Collation of posters presented at the
34th UKMi Practice Development Seminar
University of Warwick 18-19 September 2008

- Research into the value of a medicines information service: Part 1 – where to start? (Simone Henderson & Joanne McEntee, NWMIC, Liverpool)

- Research into the value of a medicines information service: Part 2 – piloting a questionnaire (Simone Henderson, Joanne McEntee, Helen Davis and Jill Rutter NWMIC, Liverpool)

- Crystal ball gazing – do predictions come true? (Lindsay Banks & Helen Davis, NWMIC, Liverpool)

- The public, the media and medicines information (Christine Proudlove, NWMIC, Liverpool)

- The only way is up: Storage of medicines and medicinal products in Automated Dispensing Systems (robots) when “Store Upright” is a requirement (Lesley McClellan, Wirral Hospitals)

- Level 1 enquiries – identifying the medicines information training needs of hospital pharmacists (Catherine Butler & Mark Cheeseman – East Anglia Medicines Information Service)

- Improving information governance for pharmacists working out of hours: involvement of a MI service (Mark Cheeseman – East Anglia Medicines Information Service)

- Does documenting when a MI service receives telephone calls help to plan service provision? (Mark Cheeseman – East Anglia Medicines Information Service)

- Joint regional MI/Specialist clinical pharmacist’s posts – do they work? (Fontane Lok & Kerstin Weber – East Anglia Medicines Information Service)

- Into the Future: The UK Drugs in Lactation Advisory Service (Kelly Broad, Louise Nolan & Peter Golightly – Trent Medicines Information Service)

- One-to-one training for clinical pharmacists: Sharpening Skills (Louise Nolan & Gillian Stead – Trent Medicines Information Service)

- Does enquiry answering make a difference to patient outcomes? Gill Stead and Peter Golightly – Trent Medicines Information Service)

- Information resources for hospital pharmacies: managing the risk (Sahera Uddin, Louise Nolan & Gillian Stead – Trent Medicines Information Service)

- NHS Direct call referrals – Can We Improve Efficacy and Safety? Andreas Muenstedt & Gillian Stead, Trent Medicines Information Service; Elizabeth McKechnie, Glenfield Hospital, University Hospitals of Leicester NHS Trust & Sharon Haughey of Queen’s University Belfast

- The Mystery Shopper Project: A useful additional tool for Quality Assurance of MI Services? (Alison Innes & Davina Wraight, London (Northwick Park) and London & SE Medicines Information Services

- Does Medicines Information have an impact on Patient Care? (Mohandas C, Bramley D, Soor S, Erskine D & Oborne CA; Department of Pharmacy, Guy’s & St Thomas’ NHS Foundation Trust London)

- Medicines Q&As on NeLM: Are they useful and accessible to UK medicines information pharmacists? (Marc Miell & Kate Pickett – Wessex Drug and Medicines Information Centre, Southampton)

- How do community pharmacists answer questions about medicines 24/7? (David Brown & Muriel Eggbeer-Linde School of Pharmacy, University of Portsmouth and Angela Emerson, Wessex Drug and Medicines Information Centre, Southampton)
• Factors that influence the length of time it takes to handle medicines information enquiries
  (William Horsley, Elizabeth Mallett & Gillian Masters – Regional Drug & Therapeutics Centre,
  Newcastle upon Tyne)

• Analysis of paternal exposure enquiries made to the National Teratology Information Service
  (Elizabeth Mallett – Regional Drug and Therapeutics Centre, Newcastle upon Tyne)

• Which factors influence spontaneous reporting of adverse reactions to varenicline in Northern
  and Yorkshire?
  (Ms R Prior, Dr S Thomas, Yellow Card Centre, Northern & Yorkshire, Newcastle upon Tyne;
  Dr G Masters & Dr S White, Regional Drug and Therapeutics Centre, Newcastle upon Tyne)

• Analysis of poisons enquiries from hospital pharmacists to the National Poisons Information
  Service (NPIS)
  (Paula Russell – Regional Drug and Therapeutics Centre, Newcastle upon Tyne)

• Developing The “Drug Use in Liver Disease” service
  (Smita Bhikha – Leeds General Infirmary, Leeds)

• MI Boot Camp: Student Pharmacy Technicians in the Medicines Information Centre
  (Helen Brittain – Leeds Teaching Hospitals NHS Trust)

• Internet based Database for management and documentation of drug information in German
  hospital pharmacies
  (S Amann, G Kirsch, J Menchini, C Mildner, U Muhlhauser, C Querbach, F Rasche, C Schuhmacher,
  D Strobach, C Vetter-Kerkhoff; Committee for Drug Information & Communication and Working Group
  FAQ; German Society of Hospital Pharmacists (ADKA)

• Medicine-related Calls Handled by Community Pharmacists: A Preliminary Study
  (Dr Paul Rutter – Pharmacy Department, University of Wolverhampton)
Research into the value of a medicines information service: Part 1 - where to start?
Simone Henderson and Joanne McEntee, North West Medicines Information Centre, Liverpool.

