important it is for them to save money for the NHS through switching to a biosimilar, 60% reported it as important.

Conclusions

A successful switch requires patient engagement with healthcare professionals addressing any potential concerns pre-switching. A validated template can be adopted by each healthcare professional to optimise their consultations with biosimilar switching. One limitation to this study was the lack of a validated question tool. There was also potential bias (social desirability) as the questions asked and responses obtained were recorded by the same individual.

References

1. Medicines and diagnostics Policy Unit, commissioning intentions: adalimumab, NHS England, version 1, 2018
2. NHS England, The NHS Long Term Plan, version 1, 2019
3. Penn H, Shah K, Flora K. Clinical outcomes of a multi-disciplinary switching programme to biosimilar Etanercept for patients with rheumatoid arthritis. *Rheumatology*, Volume 57, Issue suppl_3, 1 April 2018.

Poster 23: Analysis of the resource requirements of an environmentally driven transition from pressurised metered dose inhalers (pMDIs) to dry powder inhalers (DPIs).

Dr Duncan Jenkins, Morph Consultancy Ltd

Jas Johal, Pharmacist Consultant

James Mahon, Health Economics Consultant

This work was commissioned from Morph Consultancy by Chiesi Ltd.

Background and Introduction

The NHS Long Term Plan includes an action to reduce the carbon footprint of health and social care, including a shift to lower carbon inhalers.¹ We conducted an exploratory analysis of the resource implications of a transition from pMDIs to DPIs.

Aims and Objectives

To estimate the service resources required to manage the transition with three different 'switch' methods with varying levels of patient support.

Method

The number of patients eligible for transition from pMDIs to DPIs was estimated from Quality and Outcomes Framework prevalence data for asthma and COPD.² The cohort sizes were adjusted to account for patients with both diagnoses. Local data from a Clinical Commissioning Group (CCG) practice were used to estimate the proportion of these cohorts currently using only pMDIs. The staff resource impacts of managing a transition were estimated for three different service models. These were: 1. A transition managed by sending a letter to patients. 2. An opportunistic approach, where patients are counselled during an annual review and followed up a month later with an additional appointment. 3. A transition managed by clinical pharmacists where patients receive an initial appointment and a follow up appointment a month later. The cost of each transition model was estimated using unit costs from a standard source³ and expressed for a 300,000 population CCG.

Results

The estimated costs for each model were £123,451 for model 1, £231,762 for model 2 and £411,734 for model 3.

Discussion and Conclusion

This analysis provides a conservative estimate of the resource requirements needed to manage a transition from pMDIs to DPIs. Many CCGs are likely to opt for service model 3 in order to reduce the risk of patients adopting poor inhaler technique and losing control of their condition. This could add further service costs as well as having an impact on patient quality of life.

References

1. The NHS Long Term Plan, NHS England, January 2019.
2. <https://digital.nhs.uk/data-and-information/publications/statistical/quality-and-outcomes-framework-achievement-prevalence-and-exceptions-data/2017-18> Accessed 4/3/2019.
3. Unit Costs of Health and Social Care 2017, Personal Social Services Research Unit.

Poster 24: What is the impact of an enhanced pharmacy team on the short stay model?

Akani A¹, Bohan G¹, Mohamed M¹, Saddick A¹

¹University Hospitals of Derby and Burton NHS Foundation Trust

Background and Introduction

The short stay medical wards play a central role in maintaining patient flow from the medical assessment unit (MAU) by managing patients who require 24-48 hours in-patient stay. In 2015, three prescribing pharmacists were appointed and undertook a non-medical prescribing course. In 2017 and 2018, a fourth pharmacist and four medicine management technicians were recruited respectively.

Aims and Objectives

- Improve quality, accuracy and safety of prescribing by ensuring all patients' regular medications are reconciled and reviewed for clinical appropriateness within 24 hours
- Attend ward rounds and support the MDT with on-the-spot clinical advice and implementation of prescribing decisions, promoting use of clinical guidelines and medicine optimisation
- Help support quality, safety and timeliness of discharge medication
- Provide clinical cover to the wards 7 days a week

The service seeks to provide patients with a high quality, patient-focused experience. Key performance indicators (KPIs) were developed to help assess the impact and quality of the service.

Method

A wide range of qualitative and quantitative KPIs were devised. KPIs illustrated below include medicines reconciliation performed within 24 hours of patient admission, number of discharges seen by pharmacy and number of patients receiving a clinical intervention were collected since the service was implemented in April 2015 until December 2018.

