Oral Presentation Awards — FIRST PRIZE

Antipsychotic prescribing in black and white hospitalised patients: A cross sectional study

Anne Connolly, David Taylor, Anna Sparshatt, Victoria Cornelius
The South London and Maudsley NHS Trust

Objectives
To determine if antipsychotic prescribing differs between black and white patients.

Design
Cross sectional survey with collection of multiple confounding factors affecting outcomes.

Setting
Eight secondary care units in England.

Participants
938 black or white inpatients prescribed regular antipsychotics on day of survey.

Main outcome measures
Antipsychotic dose (expressed as a percentage of licensed maximum), high dose (being prescribed antipsychotic medication above maximum dose), polypharmacy (more than one antipsychotic prescribed), type (typical or atypical antipsychotic) and costs.

Results
There were no significant differences in any outcome by ethnicity; dose (adjusted percentage difference 2.34, 95% confidence interval [CI] –2.98 to 18.63; P=0.39); high dose (adjusted odds ratio [AOR] 1.08, CI 0.68 to 1.7; P=0.75); polypharmacy prescribed (AOR 1.35, CI 1.0 to 1.83; P=0.05); polypharmacy administered (AOR 1.13, CI 0.8 to 1.6; P=0.48); typical antipsychotic (AOR 1.31, CI 0.91 to 1.91; P=0.15); cost (adjusted effect size 3.01, CI –8.54 to 14.56; P=0.61).

Conclusions
Antipsychotic prescribing quality did not differ between black and white patients.

Oral Presentation Award — RUNNER UP

Developing psychotropic medicine information leaflets for children and adolescents

Caroline Parker
Central and North West London NHS Foundation Trust

The manufacturer’s patient information leaflets provided with most medicines are not in suitable format for children and in the case of off-label use often state “do not use in children”. There is a paucity of nationally available and independently produced psychotropic medication leaflets for this age group. Nevertheless, the NSF for children and young people outlines the need for clear understandable and up-to-date information about medicines in various formats and this provided the stimulus for this project.

Aims and objectives
The aim was to develop age-appropriate medicines information leaflets for service users aged 8–12 years. The objectives of the project were to write suitable material in child-friendly English language, to present it in an appealing format and to identify the most commonly prescribed medicines in this age group.

Methods
A list of commonly prescribed psychotropics across the trust was derived from an audit of prescribing practice. A 45-minute, audio-taped focus group to which all children at the CAMHS inpatient unit were invited was held to gather opinions and preferences regarding the design and content of leaflets. The text was jointly written by the CAMHS pharmacist and consultant psychiatrist. The general layout and content was agreed with the CAMHS MDT. Advice was sought from the trust legal department. The project did not require ethics approval as it was deemed a service improvement initiative rather than original research.

Agreed texts were sent to designers for formatting and variety of designs, pictures and layouts were reviewed by the children and the team prior to approval for printing.

Results
Leaflets were produced for methylphenidate, atomoxetine, fluoxetine, olanzapine, risperidone for behavioural disturbances and risperidone for psychotic disturbances and made available on the trust’s intranet and in

References
Poster Presentation Awards
A. Service Development — AWARD WINNER

Non-registered practitioner medicines training programme

Petra Brown, Karen Bennett
Manchester Mental Health & Social Care Trust

Mental health services employ a range of staff with diverse backgrounds and qualifications working within inpatient and community settings. Many of these staff groups such as social workers, support workers and occupational therapists do not have any official medicines management training. However they may be providing the majority of ongoing care for service users; including delivering medication, aiding compliance, providing advice on side effects or signposting to more in-depth advice.

The need for a medicines training programme was identified following an audit highlighting dependence on unqualified staff during medicines rounds. This was supported by incidents involving unqualified staff in community services. Under the NMC code of conduct the qualified nurse is responsible for the medication administered even if not personally administering. ‘Trust solicitors agreed that should a member of nursing staff delegate medication duties to another member of staff they should: do this as per NMC revised medicines management standards which include delegation,’ and only delegate to staff who successfully completed the NRP programme.’

Aims and objectives
● To produce a training programme that met needs of different teams and staff groups
● To pilot the programme and associated competency assessment
● To refine the training
● To produce an e-learning programme for commercial use

Method
The training plan was developed by the lead nurse for medicines and initially piloted with a group of inpatient and community staff. Following the pilot the programme was refined utilising feedback from the pilot. In 2007 funding enabled the delivery of the programme in conjunction with Manchester University via the production of an e-learning programme free of charge. In 2009 the programme was adapted to make it more relevant to crisis and assertive outreach teams following a developmental programme for these teams. All staff roles were reviewed and this programme was delivered on three occasions to up-skill non registered staff in medicines management.

Results
The full programme has been run on seven occasions to over 120 staff, including social workers, psychologists and occupational therapists. Feedback demonstrates a greatly improved level of understanding around:

● Management of side effects, adverse effects and information
● Safe supply of medicines, both in inpatient and community settings
● Roles of individual staff
● Incident reporting and learning from medication incidents

After successful completion of the course, the member of staff must be assessed as competent by their line manager on at least three separate occasions to undertake the types of medication duties required in their specialist service. The lead nurse for medicines collates the competency assessments.

Discussion and conclusion
For the development and reconfiguration of services, medicines training was required for a diverse range of staff. With the drive to partnership working with the voluntary sector an e-learning programme provides assurance to the trust around the skills of staff providing continuing care from commissioned services. Mental health services are unique in their employment of a wide range of staff from varying disciplines and backgrounds and this course required much planning, piloting and reviewing before the final product was established.

References

Poster Presentation Awards
A. Service Development — RUNNER UP

Pharmacy service to a crisis/home treatment unit

Janet Yates
Lancashire Care NHS Foundation Trust

A national survey of Crisis/Home Treatment (CRHTT) teams was conducted in 2005–2006.1 Pharmacists were not mentioned specifically in team compositions, although there was an unidentified ‘other’ category which may have included pharmacists. It could be suggested that pharmacy staff may not be considered core team members and that pharmacy involvement within these teams may be limited. The survey states that “Development of CRHTT is driven by the view that alternatives to admission when in crisis are both desirable and possible.” Medication is one of the many tools that can be utilised to support this. Pharmacy involvement with Chorley CRHTT started in January 2007 and comprises 0.1WTE pharmacist.