Background

The national user survey questionnaire used by UK Medicines Information (UKMi) centres to assess the quality of enquiry answering services does not gather data on the impact of the service on patient care. This has been identified as an essential UKMi research topic. How can the impact be assessed? As novice researchers, where do we start?

Objective

To design a study to find out if and how medicines information and/or advice given to healthcare professionals is used in the care of patients.

Methods

Getting advice.

We found extensive information on research methods in the research section of the UKMi website. ‘Taking the first steps’, by Professor Dave Brown, encourages you to identify research projects from problems you encounter in your daily working life. You then proceed in simple steps to ensure that you don’t lose sight of the original research question. The document includes advice on what to include in your research protocol and how to write a funding proposal.

Within the research section is also information on methods for literature search and appraisal, guides for interpreting statistical data, and links to resources containing previous published and unpublished research. Pointers for getting your work published are included.

Support is available from MI colleagues and UKMi research leads, whose details are available on the UKMi website. Their role includes advising on all aspects of research such as design, ethics, governance and methodology. They are a source of peer review and can provide links to useful resources, such as schools of pharmacy and local trust research and development (R&D) departments. R&D departments can assist in submitting ethics approval requests.

Defining the research question

We conducted a literature search and prepared a research protocol to set out the aims and proposed methods of the project. A full literature search helps identify whether your research is actually needed, allows you to build other people’s suggestions for future research into your own project, and learn from their mistakes. Writing a research protocol was extremely valuable, enabling us to focus on exactly what we wanted to learn and the practicalities of how we were going to conduct the project. We asked experienced pharmacy practice researchers to check our protocol.

Designing a questionnaire.

Using information gathered from the literature, guides to survey methods and design, and examples of questionnaires used within the UKMi network, we prepared a draft questionnaire. The North West Development Agency’s Regional Intelligence Unit has published a basic guide to survey methods. Similar information is also on the UKMi website together with links to additional resources. We sought comments from MI colleagues and experts in pharmacy practice research on the content and layout of our questionnaire.

Calculating sample size

We estimated the required sample size using a calculator available on the internet.

Doing a pilot.

We conducted a pilot to ensure that the questionnaire was suitable for purpose, and our processes were robust. We used computer software to assist with data analysis. UKMi research leads can advise on where to obtain appropriate software.

Findings

Conducting a research project is challenging. Support is available from within the UKMi network and from external sources such as universities and healthcare trusts. A clear focus on the aims of the project is essential and a pilot is necessary to ensure that you are gathering the correct data and processes are robust.

References

3. www.surveysystem.com/sscalc.htm
Background

The UK Medicines Information (UKMi) national research strategy highlights the limited published research on the impact of MI services on patient care. The aim of the study was to find out how the advice we provide to enquirers is used and what it is used for.

Methods

A questionnaire was designed based on the findings of a literature search and writing guides. All healthcare professionals, except NHS Direct staff, who contacted the North West MI centre with an enquiry over a five day period were eligible for study participation. The questionnaire assessed satisfaction with the service and how advice provided was used. As this was a pilot study, enquirers were also asked to comment on the format of the questionnaire and ease of completion.

Results

- Of 53 questionnaires distributed by email or post, 27 (51%) were returned. Non-responders received a single telephone follow-up call after three weeks; the response rate then increased to 40 (75%).
- 25 (62.5%) pharmacists, 4 (10%) doctors, 9 (22.5%) dentists and 2 (5%) nurses answered the questionnaires.
- All enquirers were happy with the quality of the service provided.
- 97% (38/39) of enquirers used the information provided. One individual did not answer this question and one said that the information was not provided in time for them to use it.
- 92% (36/39) of enquirers who used the information used it for the management of a patient. Of these, 32 said that the information was useful for the care of their patient(s). Figure 1 shows how the information/advice was used.
- Other uses of the information were to give it to someone else, for CPD or for teaching purposes.
- 84% (32/38) of respondents completed the questionnaire in five minutes or less.
- 97% (37/38) stated that they understood the questions, were given adequate explanation and the questionnaire length was acceptable.
- 89% (34/38) said the questions flowed well yet our analysis revealed that only 20% worked correctly through the questionnaire.

Conclusion

- The results indicate a high level of satisfaction with the NWMi service.
- Nearly all enquirers used the information provided and a high proportion of these said the information was useful for the care of patient(s).
- Almost half of the enquiries answered (47%) were about an adverse effect or drug interaction.
- Questioning enquirers about the format of the questionnaire and ease of completion enabled us to establish whether the questionnaire design and the instructions included were comprehensive and user friendly.
- The results from the pilot will allow us to revise and improve the questionnaire content and make changes to the processes for issue and receipt. This may increase the response rate.
- Conducting a pilot is valuable and should be considered essential for even the smallest of projects.
- The questionnaire will be used to conduct a larger study and it is intended to be used as an audit tool in the future.