Results

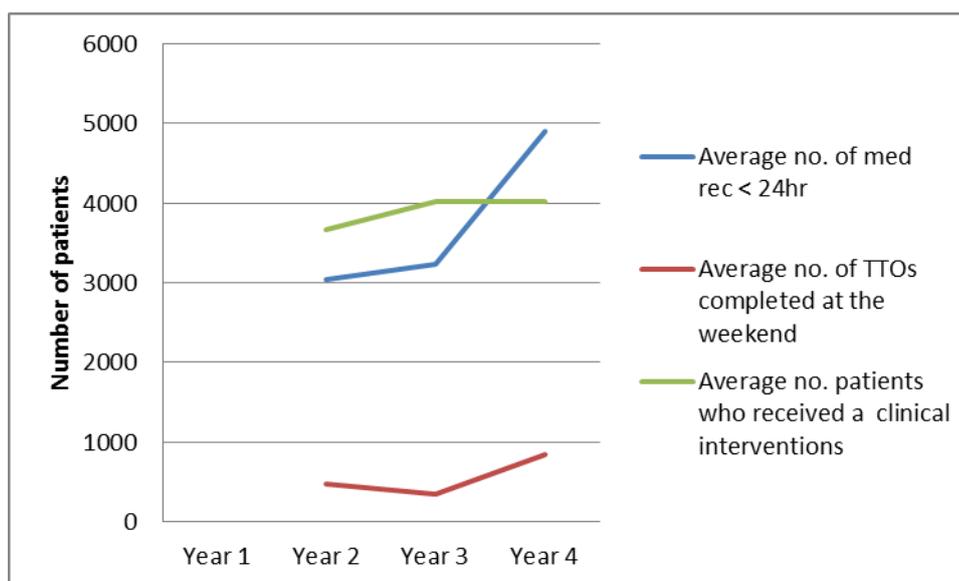


Figure1: KPIs for the short-stay unit

Year 1 data were excluded from the graph as it was not standardised to other years as KPIs were undergoing continuous review and development.

Discussion and Conclusion

The KPIs demonstrates an overall upward trend over the 4 year period. The impact of the MMT recruitment in year 4 is clearly evident. The overall patient population has continually increased each year. Patients often have significant clinical interventions, which current KPIs do not reflect. Future KPIs will be amended to reflect this workload. Weekend working has improved patient safety, quality of discharge and has positively impacted on the operational activities of the wider pharmacy department.

Poster 25: What is the impact of an enhanced pharmacy team on the short stay model?

Akani A¹, Bohan G¹, Mohamed M¹, Saddick A¹

¹University Hospitals of Derby and Burton NHS Foundation Trust

Background and Introduction

The short stay medical wards play a central role in maintaining patient flow from the medical assessment unit (MAU) by managing patients who require 24-48 hours in-patient stay. In 2015, three prescribing pharmacists were appointed and undertook a non-medical prescribing course. In 2017 and 2018, a fourth pharmacist and four medicine management technicians were recruited respectively.

Aims and Objectives

- Improve quality, accuracy and safety of prescribing by ensuring all patients' regular medications are reconciled and reviewed for clinical appropriateness within 24 hours
- Attend ward rounds and support the MDT with on-the-spot clinical advice and implementation of prescribing decisions, promoting use of clinical guidelines and medicine optimisation
- Help support quality, safety and timeliness of discharge medication
- Provide clinical cover to the wards 7 days a week

The service seeks to provide patients with a high quality, patient-focused experience. Key performance indicators (KPIs) were developed to help assess the impact and quality of the service.

Method

A wide range of qualitative and quantitative KPIs were devised. KPIs illustrated below include medicines reconciliation performed within 24 hours of patient admission, number of discharges seen by pharmacy and number of patients receiving a clinical intervention were collected since the service was implemented in April 2015 until December 2018.

Results

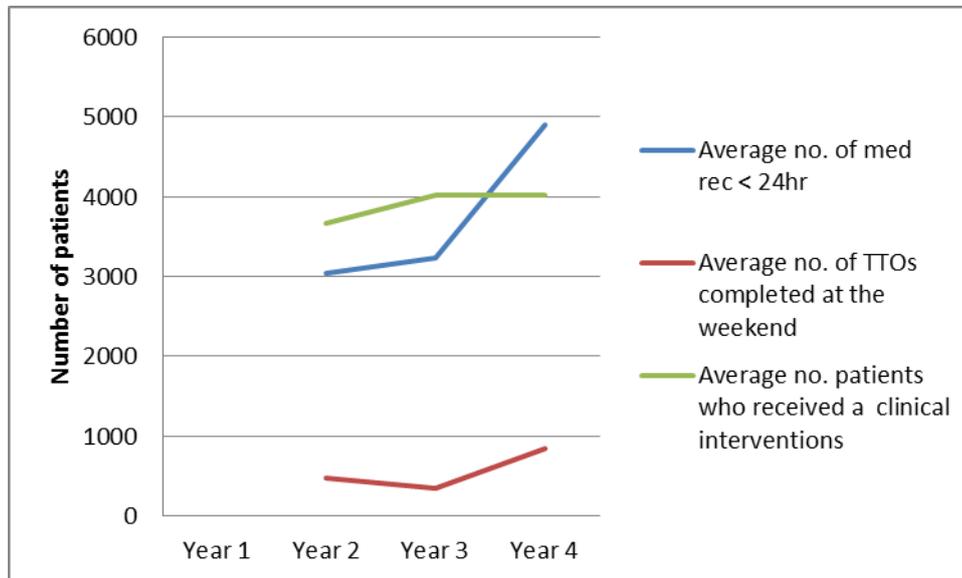


Figure1: KPIs for the short-stay unit

Year 1 data were excluded from the graph as it was not standardised to other years as KPIs were undergoing continuous review and development.

Discussion and Conclusion

The KPIs demonstrates an overall upward trend over the 4 year period. The impact of the MMT recruitment in year 4 is clearly evident. The overall patient population has continually increased each year. Patients often have significant clinical interventions, which current KPIs do not reflect. Future KPIs will be amended to reflect this workload. Weekend working has improved patient safety, quality of discharge and has positively impacted on the operational activities of the wider pharmacy department.