Aims and objectives
● To ensure appropriate medicines management
● To provide accessible contact for medication queries
● To allow for pharmaceutical follow-up
● To be a resource for service users and carers, for medication related queries

Results
Over 100 visits to the team have been conducted. Examples of pharmaceutical interventions follow:

● Alterations to a patient’s medication regimen who was also taking several herbal remedies (GP and CRHTT were unaware) were suggested to reduce side effects and potential interactions
● Supporting patients with haphazard medication-taking regimens to improve medication adherence
A patient with ongoing extrapyramidal side effects was given advice and reassurance; dose adjustments were suggested to minimise other side effects.

**Conclusion**

The aims and objectives were achieved by supporting the initiation of home visits aimed at medicines management and a commitment to physical health monitoring for antipsychotics and mood stabilisers. The rationalisation of medication regimens of participating service users supported medication adherence and the service enabled the support of staff, patients and carers with medication-related queries.

Overall the increased pharmaceutical input into this team has been beneficial to both pharmacy and team members, as well as service users and carers for whom the service is provided.

**References**


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**Poster Presentation Awards**

**B. Research — AWARD WINNER**

A pharmaceutical perspective: the Randomised Injectable Opiate Treatment Trial

Jessica Purkiss, Yasmin Patel, Tanya Latham, Ros Prior

Tees, Esk & Wear Valley NHS Foundation Trust

Within the locality of Darlington there was a substantial illicit drug problem with significant risks to health and the community. The Randomised Injectable Opiate Treatment Trial (RIOTT) compares injectable opioids with standard methadone supplementation in terms of personal, economic, social and health related outcomes.

**Aims and objectives**

To overcome legal and practical hurdles of supplying large quantities of Controlled Drugs to a location distant to pharmacy, in a safe, secure, efficient and timely manner.

**Methods**

The RIOTT treatment protocols were complex combinations of supervised diamorphine or methadone injections twice daily, seven days a week, with oral methadone. It was agreed locally to dispense for individual clients, an excess of 1000 doses per week. Space for a dedicated on-site dispensary was identified within the base which is used tri-weekly.

The multidisciplinary team weekly reviews cases, and an electronic database of prescriptions is created from which prescriptions are printed for signing. Initially competency issues occurred concerning nursing staff, with administration and recording errors reported, resulting in a high staff turnover. Extensive training and support was provided regarding CD regulations; plus management of over-dosage with naloxone and adrenaline, because of continued illicit drug use by substance misusers.

**Results**

A dedicated pharmacy team has minimised drug expenditure reduced administration errors and saved nurses time with individual dispensing on-site. Complete adherence to CD secure storage and recording requirements has been achieved, fostering enhanced multidisciplinary team working and saving doctors’ time.

**Discussion and conclusion**

The pharmacy team has improved safety for the team and clients by implementing a way of working improving accuracy and minimising errors and supporting safer injecting practices.

**References**


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**Safety in doses?**

Matthew Elswood*, Ian Maidment†, Linda Mathews†

* Milton Keynes PCT Provider Services; † Kent and Medway NHS and Social Care Partnership Trust; † National Patient Safety Agency

In 2007 the National Patient Safety Agency (NPSA) published “Safety in doses”; a review of medication incidents reported to the agency between January 2005 and June 2006. Many medication incidents are preventable and effective management could reduce harm to patients and costs. Little is known about medication incidents that occur in the mental health and learning disability sectors.

**Methods**

This study involved analysis of medication incidents reported by mental health and learning disability settings using the Reporting and Learning Service (RLS) in 2007. A sample of 400 incidents was analysed by two experienced mental health pharmacists (ME, IM) in order to identify potential themes. Verification of the severity of the incidents was also attempted by independent assessment and comparing with RLS criteria. This analysis formed the basis of a specific chapter looking at incidents reported by mental health and learning disability settings in the recent update of “Safety in doses”.

**Findings**

Incidents reported by mental health and learning disability settings constituted 10.7% of all medication incidents reported in 2007. Incidents were most commonly reported from ward environments (255 incidents, 63.8%). There was a paucity of reporting from community settings (eg, recovery teams), where the majority of patients are managed. Eighty-one incidents (20.3%) involved errors in administration of medicines. Incidents reported as severe appeared to be reported based on their potential to cause harm rather than actual (resultant) harm. Clozapine and methadone appear to be associated with risk as do medicines prescribed for physical health problems. Omission of anticonvulsants appears to be a common incident in learning disability settings.

**Conclusion**

The fragmented nature of modern mental health services and lack of pharmacy support predisposes mental health and learning disability to risk of medication incidents. Reporting of medication incidents needs to be encouraged and the quality of reports improved in order for further learning to occur.

**References**

**Poster Presentation Awards**

**C. Audits/Surveys — AWARD WINNER**

Improving the prescribing of antimicrobial medication in a secondary care mental health trust

Chilton N, Hughes J, Prescott L
5 Boroughs Partnership NHS Trust, Cheshire

Infection issues are important and newsworthy. The CQC requires all NHS Trusts to have guidelines to promote the safe and effective use of antimicrobial medication to prevent drug resistance (including MRSA) and problems with *Clostridium difficile*. This paper outlines the action taken by the 5 Boroughs Partnership NHS Trust to improve documentation and prescribing in this area.

**Aims and objectives**

1. Evaluate the impact of an implemented action plan following the previous audit
2. Assess the impact of a clinical pharmacy service.