References

Crystal ball gazing
Do predictions come true?
Lindsay Banks and Helen Davis, North West Medicines Information Centre

Prescribing Outlook – New Medicines (PO-NM) is a horizon scanning resource published annually each Autumn since 2003. The content of PO-NM is based on the anticipated launch date of new drugs or significant licence extensions and the likely financial and service impact in the NHS. Launch dates are influenced by trial data and licensing systems. Impact is difficult to determine but various criteria are used to help prioritise drugs. These include; high cost, size of target population, first in class or major new indication. The content of PO-NM is decided by a panel of experts who apply these criteria together with information on anticipated launch dates. Although systems have been developed to support the process their effectiveness is unknown.(1)

Aims: To evaluate the accuracy of predictions of new product launches as stated in PO-NM and identify factors contributing to unintended omissions.

Method: The date of UK marketing of new products or significant licence extensions for all drugs over the period Sept 03 to Aug 07 was determined. Each product launch was categorised as:
- ‘on target’ if listed in PO-NM and launched within 6 months of predicted date
- ‘off target’ if listed in PO-NM and launched outside 6 months of predicted date, not launched or withdrawn from the licensing process
- ‘missed’ if not included in PO-NM.

Two experts in horizon scanning assessed all missed product launches and by applying the criteria used to decide content determined which, in retrospect, should have been included in PO-NM. These were classed as unintended omissions.

Results: About 70% of key product launches each year were featured in PO-NM. The proportion which were ‘on target’ has remained fairly constant (figure 1). Of 75 ‘missed’ products in total over the study period, there were 17 unintended omissions. Of these 8 were new chemical entities, 8 were licence extensions and 1 was a new formulation (intravenous paracetamol). Figure 2 highlights the proportion of ‘missed’ products each year and those considered to be unintended omissions. Table 1 lists the new chemical entity unintended omissions as assessed by two experts, table 2 lists the licence extensions. 65% of the unintended omissions were launched in the summer months.

Discussion: PO-NM is intended to focus on new drugs which will have the largest impact for the NHS in terms of service or financial impact. This study highlights the following:
- About 70% of key product launches each publication year were featured in PO-NM. Delays in licensing or adverse trial data were the main factors that influenced the proportion ‘off target’.
- 47% of unintended omissions were licence extensions. A possible reason for missing these is that information about licence extensions is more difficult to obtain than that for new chemical entities. In addition, the time from filing to licensing is shorter than that for new chemical entities.
- Unintended omissions are more likely to occur when the filing of drugs for licensing occurs whilst PO-NM is being compiled in the summer months. To ensure that key product launches are not missed it is important to keep horizon scanning during PO-NM production and to continually reconsider content.

Table 1. Unintended omissions - New chemical entities

<table>
<thead>
<tr>
<th>Product</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bivalirudin</td>
<td>Antithrombotic</td>
</tr>
<tr>
<td>Eculizumab</td>
<td>Paroxysmal nocturnal haemoglobinuria</td>
</tr>
<tr>
<td>Imatinib</td>
<td>Chronic myeloid leukaemia (CML)</td>
</tr>
<tr>
<td>MiCera</td>
<td>Renal anaemia</td>
</tr>
<tr>
<td>Octagoc alfa</td>
<td>Factor VIII</td>
</tr>
<tr>
<td>Sorafenib</td>
<td>Renal cell cancer</td>
</tr>
<tr>
<td>Sunitinib</td>
<td>Renal cell cancer</td>
</tr>
<tr>
<td>Paliperidone</td>
<td>Schizophrenia</td>
</tr>
</tbody>
</table>

Table 2. Unintended omissions - Licence extensions

<table>
<thead>
<tr>
<th>Product</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anastrozole</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>Leflunomide</td>
<td>Psoriatic arthritis</td>
</tr>
<tr>
<td>Pregabalin</td>
<td>Peripheral neuropathic pain</td>
</tr>
<tr>
<td>Duloxetine</td>
<td>Peripheral neuropathic pain</td>
</tr>
<tr>
<td>Infliximab</td>
<td>Psoriatic arthritis</td>
</tr>
<tr>
<td>Anastrozole</td>
<td>Adjuvant post tamoxifen</td>
</tr>
<tr>
<td>Imatinib</td>
<td>CML dose increase</td>
</tr>
<tr>
<td>Rituximab</td>
<td>Follicular non-Hodgkin’s lymphoma</td>
</tr>
</tbody>
</table>

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Ex:clusive: The public, the media and MI

By: Christine Proudlove

Does the UK medicines information service answer the call when the public are worried by medicine-related stories in the media?

The media publishes medicines-related articles on a regular basis. A survey, carried out in September 2007, aimed to find out whether this has an impact on calls to medicines information (MI) centres. The survey took the form of an electronic questionnaire, promoted via the UKMI e-discussion group.

About 30% of MI centres in the UK responded to the survey. This included returns from 55 local and 8 regional centres.

Only four centres did not take calls from the public. Over a third of centres (38%) ran a dedicated patient helpline and a further quarter supported the NHS patient helpline, NHS Direct.

The number of calls from members of the public varied. Over 80% of centres had taken more than 20 calls from the public in the last year, and just over a quarter more than 100 calls.

Not all these calls followed a media story. In fact, most of those taking part in the survey thought only a small proportion of the calls they received were prompted by the media. In the last year, around 15% of centres had received more than ten media-prompted calls, but the majority had taken only between two and 10 calls.

Where calls were triggered by media stories, newspapers and news items on the TV or radio were thought to be the main sources. Women’s magazines and ‘broadsheets’ were not far behind, closely followed by the internet.

So what do people ask?

Calls about adverse effects topped the list, with three-quarters of centres saying that they were the most frequent types of calls prompted by media stories.

Not surprisingly considering both the public and media interest in ‘natural’ products, calls about complementary medicines were also common. But, given the media’s interest in heralding the potential benefits of drugs still in clinical development it’s worth noting that centres received more calls about newly marketed medicines, than those some way off from being licensed.

Problems with switching from atorvastatin to simvastatin and cardiac side effects of the ‘glitazones’ were the two big medicine-media stories of 2007 according to the survey, as they had prompted the most questions from the public. However, although concerns about the safety of the MMR vaccine were raised some years ago, MI centres are still taking calls on this issue.

The challenges

Answering calls from the public presents challenges. The graph shows how these are rated. Callers wanting a ‘black and white’ answer when one didn’t exist was high on the list, as was communicating messages about risk. These are issues that media stories often avoid or misrepresent.

There was a desire for training to help meet these challenges.

The bottom line

The Healthcare Commission has called for more patient helplines. In response, one of the aims of the UKMi strategy, Effective Information for Managing Medicines, is to increase the number of MI centres offering helplines. To support this, a template business case for establishing a helpline is being developed and cascade training is planned.

References
2. UKMi. Effective information for managing medicines. September 2007
**INTRODUCTION**

The Audit Commission report ‘A Spoonful of Sugar’ recommended the introduction of automated dispensing systems to all trusts\(^1\): ‘Trust boards will need to invest in computer systems and automation in order to release pharmacy staff resources into direct patient services.’

Many hospital pharmacies, including WUTH, now have robots to automate the storage and dispensing of medicines and medicinal products, releasing staff for patient-centred services. Storage in many robots is random. The dimensions of each pack are measured and then the pack is placed in the most suitable position within the unit for size and positional stability\(^2\). This may not always be upright. It was observed that some items are labelled with the direction ‘Store Upright’ on the packaging. All products with this requirement needed to be identified, and systems annotated, to ensure compliance with these specific storage requirements to maintain quality.

**METHOD**

Internet and product literature searches were performed to identify any items which needed to be stored upright. Pharmacy procurement staff were alerted and agreed to note such product information when checking items delivered to Pharmacy Stores, as information was only available for branded products.

**RESULTS**

23 medicines or medicinal products with the direction on the pack and/or the product literature to ‘Store Upright’ were found (Table 1). Of these:
- 12 were currently being stored in robots within WUTH pharmacies
- 5 had previously been stocked
- 6 had not been purchased.

**STORE UPRIGHT**

- Add cortril Intra-articular
- Intradermal Injection 10mg/ml
- Alomide 0.1% w/v
- Anhydrol Forte 20% w/v cutaneous solution
- Ciloxan 0.3% w/v eye drops
- Clarelux cutaneous foam
- Diproban
- Driclor
- Earcalt Spray
- Exelon
- Exterol 5% w/w ear drops
- Flixonase Nasule Drops
- Flexotide Nebules 0.5mg/2ml
- Flexotide Nebules 2mg/2ml
- Glutarol 10% w/v cutaneous solution
- Ibuvele Mousse
- Ibumousse
- Kenalog Intra-articular/Intramuscular Injection
- Miacalcal 200 IU Nasal Spray
- Otex Ear drops
- Otomize
- Synarel Nasal Spray
- Thiopental injection (Link Pharmaceuticals Ltd)
- Zofran Syrup

**RECOMMENDATIONS**

- Remove the 12 products identified and store on open shelves.
- Change the shelf location on the pharmacy stock control system
- Add ‘Store Upright’ as a special consideration to the entry on the pharmacy stock control system for all 17 products.
- Remain alert when any new product, or new packaging for an existing product, is received, incorporating this check in the WUTH Pharmacy Purchasing for Safety Risk Assessment\(^3\).