**Methods**

In-patient prescriptions were reviewed to identify antimicrobial medication prescribed during March 2009. Prescribed antimicrobials triggered completion of the audit tool. Medical notes were consulted to determine documentation standards and where deviation from prescribing guidelines was identified. Where no rationale for deviation was documented, medical teams were requested to amend the prescription as per guidelines. The data collected (pre and post pharmacy intervention) was compared with previous results.

**Standards**

The Infection Control Committee agreed the criteria for the audit; these included consideration of sensitivity, prescribing, formulary choice and documentation.

**Results**

The results are set out in Table 1 (below).

**Discussion and conclusion**

The previous action plan resulted in widespread communication of the findings, inclusion of antimicrobial prescribing guidance on the doctor induction program, wider distribution of the guidelines and constant challenges by the pharmacy team.

Aim 1: Implementation of the action plan improved the trust average prescribing compliance (66% in Sept 08 to 85%) and documentation compliance (70% to 74%).

Aim 2: Pharmacy intervention further improved prescribing compliance (85% to 91%).

**Table 1: Compliance with prescribing standards**

<table>
<thead>
<tr>
<th>In-patient charts reviewed daily*</th>
<th>February 2008</th>
<th>September 2008</th>
<th>March 2009</th>
<th>March 2009 after pharmacy intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimicrobials prescribed</td>
<td>47</td>
<td>59</td>
<td>57</td>
<td>—</td>
</tr>
<tr>
<td>Average compliance with prescribing standards</td>
<td>68%</td>
<td>66%</td>
<td>85%</td>
<td>92%</td>
</tr>
<tr>
<td>Average compliance with documentation standards</td>
<td>63%</td>
<td>70%</td>
<td>74%</td>
<td>—</td>
</tr>
</tbody>
</table>

* based on 85% bed occupancy rate and acknowledging not all wards are visited daily

**Poster Presentation Awards**

**C. Audits/Surveys — RUNNER UP**

Promoting the safer use of injectable medicines

Darren Fletcher, Joanne Goode
York Hospitals NHS Foundation Trust

The NPSA issued Patient Safety Alert 20 in March 2007. This required action led by pharmacy and made recommendations to make the use of injectable medicines safer.

**Aims and objectives**

Risk assessments on the preparation and administration of injectable medicines needed to be undertaken by pharmacy in conjunction with a trained nurse from each area. Results would be shared with medical and nursing staff and steps taken to reduce the risks.

**Methods**

Each clinical area and all injectable medicines were assessed against the risk factors specified in the NPSA risk assessment tool. This consisted of 10 assessment criteria for each area and eight criteria for individual medicines. Risk scores of between 0 and 10 were assigned to each area and 0 to 8 for each injectable medicine. A central database was developed to collate the results showing the medicines and areas that carried the highest risk score.

**Results**

Twenty-three areas were assessed for risks associated with the preparation of injectable medicines. Although the risk scores were low, a common theme of a lack of technical information available was evident. Of the 117 injectable medicines assessed, three produced a high risk score (6–8), 22 produced a medium risk score (3–5) and 93 produced a low risk score (0–2). The risk scores in many cases posed a potential risk to patients due to the therapeutics of the drug itself and the risk of harm if not used as intended (see Table 1, below). The use of complex calculations during the preparation and administration of the injectable medicines, and use of syringe drivers for administration carry a potential for error and were included as a risk to patients in the risk assessment.

**Table 1: Risk scores for some injectable medicines**

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Risk score</th>
<th>Potential risk factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diamorphine</td>
<td>6</td>
<td>Therapeutic risk, complex calculations, complex method, reconstitution of powder in an ampoule, use of part ampoule, use of pump</td>
</tr>
<tr>
<td>Propofol</td>
<td>4</td>
<td>Therapeutic risk, complex calculations, use of part ampoule, use of pump</td>
</tr>
<tr>
<td>Pabrinex IM</td>
<td>4</td>
<td>Therapeutic risk, use of concentrate, complex method, use of part ampoule</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>3</td>
<td>Therapeutic risk, use of concentrate, use of part ampoule</td>
</tr>
</tbody>
</table>
Discussion and conclusion

Injectables guidelines have now been updated and issued to appropriate units. Monographs have been developed for many injectable medicines with input from nurses and consultants to reduce the risk scores. Reassessment will take place on an annual basis.

References

UKPPG Preregistration Bursary Award 2009
— JOINT WINNER

The off-label use of psychotropics for unlicensed indications in adult inpatients

Helen Frances Wade (Supervisor Justine Raynsford)

The incidence of off-label prescribing of psychotropics for an unlicensed indication has been previously reported; however the incidence at a local level was unknown. There are legal and possible clinical implications for off-label prescribing for unlicensed indications.

Aim
To assess the incidence of off-label prescribing for unlicensed indications of psychotropics within the trust.

Objectives
- To audit which psychotropics were being used off-label and for which indications using the Summary of Product Characteristics (SPC) and the British National Formulary (BNF) Edition 56 as the audit standard.
- To establish whether these off-label indications have been approved by the trusts’ Drug and Therapeutics (D&T) Committee.
- To identify the D&T register of approved unlicensed uses required updating.

Design
Data on prescribed psychotropics were collected from service users’ medication charts using a standardised data collection form. Information regarding the service users’ diagnoses and indications for psychotropics was gathered from case notes, ward pharmacists and other healthcare professionals.

Setting
A psychiatric hospital with four acute wards for working age adult inpatients.

Participants
The medication charts of adult inpatients (aged 16 to 65 years) receiving prescribed psychotropic medication were audited.

Results
Out of a total of 288 prescribed psychotropic items, 52 (18.1%) were prescribed for an off-label indication. Only 12 (23.1%) indications were on the D&T register for approved unlicensed use. Over half (51.4%) of service users were prescribed one or more off-label psychotropics for an unlicensed indication.

Conclusion
In line with other studies, there is a high prevalence of off-label prescribing of psychotropics in psychiatric inpatients. From looking at off-label prescribing of psychotropics within the trust, it appears that the trust’s D&T register of approved unlicensed uses should be updated and based upon current evidence in the literature. Any off-label uses that are not currently approved should be submitted for approval.

References

UKPPG Preregistration Bursary Award 2009
— JOINT WINNER

A clinical audit of the use of antipsychotics in the management of BPSD

Louise Millen (Supervisor Carol Paton)

In 2004 the first warnings related to the association between the use of antipsychotics in people with dementia and adverse cerebrovascular events appeared. Further data suggest that the increased risk is attributed to all antipsychotics. In light of this research the National Institute for Health and Clinical Excellence (NICE), as part of a clinical guideline for the management of dementia, made recommendations pertaining to the use of antipsychotics in dementia. All NHS trusts are required to ensure adherence to NICE guidelines.

Aims
To audit the use of antipsychotics in people with dementia against the following standards:

1. The indication for use of antipsychotic medication should be documented
2. The need for antipsychotic medication should be reviewed at least every three months
3. Where possible the patient or their relatives should be involved in the medication review

Method
Cross-sectional review of prescriptions and clinical records across 10 care homes in borough B.

Results
The standards were not met as follows:
- Indication for treatment recorded in 43%
- Review of the continuing need for treatment every three months 86%
- Family being involved in the review 34%

Conclusion
Clinical documentation regarding the use of antipsychotics in people with dementia suggests that practice is not in line with the standards set by NICE. The major limitation of this audit was that clinical documentation in primary care was not accessed.

References
1 MHRA. Atypical antipsychotic drugs and stroke. 2004. www.mhra.gov.uk/NewsCentre/Pressreleases/CDNO002047
About the College of Mental Health Pharmacy

At the October 2009 Annual General Meeting both the United Kingdom Psychiatric Pharmacy Group and the College of Mental Health Pharmacists voted unanimously to come together in one organisation as a Company Limited by Guarantee, with the intention of eventually forming a registered charity. Both organisations also voted that the name of the new organisation would be the College of Mental Health Pharmacy.

The last UKPPG committee meeting was held at the Hilton Hotel, Gatwick Airport, on 5 February 2010, where the appropriate documentation was signed to enable the first phase of becoming a Company Limited by Guarantee. At the end of this meeting the first Council meeting of the College of Mental Health Pharmacy was held.

The second phase of the process is now under way with an application to the Charity Commission to become a registered charity.

One of the first items of business was the drafting of bye-laws that include a clause to admit existing UKPPG members as “Associate members” of the new group and existing CMHP members as “Full members”. A membership category of “Fellow” has also been created and will be awarded retrospectively to previous winners of the UKPPG Chairman’s award. In future, Fellowship will be awarded to members who have demonstrated outstanding commitment in the practice of mental health pharmacy.

The bye-laws are to be approved at a future Council meeting and as agreed at the 2009 AGMs of both previous organisations. All members will have the opportunity to comment on the bye-laws and suggest amendments at the College’s first AGM in October 2010.

The Council is developing a strategic plan for the new organisation in order to ensure it meets its objectives of advancing education and research in the practice of mental health pharmacy.

A new CMHP website is currently under construction. Further details are available at www.ukppg.org.uk or from the General Secretary Marina Davidson (marina@robpaxton.co.uk).

Call for abstracts

The inaugural International Conference of the College of Mental Health Pharmacy is to be held at the Hinckley Island Hotel, Leicestershire, on 22–24 October. The event will include sessions on leading-edge mental health pharmacy practice and interactive workshops, as well as a new joint afternoon session with the British Association for Psychopharmacology.

ABSTRACTS We are now accepting applications for oral or poster presentations in the following categories:

- Original research
- Service developments
- Audits

The call for abstracts closes on 30 April. Further information about the conference and submission of abstracts is available at www.ukppg.org.uk.

This supplement has been collated and edited by the College of Mental Health Pharmacy, not by the publisher Pharmaceutical Press.

The UKPPG/CMHP would like to thank its corporate sponsors for their support of the UKPPG conference 2009:

- AstraZeneca
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- Leyden Delta
- Lundbeck UK
- Novartis
- Pfizer
- Servier
- TEVA UK
Specialist clinical pharmacy input into the learning disability community assessment and treatment teams (CATT)

Bassi SR
Sherwood Forest Hospitals NHS Foundation Trust

The ‘Valuing People’ white paper published in March 2001, set out a new strategy for Learning Disability services that centred around the provision of person-centred, responsive, convenient, good quality, evidence-based services for service users / clients, ensuring that clients were offered as much choice, and control over their lives as possible.

Aims and objectives
With the closing of all long-stay inpatient learning disability campuses by March 2010, community-based teams are being developed locally (North Nottinghamshire).

This pilot was conducted in order to demonstrate the benefits of specialist clinical pharmacy input into both the learning disability CATT and it’s associated Assessment and Treatment Unit (ATU).

Methods
The specialist mental health pharmacist worked as part of the CATT and attended regular weekly multi-disciplinary meetings based within the CATT and the ATU.

The service was assessed by collecting data relating to the number and type of medication-related interventions made (including those that involved liaison with primary care), the number of medication histories completed over the 3-month period and carrying out staff satisfaction surveys.

Results
75 clients were reviewed over the 3-month period. 45 clinical interventions were made (22 included liaison with primary care), of which 47% (n=21) were classed as ‘minor’ clinical interventions and 53% (n=24) as ‘moderate’ clinical interventions.

All interventions were actively picked up by the pharmacist, with a ‘clinically significant’ intervention being made in every 1.6 patients seen.

100% of CATT staff wanted the specialist pharmacist input into the team to continue.

Discussion and conclusion
The specialist pharmacist has an important role in ensuring that a client’s medication (including physical medication) is safe, effective, evidence-based, and is monitored appropriately as they are transferred across the primary / secondary care interface.

Recommendations
Continued specialist pharmacy input into the CATT including consideration for a non-medical prescribing role, and a technician led medicines reconciliation service.