**REFERENCES**

2. Derek Swanson, Automated dispensing – an overview of the types of the systems available, Hospital Pharmacist 2004; 11(2): 66-68
Level 1 enquiries - identifying the medicines information training needs of hospital pharmacists

Catherine Butler, Department of Pharmacy & Medicines Management and Mark Cheeseman, East Anglia Medicines Information Service, The Ipswich Hospital NHS Trust, Ipswich

**Background**

The Medicines Information (MI) centre based in the Department of Pharmacy & Medicines Management at Ipswich Hospital NHS Trust is comprised of the East Anglia MI service (EAMIS) and the Ipswich Hospital NHS Trust MI service. A previous in-house service evaluation undertaken by the MI centre had identified that hospital pharmacists were the most common users of the MI centre.

The aim of this service evaluation was to identify the MI training needs of hospital pharmacists by reviewing the enquiries recorded on MiDatabank from this user group.

**Methodology**

A data collection form was initially piloted using 20 hospital pharmacist enquiries received by the MI centre. This recorded the enquiry type, complexity of enquiry, time the enquiry was received, length of time taken to complete the enquiry and the resources used to answer the enquiry. These indicators were used to identify any possible MI training needs.

Enquiries received during the period June to August 2007 from hospital pharmacists were retrospectively analysed.

**Results**

A total of 781 enquiries were received by the MI centre during the study period of which 22% (n=171) were from hospital pharmacists. 91% of these enquiries involved a specific patient and the most common categories of enquiry received from hospital pharmacists were, in descending order of frequency:

- administration/dosage (39%)
- choice of therapy/indication/contraindication (15%)
- drug interactions (11%)
- pharmaceutical (11%).

A total of 83 (48%) of the enquiries received from hospital pharmacists were categorised as level 1. The median time taken to complete a level 1 enquiry from a hospital pharmacist was 12 minutes. The MI service answered 25% of these enquiries using resources which were also available outside of the MI centre.

**Discussion**

The results of this study suggest that hospital pharmacists do not utilise available resources to attempt to answer “simple” MI enquiries themselves before contacting the MI service. This may have developed in part, as a result of the accessibility of the MI service but the exact reasons for this were felt to be outside the scope of this project.

However, in response to these results, it was decided to develop a MI quick reference guide for ward-based pharmacists and pharmacy technicians. This A5 guide provides:

- background information needed to answer enquiries involving administration/dosage, choice of therapy, drug interactions and pharmaceutical enquiries.
- resources available to pharmacists at ward level empowering them to find relevant information to answer level 1 enquiries.

A training session was delivered to show ward-based pharmacists/pharmacy technicians how the guide should be used and how to access and use the resources. The MI quick reference guide is now provided to all new ward-based pharmacists/pharmacy technicians together with training as part of their MI induction.

At the same time, pharmacists were given access to the Medicines Complete Pharmacy Package and MiDatabank was installed on more computers within the Pharmacy to increase access.
Improving information governance for pharmacists working out of hours: involvement of a MI service

Mark Cheeseman, East Anglia Medicines Information Service, The Ipswich Hospital NHS Trust, Ipswich

Background
Ipswich Hospital NHS Trust is one of the largest general hospitals in the East of England Strategic Health Authority covering 46 acres of land. It has over 700 beds and includes the following specialities: cardiology, care of the elderly, critical care, dermatology, diabetes/endocrinology, emergency medicine, general medicine, neurology, oncology/haematology, ophthalmology, renal medicine, respiratory medicine, surgery and trauma and orthopaedics.

MI enquiries from Ipswich Hospital are dealt with by the on-call pharmacists between 5.30pm and 8.30am Monday to Friday and all day on Saturdays and Sundays.

Historical Practice
If the on-call pharmacist received a MI enquiry out of hours, the question and answer given would be documented onto a form. This form was also used to document information about the numbers and types of medicines supplied, lost charts and any issues with alarms. The completed form was then reviewed by the lead on-call pharmacist and any necessary action taken where upon the paper record was then destroyed.

Review
It was identified by the MI service that the procedures employed meant that the information/advice documented by the on-call pharmacists was very limited with no or little reference to the source(s) used to provide the information. In addition, because the completed forms were destroyed, the details of the enquiry and the advice given could not be accessed at a later date.

Aim
The aim of this service evaluation was to develop a robust system to signpost pharmacists providing MI out of hours to relevant information resources and ensure that any advice given was documented. This documentation should be archived so that it is accessible and easily retrievable.

The Emergency Duty Drug & Medicines Information (EDDi) Pack
Using the existing UKMi documents ‘Enquiry Answering Guidelines’ and ‘Quick Question Guide’, the Emergency Duty Drug and Medicines Information or ‘EDDi Pack’ was developed to support on-call pharmacists providing advice/information out of hours at the Ipswich Hospital NHS Trust.