References

Seamless care for clozapine patients in Galway — improving communication between hospital and community pharmacists

Dunne A
Pharmacy Department, University Hospital, Galway, Republic Of Ireland

If a patient is receiving clozapine from a hospital pharmacy, their community pharmacist is likely to be unaware that they have had clozapine dispensed as there is currently no formal method of communicating this information.

Aims and objectives
This project aimed to investigate and implement ways of bridging the gap in communication between the clozapine clinic pharmacist and community pharmacists.

Methods
Eighteen clozapine outpatients gave permission for their community pharmacist to be contacted. Thirteen pharmacies were contacted by telephone to find out the level of pharmacist knowledge about clozapine and then sent a clozapine information pack. The pharmacists were contacted again two weeks later. They were interviewed about what they did with the information, how useful they found it and if they had any suggestions for improvement.

Results
At the first interview 77% (N=10) of the community pharmacists knew that clozapine was used to treat schizophrenia but only 31% (N=4) knew that patients needed regular blood testing. After the information was sent, 63% (N=5) of pharmacists made a note on the patient’s computer record to allow interaction checks. All the pharmacists were very positive about the improvement in communication and 75% (N=6) said they would be interested in internet based information.

Discussion and conclusion
This study highlights a gap in the information chain for clozapine patients living in the community. One way of bridging this gap is for the hospital pharmacist to contact a patient’s community pharmacy at the time of discharge from the psychiatric ward. Future roll out of the service could include an internet based information service and extension to include other medicines.
An observational longitudinal study using a previously validated tool of the anticholinergic burden of 224 people with Alzheimer’s disease

Ian Maidment*,†, Chris Fox*,†, Gill Livingston‡, Cornelius Katona*, Simon Coulton*, David Smithard*, Malaz Boustani‡* Centre for Health Service Studies, University of Kent; † Kent and Medway NHS and Social Care Partnership Trust; ‡ University College London; § East Kent Hospitals University Teaching Trust; ¶ Regenstrief Institute, Inc, USA.

There is increasing evidence that anticholinergic medication (ACM) impairs cognition. We have developed an anticholinergic burden tool that rated the anticholinergic effects of medication on a scale of 0 to 3 (higher scores indicate a greater burden). The scale is designed to capture the accumulative anticholinergic burden.

Aims and objectives
The objective of this study was to assess the baseline anticholinergic burden in a cohort of people with AD and the longitudinal impact on cognition.

Methods
This study is part of a naturalistic cohort trial (LASER-AD), which has received full ethical approval. The total anticholinergic burden, of the medication regimens, was assessed using a previously validated scale in 224 people with AD. Ages ranged from 55 to 98 years [mean 81.0 (SD 7.4)] and MMSE ranged from 0 to 29 [mean 14.7 (SD 8.3)].

Results
Excluding laxatives, eye-drops and topical preparations, people in the study received a mean of 3.66 (SD 2.38) medicines. The mean anticholinergic burden was 1.15 (SD 1.45). Approximately 55% of the sample was prescribed anticholinergic medication.

Anticholinergic burden had no effect on cognitive decline at 18 months as assessed by the ADAS-Cog (p=0.271).

<table>
<thead>
<tr>
<th>ACB score</th>
<th>Number of people with score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>101</td>
</tr>
<tr>
<td>1</td>
<td>58</td>
</tr>
<tr>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
</tr>
</tbody>
</table>

Discussion and conclusions
There was considerable use of ACM in this population with cognitive impairment. Further research is required on the impact of ACM on cognition in people with mental illness.

References
Outcomes of information provision to callers to a psychiatric medication helpline

Olubanke Olofinjana, Anne Connolly, David Taylor
South London and Maudsley NHS Foundation Trust

The Maudsley hospital operated a national helpline for information about psychotropics between 1997 and 2007. The helpline provided information about medication used to treat mental illness and was staffed by experienced mental health pharmacists. There are many studies examining outcomes of helpline use but none has evaluated outcomes of information received from a psychiatric medication helpline.

Aims and objectives
To examine outcomes of information received by callers to a psychiatric medication helpline.

Methods
All callers to the helpline between January and May 2007 were asked to contribute to the study. Those who gave permission were contacted to complete a questionnaire over the telephone. Outcomes collected include: reason for contacting the helpline, frequency of self-referral to a health care professional, action taken as a result of information received and satisfaction with the service & quality of information received.

Results
Two hundred and seventeen callers gave permission to be interviewed. A total of 123 participants were later contacted and included in the study. Majority (70.7%, n=87) of callers were patients (as opposed to relatives) and were likely to be female (76.4%, n=94).

Almost half (47%) of caller reported changes (stopping, starting, switching or dose adjustment) to their medication after consulting the helpline. However a small majority (53%, n=65) of callers reported no quantifiable changes in their medication apart from reassurance, referral, review and monitoring. Well over half (59%) of caller contacted a healthcare professional, most commonly a doctor, after contacting the helpline. Overall satisfaction with the quality of information and service provided by the helpline was very high.

Discussion and conclusion
Information provided by a psychiatric medication helpline can result in changes to callers’ treatment and increase contact with other health care professionals. Use of information provided by the helpline are numerous and often go beyond a need for mere factual information.

Modemisation of the delivery of clinical pharmacy services for adult mental health admissions using “lean thinking”

Phelps K, Prior R
Tees, Esk and Wear Valley NHS Foundation Trust

This project took place on a 29 bedded male admissions unit. Eight to ten consultant led ward rounds per week were being held, all of which were run differently, and some patients could be waiting up to seven days before being reviewed and seen by the multidisciplinary team (MDT). This led to significant delays in clinical decision making, with pharmacist involvement in MDT ward rounds minimal due to their inefficient, time-consuming nature and only one WTE pharmacist. It was decided to rationalize service delivery using the system of ‘lean-thinking’.

Aims and objectives
To rise to the clinical director’s challenge of abolishing ward rounds and reducing average length of stay from 29 to 21 days, to standardise MDT working practice and to improve pharmaceutical care provided to patients due to changed ways of MDT working.

Method
Seventeen frontline staff, including the ward pharmacist, were tasked with brainstorming, developing, testing and implementing their ideas at ward level in just three days.

The team identified 85 issues/ideas (in approximately one hour!) and proposed solutions to them by looking at standardisation of work, introduction of ‘visual controls’, changing the allocated use of six rooms on the ward and developing service user information and contact cards.

Results
Every day an hour-long, full MDT ‘report out’ is held on the unit. Each patient is discussed and tasks allocated to the appropriate team member.

Standard processes have been written for all MDT members, including the pharmacist, providing stepwise details for each professional’s work as part of the team.

Medicines reconciliation is now part of the standard process for pharmacists and pharmaceutical preparation for discharge is much more proactive.

There are now four consultants utilising 23 beds and the average length of stay has reduced to 19 days.

Other key performance indicators are summarised in Table 1.

Conclusions
The resulting pathway is more patient-centred, with substantial gains demonstrated across key performance indicators (see Table), service

Table 1: Key performance indicators

<table>
<thead>
<tr>
<th></th>
<th>1 Apr 2007 to 31 Jan 2008</th>
<th>1 Apr 2008 to 31 Jan 2009</th>
<th>% change from baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed numbers</td>
<td>29</td>
<td>23 (by Dec 08)</td>
<td>20.69</td>
</tr>
<tr>
<td>Bed occupancy (%)</td>
<td>103.6</td>
<td>80.99</td>
<td>21.82</td>
</tr>
<tr>
<td>Number of admissions</td>
<td>260</td>
<td>199</td>
<td>23.46</td>
</tr>
<tr>
<td>Mean length of stay (days)</td>
<td>29</td>
<td>19</td>
<td>34.48</td>
</tr>
<tr>
<td>Mean % staff sickness</td>
<td>10.47</td>
<td>3.88</td>
<td>62.94</td>
</tr>
<tr>
<td>Violent incidents involving staff</td>
<td>29</td>
<td>6</td>
<td>79.31</td>
</tr>
<tr>
<td>Reports of violence and aggression</td>
<td>94</td>
<td>26</td>
<td>72.34</td>
</tr>
<tr>
<td>Incidents of control and restraint</td>
<td>20</td>
<td>3</td>
<td>85</td>
</tr>
<tr>
<td>Issues raised by PALS</td>
<td>27</td>
<td>12</td>
<td>55.56</td>
</tr>
<tr>
<td>Complaints by service users</td>
<td>4</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>
A review of clozapine returned to a clozapine clinic
Burke E, Dunne AR
Department of Psychiatry, University Hospital, Galway, Ireland

This study looks at the atypical anti-psychotic drug clozapine. Patients on clozapine are carefully monitored for neutropenia and have medicine dispensed according to the valid period of a blood test. In theory, if a patient is compliant with medication they will not have excess clozapine at home.

Aims and objectives
The main focus is to investigate how much clozapine is returned to the clinic due to non-compliance. Action can then be taken to improve compliance in those patients. The review will also identify other reasons for return of clozapine from patients. This will increase safety of patients by not dispensing extra stock of tablets to them if they have mislaid their current supply.

Methods
All clozapine returned to the clozapine clinic was recorded by a pharmacy technician for three months. Reasons for return were notes to identify patterns and allow action to be taken.

Results
Approximately one third (32%) of clozapine returns were related to non-compliance with medication.

Discussion and conclusion
Compliance with clozapine is an area that can be targeted by a pharmacist, pharmacy technician and the clozapine clinic nurses. A pharmacy technician can have an impact on lost or mislaid tablets to reduce drug wastage and improve patient safety.

An audit of medicines reconciliation by pharmacy staff within 24 hours in an acute psychiatric hospital

Fletcher D, Setchell R
York Hospital Pharmacy, Wigginton Road, York Y031 8HE

In response to the NICE Technology Appraisal, and an NPSA alert “Technical patient safety solutions for medicines reconciliation on admission of adults to hospital”, the pharmacy audited its achievement of the 95% standard of patients medicines reconciled within 24 hours at the local acute mental health hospital.

Aims and objectives
To assess what level of medicines reconciliation could be achieved by pharmacy staff within current resource. To raise the profile of medicines reconciliation amongst other staff groups via presentation at clinical audit meetings. To provide evidence that work was being undertaken to address this issue.

Methods
Pharmacy staff in mental health were trained in an approved medicines reconciliation program in the Yorkshire region. Medicines reconciliation was undertaken on ward visits to 4 acute mental health wards over a 2 month period. Data was entered on the computer. Results were presented to the clinical audit meeting.

Results
46% (28) of admissions were reconciled within 24 hours; of these 61% (17) were fully reconciled and 85.7% (24) had correct allergy status documented.

Discussion and conclusion
It is recognized that medicines reconciliation requires funding to implement fully. The audit shows that orientating the service towards medicines reconciliation with current staffing does not reach targets set. Extra pharmacy staff or a different model would be needed to achieve 95% reconciliation within 24 hours. The NICE calculation estimates 15 hours pharmacy time for 60 admissions, our experience is that this is an underestimate. Out of hours, travel time and client group are contributory factors.

Up to 6.5% of admissions suffer medicine related harm. Medicines reconciliation aims to reduce this. Increased awareness amongst all staff will encourage a multidisciplinary approach to this medicines management issue.

References
Developing, implementing and monitoring a technician-led medicines reconciliation service

5 Boroughs Partnership NHS Trust

5 Boroughs Partnership NHS Trust serves a population of 930,000 people and provides mental health services across Warrington, Halton, Knowsley, St Helens and Wigan.

NPSA and NICE require all healthcare organisations that admit adult inpatients to have policies in place for medicines reconciliation on admission.1

This poster describes how we developed, implemented and are monitoring a pharmacy technician led medicines reconciliation service.