A separate record form was designed for each enquiry type most commonly received out of hours (based on the author’s own experience as an on-call and MI pharmacist). These include:

<table>
<thead>
<tr>
<th>Administration (Drug)</th>
<th>Paediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse Drug Reactions</td>
<td>Palliative Care</td>
</tr>
<tr>
<td>Compatibility of Intravenous Drugs</td>
<td>Poisoning or overdose</td>
</tr>
<tr>
<td>Compatibility of subcutaneous drugs</td>
<td>Product Availability</td>
</tr>
<tr>
<td>Drug Identification</td>
<td>Pregnancy, Drugs in</td>
</tr>
<tr>
<td>Interactions (Drug)</td>
<td>Renal Impairment, Drugs in</td>
</tr>
<tr>
<td>Liver Disease, Drugs in</td>
<td>Therapeutic Drug Monitoring</td>
</tr>
</tbody>
</table>

The EDDi Pack guides the on-call pharmacists to record the minimum amount of information to be documented when receiving an enquiry. It also signposts the on-call pharmacist to the resources available to them and where these can be located, i.e. the MI centre, dispensary, Internet.

Once completed by the on-call pharmacist, the form is given to the MI centre the next working day to retrospectively enter onto MiDatabank. The enquiry is categorised to ‘Ipswich Hospital’ and ‘out of hours’ to enable easy retrieval of the information/advice given.

Evaluation
The EDDi Pack has now been in use since July 2008. A small number of EDDi Pack forms have been received by the MI centre which have been recorded onto MiDatabank. However, it is not known at this stage how many pharmacists are only using the EDDi Pack to signpost them to resources but not recording the enquiry.

The first two monthly reports have been generated for the lead on-call pharmacist showing the types of enquiries received out of hours and the information/advice provided. The most common enquiry type currently is ‘drug administration’.

The on-call pharmacists will be surveyed after 6 months to evaluate their use of the EDDi Pack. This will help to identify if the EDDi Pack provides a robust system to:

- signpost pharmacists to relevant information resources when dealing with enquiries out of hours.
- enable pharmacists to document details of the enquirer, question, research and advice given out of hours.
- identify common themes and active information that can be provided in response to the enquirer, e.g. development of a hospital guideline for intravenous administration of sodium valproate.
Does documenting when a MI service receives telephone calls help to plan service provision?

Mark Cheeseman, East Anglia Medicines Information Service, The Ipswich Hospital NHS Trust, Ipswich

Background
The Medicines Information (MI) centre based in the Department of Pharmacy & Medicines Management at Ipswich Hospital NHS Trust is comprised of the East Anglia MI service (EAMIS) and the Ipswich Hospital NHS Trust MI service.

The MI service introduced a rota during 2007 for MI pharmacists answering the phone, processing enquiries and undertaking ‘active’ time. This utilised a MI pharmacist answering the telephone and another processing enquiries. However, it was recognised that there are some days and certain times of day when relatively more enquiries are received compared to others. Identifying when these time periods occur might enable more efficient use of staff and potentially greater ‘active’ output.

Aim
The aim of this service evaluation was to find out if there are any patterns with regards to the day and/or time of day when the MI centre receives telephone enquiries.

Method
A simple ‘Telephone Record Form’ was produced which enabled the MI pharmacist to document the type of call, i.e. enquiry or other (this was for all other calls which were not enquiries), and the day and time it was received Monday to Friday. Telephone calls received by the MI centre were recorded every other month for 8 months (4 months data collected). The periods of data collection were:

- 30th April to 25th May 2007
- 25th June to 20th July 2007
- 20th August to 14th September 2007
- 22nd October to 16th November 2007

The data recorded on the ‘Telephone Record Forms’ were collated and entered into a Microsoft Excel spreadsheet.

Results
A total of 1398 telephone calls were documented during the 16 week period. A total of 772 (55%) were enquiries and 626 (45%) were classified as “other” calls. The median numbers of enquiries received each working day over the 16 week period showed that in descending order of frequency, most telephoned enquiries were received on Thursdays, Wednesdays, Tuesdays, Monday and Fridays.

The median number of enquiries received by the MI centre for each hour of the day over a 16 week period can be seen above.

Discussion
The MI centre received most of its enquiries on Thursdays followed by Wednesdays and Tuesdays in descending order. The least number of enquiries were received on Mondays and Fridays. This data suggest an increasing workload around mid-week, with Mondays and Fridays being quieter.

Enquiries received by the MI centre initially peaked during 11am and 12pm. This is likely to be due to hospital pharmacy staff contacting the service whilst on the wards. The second busiest time period is between 2pm and 4pm. Further work is needed to identify the type of enquirer using the service during this time of day.

Overall, 45% of calls were documented as ‘other’ and not enquiries. As a proportion, this is a high number and may result in MI staff being distracted unnecessarily from their work. Unfortunately this service evaluation was not designed to identify the nature of these calls.

Conclusion
As a consequence of this work, the rota used by the centre has been adjusted to ensure that a full complement of staff is available to receive enquiries on Wednesdays and Thursdays, in particular between 11am and 12pm and 2pm and 4pm.

For all other days, except between 11am and 12pm and 2pm and 4pm, only one MI pharmacist is on the rota to answer telephones & process enquiries which enables more staff to undertake ‘active’ work.

Limitations
There are a number of limitations to this study, including:

- Only the type and numbers of calls received were recorded.
- NHS Direct calls are received on Thursdays which may have skewed these figures.
- An increasing NHS Direct workload was received during this period which may have affected these results.
- This evaluation was only conducted over a 16 week period.
- This data does not tell us:
  - the urgency of the enquiries, e.g. they may have been received but may not have been urgent for that day.
  - where these calls originated, e.g. internal or external to the Trust.
  - the nature of the ‘other’ calls and why the MI centre was contacted.
- Data assumes MI staff accurately recorded the calls received.
Joint regional MI/specialist clinical pharmacist posts – do they work?

Fontane Lok & Kerstin Weber, East Anglia Medicines Information Service, The Ipswich Hospital NHS Trust, Ipswich

Background
At Ipswich Hospital, two new posts have been implemented recently. These involve working as both regional medicines information (MI) and specialist clinical pharmacists. One post covers critical care, theatres and anaesthetics, and the other post covers ophthalmology, ENT and urology. Both the critical care unit and the elective surgery ward are located in the newly built Garrett Anderson Treatment Centre (see picture below).

These full-time roles involve spending three afternoons each week in MI and the remainder within the clinical area. In addition, an average of three to four hours per week is allocated to the pharmacy dispensary.

A Pharmline search did not find any papers which discussed such posts.

There are a number of advantages and disadvantages to these innovative roles which are provided below:

Advantages
Developing the clinical pharmacy service provided by utilising MI skills:

- Enquiry answering skills: retrieve relevant information from enquirers, aware of the resources to use, able to interpret information, and provide complex information to all types of enquiries.

- Theoretical knowledge gained in MI can be applied into clinical practice.

- Communication skills acquired in MI are essential for collaboration with other healthcare professionals and patients on the ward.

- Critical appraisal skills can be used to provide information on evidence based medicines to patients (e.g. if patients are reluctant to take their medications) and to other healthcare professionals.

Developing the MI service provided by utilising clinical pharmacy skills:

- In MI, a link with hospital pharmacy practice is important so that information can be interpreted using clinical background knowledge.

- Pharmacist’s knowledge and practical experience in specialist area can be used as a resource in MI.

- Communication with healthcare professionals can be used as a way of promoting the MI service.

- Understanding patients’ views and concerns can be taken into account when providing advice in MI, especially for NHS Direct enquiries.

- Better understanding of different roles of healthcare professionals working in secondary care when answering their enquiries.

Disadvantages
- Less flexibility, for example it is not always possible to attend meetings.

- Understanding of our role in regional MI by hospital staff and colleagues can be a challenge.

- May be difficult for line manager to understand our roles as clinical pharmacists.

Conclusions
In summary, the benefits of working as both MI and specialist clinical pharmacists far outweigh the disadvantages. We believe that the time we spend in each area is optimal. Working in MI in the afternoons enables us to provide a pharmacy service to our clinical areas when it is most urgently required (i.e. in the mornings).
Into the Future: Developing the UK Drugs in Lactation Advisory Service

Kelly Broad - MI Pharmacist, Louise Nolan - Senior MI Pharmacist & Peter Golightly - Director. Trent Medicines Information Service, University Hospitals of Leicester.

INTRODUCTION
The UK Drugs in Lactation Advisory Service (UKDILAS) is delivered jointly by Trent and West Midlands Medicines Information (MI) Service. A total of 943 enquiries, from healthcare professionals and members of the public were answered by the service in 2007. To support the provision of information on drugs in breast milk several resources are developed and maintained by UKDILAS including UKMiCentral website, in-house UKDILAS monographs and NELM Q&As.

The following audit was undertaken to help clarify, prioritise and determine our user profile to guide and develop a future strategy for UKDILAS.

METHOD
A two part audit was designed to identify UKDILAS service users, what medicines information was requested and what sources were used prior to contacting UKDILAS, at the Trent MI service. Part 1 retrospectively analysed the service users and the specific medications enquired about. In addition to this, Part 2 looked at what resources were used prior to calling UKDILAS. A proportion of the audit was retrospective so as to minimise data collection time.

Part 1
A retrospective analysis of all drugs in lactation enquiries received by the Trent MI service between 1st May 2007 and 30th July 2007 was undertaken. Data collated from these enquiries included:
- Enquirer status
- Medicines being enquired about
- BNF classification of medicines
- Whether a UKDILAS resource was available to answer the enquiry

Part 2
An audit form was developed to capture information on:
- Enquirer status
- Medicines being enquired about
- Resources used prior to contact with UKDILAS.

RESULTS
In total 145 enquiries were analysed retrospectively for the period specified and a further 58 were collated prospectively.

The top 5 users were hospital / medicines information pharmacist (61%), GPs (12%), primary care nurses / midwives (7%), Members of the public (7%) and community pharmacists (3%). Other hospital staff and external bodies, for example La Leche League, contributed to the other 10%.