**Aims and objectives**
- To develop standard operating procedures for a technician led medicines reconciliation service
- To implement the procedures on all adult inpatient wards across the Trust
- To monitor the service and its effectiveness

**Methods**
A procedure for medicines reconciliation2 was developed by the pharmacy team in collaboration with clinical staff. It was approved by the Medicines Management Committee and implemented in all localities, led by the pharmacy technicians. The Datix incident reporting system was adapted for intervention monitoring, so pharmacy staff can record any interventions made and their outcomes.

**Results**
The results are set out in the table.

<table>
<thead>
<tr>
<th>Table 1: Results</th>
</tr>
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<tbody>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td><strong>Table 1: Results</strong></td>
</tr>
<tr>
<td>April 2009</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Number of admissions</td>
</tr>
<tr>
<td>Number of medicines reconciliations completed by pharmacy</td>
</tr>
<tr>
<td>Average with correct medication</td>
</tr>
<tr>
<td>Average with one or more omissions</td>
</tr>
<tr>
<td>Average with one or more errors</td>
</tr>
</tbody>
</table>

**Discussion and conclusion**
Pharmacy technicians are completing increasing numbers of medicines reconciliations as ward staff become familiar with their roles.

Medication errors were potentially occurring before the introduction of the service. We are now proactively managing these issues and reducing the potential for incidents. We hope to expand the procedure to include discharges and community teams, to hopefully reduce medication related re-admissions arising from errors in the community.

However, it was noted that there was no way of determining which medicines reconciliations were carried out prospectively to medication being prescribed. The system has now been upgraded, and when medicines reconciliations are classified as correct we can tell if this is due to our proactive approach.

**References**
1 Patient Safety Guidance Number 1 (Technical patient safety solutions for medicines reconciliation on admission of adults to hospital) – NPSA and NICE
2 5 Boroughs Partnership NHS Trust. Procedure for Medicines Reconciliation (June 2009)

An audit of hypnotic prescribing in Berkshire Healthcare NHS Foundation Trust

Mitchell K
Prospect Park Hospital, Berkshire (at the time of audit, Kings College Hospital from September 2009)

Chronic insomnia has serious health consequences adversely affecting a person’s quality of life. The main pharmacological treatments include the z-hypnotics (zopiclone, zolpidem and zaleplon). Research has shown there to be no clinically significant difference between these drugs, therefore NICE guidance (TA77) was introduced in 2004 to inform their prescribing.

**Aim and objectives**
To determine whether prescribing of hypnotics to inpatients in Berkshire Healthcare NHS Foundation Trust was in accordance to z-hypnotic (TA77) NICE guidance.

**NICE audit guidance**
1. 0% of patients should be switched from one z-hypnotic to another.*
2. 100% of patients should be prescribed the hypnotic with the lowest purchase cost.*
3. 0% of patients should have their hypnotic prescribed for more than 4 weeks.

* Unless the patient experiences a side effect directly attributable to that hypnotic.

**Methods**
Data was collected and analysed from all inpatients prescribed a hypnotic on their drug chart within the Trust over the 8-week period of the audit.

**Results**
6% (just 3 patients) had been switched from one z-hypnotic to another.
83% of patients had been prescribed the drug with the lowest purchase cost (zopiclone).
97% of patients had been prescribed their hypnotic for more than four weeks.

**Discussion and conclusion**
The trust successfully prescribed the lowest purchase cost hypnotic and avoided switching hypnotics, however failed to prescribe for a maximum of four weeks. Current evidence suggests no benefit is derived from the chronic use of hypnotics. However, NICE guidance and much of the current research is not specific to this type of patient. Effective treatment of insomnia in psychiatric patients is important but remains under researched.

**Key recommendation:** review how NICE guidance (TA77) is interpreted and applied in terms of the four-week treatment limit for this Trust.

**References**
3 Touitou Y. Sleep disorders and hypnotic agents: Medical, social and economical impact. Ann Pharm Fran, 2007; 65:230-238.
Development of a pharmacy service to the Home Treatment Team (HTT)

Radmore C, Setterington L
Plymouth NHS Trust

The Plymouth HTT provides an alternative to inpatient admission and facilitates early discharge. Up to 50 patients will be on caseload at one time. Previously medication was being ordered on a weekly basis and “packed down” by HTT nurses for delivery to the patients (sometimes on a daily basis). This was identified as a high risk and high cost area for medications use.

Aims and objectives:
- To improve the HTT skill mix by providing the services of a pharmacist and technician
- To improve safety by developing comprehensive procedures for all aspects of medicines management and setting up a pharmacy-led dispensing service
- To save money by reducing excessive drug ordering and promoting cost effective prescribing

Methods
Areas of medication risk and need were identified through observation of current practice and discussion with HTT staff. This led to the development of robust medication procedures. A pharmacist and technician attend HTT base daily (10-15 hours each week) to take over the ordering and dispensing of medication and to provide a clinical pharmacy service to the MDT.

Results
- Improved systems for ordering, dispensing, delivery and recording of medication.
- Pharmacist and technician dispense individual patient medication supplies.
- Cost savings from reduced item issue charges (estimated £52K p.a) and drug costs (estimated £40K p.a).
- Pharmacist attends weekly clinical reviews, undertakes medicines reconciliation, screens drug charts and offers clinical advice.

Discussion and conclusion
The involvement of the pharmacist and technician has resulted in improved medicines management and pharmaceutical care. A staff satisfaction survey has shown that they are now valued members of the HTT and the service provided is beneficial. The role of pharmacy staff will develop further as the service develops.

A baseline audit of nurse-led clozapine-quarantine in clozapine clinics

Newton G*, Barker K†, Chilton N†, Hull S†, Jackson A†, Prescott L†
* Pharmacy Department, Halton Hospital, Hospital Way, Runcorn, Cheshire, WA7 2DA; † 5 Boroughs Partnership NHS Trust, Hollins Park, Warrington, WA2 8WA

Clozapine clinics have traditionally been led by nursing staff supported by a pharmacy-managed quarantine for pre-dispensed clozapine. The development of near-patient testing (PoCBA, Novartis) for the mandatory blood tests required for clozapine (Clozaril Patient Monitoring Service (CPMS)) has challenged this convention.

Following service reconfiguration, the clozapine clinics were able to use a nurse-lead clinic-based pre-dispensed clozapine-quarantine. Therefore service users are issued their medication immediately after a validated blood test result was available from CPMS. The quarantine & release processes were strictly documented in Trust approved Standard Operating Procedures (SOPs).

Aim
A baseline audit of compliance with new clozapine clinic SOPs to assure the trust of effective governance arrangements.

Criteria (Standards)
1. The use of the SOPs (100%)
2. The legible use of the documentation (100%)
3. The completion rates of the documentation (100%)

Method
The trust’s medicines management technicians collected data using a standardised data collection tool.

Results
For criteria 1 & 2 the clinics are meeting the required standard of 100%. For criterion 3, the documentation completion rates were between 91 – 100%. While there is independent evidence of no risk to service users, it is essential that the documentation must be consistently kept to assure the Trust of safe practices.

Recommendations
Feedback of baseline audit results and ongoing training with clozapine clinic staff to emphasise the need for comprehensive documentation to assure the Trust that the necessary patient safe guards are in place.

Conclusions
The SOPs have enabled an improved quality of life for service users attending clozapine clinics as they make fewer visits to clinic. The SOPs are being used in all clinics but complete documentation relating to the release of clozapine from quarantine is lacking. Follow up work is planned to remedy this deficit.

Medication management — assessment of ability

Payne M
Leeds Teaching Hospitals / Leeds Partnerships Foundation Trust

Patients with mental health illnesses often have co-existing physical health illnesses, when they are admitted to acute health hospitals their mental health needs and specific issues relating to their mental health may be overlooked. This is especially important at the point of transfer of care. Pharmacists have a key role to play in the transfer of information about medication.

Aims and objectives
- Establish referral process for patients who have mental health needs to be assessed for their ability to manage their own medication.
- Assess the process for suitability for purpose.
- Assess the appropriateness of several tools for assessment of medication management ability.

Methods
Patients referred to the mental health intermediate care team were referred to a pharmacist to manage their ability to manage medication. Patients will be assessed using one of three validated systems. The pharmacist will decide which of these is the most appropriate to this population, as none are validated in this population.
Developing psychotropic medicine information leaflets for children and adolescents

Ezewuzie N, Parker C
Central and North West London NHS Foundation

The manufacturer’s patient information leaflets provided with most medicines are not in suitable format for children and in the case of off-label use often state ‘do not use in children’. Additionally, there is a paucity of nationally available and independently produced psychotropic medication leaflets for this age group. Nevertheless, the NSF for children and young people outlines the need for clear understandable and up-to-date information about medicines in various formats and thus provided the stimulus for this project.

**Aims and objectives**
The aim was to develop age-appropriate medicines information leaflets for service users aged 8–12 years. The objectives of the project were to write suitable material in child-friendly English language, present it in an appealing format and to identify the most commonly prescribed medicines in this age group.

**Methods**
A list of commonly prescribed psychotropics across the Trust was derived from an audit of prescribing practice. A 45 minute, audio-taped focus group to which all children at the CAMHS inpatient unit were invited was held to gather opinions and preferences regarding the design and content of leaflets.

The text was jointly written by the CAMHS pharmacist and Consultant Psychiatrist. The general lay-out and content was agreed with the CAMHS MDT. Advice was sought from Trust Legal Consultant Psychiatrist. The general layout and content was agreed and thus provided the stimulus for this project.

Results

Leaflets were produced for methyphenidate, atomoxetine, fluoxetine, olanzapine, risperidone for behavioural disturbances and risperidone for psychotic disturbances and made available on the Trust’s intranet and in all CAMHS services across the Trust. Difficulties encountered included ascertaining the information need for this patient group. Considerable interest from other Trusts prompted the decision to make them available to other Trusts to purchase.

**Discussion and conclusion**
This series of child-friendly medicine information leaflets specifically designed for our young service users is now available.

**References**
1. Oboh L. Pharmacists can help improve older people’s medicines management. Pharm J 2006;276:206-207

Substance Misuse Management in Community Pharmacy scheme: developing interagency governance and medication incident reporting

Mann H
Westminster Treatment Centre, Central and North West London NHS Foundation Trust

Central and North West London NHS Foundation Trust (CNWL) runs a scheme providing a formal arrangement for a community-based service for the supervised consumption of medication for the management of substance misuse. There is a current inter-agency approved written framework to guide and support pharmacists and their staff in the provision of services under the substance misuse management in community pharmacy (SMMCP) scheme.

**Aims and objectives**
To improve governance on the SMMCP scheme in order to ensure safety to clients by reducing clinical risk from medication incidences.

**Discussion**
Medication errors are mistakes or lapses when medicines are prescribed, dispensed or used. CNWL pharmacists were concerned about the inconsistencies in reporting of medicine errors, the high number of recurring incidences, and a significant under reporting of incidences in several boroughs in the scheme.

To address this, the SMMCP framework was reviewed to include an incident reporting system, a monitoring and audit framework. The guidelines clearly describe the responsibility of reporting incidences to CNWL and the PCT improving communication between agencies. After investigation an action plan is cascaded to the PCT and the community pharmacists.

The SMMCP guidelines were reviewed in consultation with CNWL’s Primary Care Team, community pharmacists and the PCT. The guidelines were approved at local clinical governance.

**Implementation strategy**
Since approval of the updated framework, community pharmacists and prescribers have been trained on the new incident reporting and monitoring system. CNWL produce quarterly medication incidence reports to monitor the frequency of reporting.

**References**
1. Central and North West London NHS Foundation Trust; SMMCP Guidelines, Procedures on Core Services of the Supervised Consumption Scheme, updated 2009
2. Department of Health; Building a safer NHS for patients, Improving Medication Safety, 2004