Medicines were linked to BNF category. The top five frequently asked categories were:

<table>
<thead>
<tr>
<th></th>
<th>Antidepressants</th>
<th>Analgesics (Opioid)</th>
<th>Antihistamines</th>
<th>Antipsychotics</th>
<th>Dugs used for nausea and vomiting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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</tbody>
</table>

Prospective and retrospective calls were compared to specialist sources maintained by UKDILAS.

Of the 203 enquiries, there was no UKDILAS specialist resource, i.e. Q&A, UKMiCentral entry or breastfeeding monograph, available for 65 enquiries.

The top 5 resources used prior to contacting UKDILAS were: Drugs during Pregnancy and Lactation, 2nd Ed, Schaefer C. et al (40%), Medications and Mothers’ Milk 12th Ed, Hale T. (38%), Drugs in Pregnancy and Lactation, 7th Ed, Briggs G. et al (38%), BNF 54 (33%), electronic Medicines Compendium (31%).

NELM Q&As were accessed by 9% of enquirers and UKMiCentral by 28%, of which 94% rang UKDILAS for clarity.

CONCLUSIONS
Hospital / Medicines Information pharmacists are the highest user of the service. Limited enquiries were received from healthcare professionals in the primary care setting. This may be due to a lack of knowledge regarding UKDILAS and the specialist resources available, although use of the website and other resources may have contributed.

Enquiries received from Medicines Information centres did not suggest that all enquirers were using the basic resources available before contacting UKDILAS.

Callers frequently contacted UKDILAS for clarity of information found on UKMiCentral.

This suggests that traffic light status is not perceived to be sufficient for some enquiries and further detailed information is required.

Of the top 5 BNF categories frequently enquired about a NELM Q&A / UKDILAS resource was available for all. This implies that UKDILAS resources are being developed which are reflective of the information required by users of the service, however that there is a lack of knowledge of their accessibility.

Acknowledgements: West Midlands MI Service, Denise Stevens, Clare Nelson & Gillian Stead.

THE FUTURE
Develop a detailed search strategy detailing resources to be used as standard and background information required if UKDILAS is contacted. This should also complement the guidance on search strategies recently issued on UKMI.

Produce UKDILAS monographs / Q&As for drugs frequently requested where there is no UKDILAS resource available

Development of the UKMiCentral website and investigate why people:
- Don’t access the website
- When the website is used why people feel that further clarification is required

Promotion of the UKDILAS service to Primary Care and Secondary Doctors and Nurses, however this should be weighted against the theoretical increased workload.

Consider a Research Post to increase the evidence for drugs where there is limited / no information with regards to breast feeding

Repeat the audit at West Midlands MI service, if appropriate.

For further information please contact kelly.broad@uhl-tr.nhs.uk
One-to-one training for clinical pharmacists: Sharpening skills

Louise Nolan – Senior MI Pharmacist, Gillian Stead – Principal Pharmacist MI
Trent Medicines Information Service, University Hospitals of Leicester

Background
In January 2006, the Trent Medicines Information department offered one-to-one training MI sessions for pharmacy staff across University Hospitals of Leicester (UHL). The Pharmacy department at UHL consists of three main departments spread across three hospitals with a number of outpatient and satellite pharmacies and the Medicines Information and Pharmacy Purchasing departments.

We hoped to update clinical pharmacists with the resources available to them, in particular those pharmacists who had either not had any MI training or their MI training was several years ago. In addition, we hoped to strengthen contacts and links with all of the UHL pharmacy departments.

Aims
• The aim of the one-to-one session would be to address individual or directorate MI-related concerns that come about in day to day clinical pharmacy work.
• Possible topics suggested were: Database searching, critical appraisal, navigation and interpretation of websites, orientation to local UHL resources, advice on how to approach directorate–related information requests.
• Attendees were asked to specify learning outcomes for the training session in advance.

Method
• The training sessions were promoted to the directorate lead pharmacists through meetings and to all pharmacists through the MI newsletter. All clinical pharmacists were eligible to come to a session and were encouraged to liaise with their directorate lead pharmacist to organise a session.
• The sessions lasted 1 hour each, were held in MI (away from ward and dispensary distractions) and were conducted by an experienced MI pharmacist (band 8A).
• Attendees were emailed a survey to assess the usefulness and relevance of their MI one-to-one training session.

Results
• In total 10 individual and 2 directorate sessions were conducted between January 2006 and July 2007.
• Most sessions involved refreshing literature searching and finding journals, navigating useful internal and external websites.
• All respondents said their objectives were met.
• The most helpful aspects of the sessions indicated by respondents are listed in Tables 1 and 2.
• Of the 10 individual sessions attended: one The sessions were rated as 4.3 out of 5 for usefulness.

Figure 1 represents the ratio of grade of staff who took up the 1:1 sessions

Conclusions
The training sessions were well received by pharmacy staff with sessions generally attended by more senior pharmacists. This may be as they have less recent experience of MI, answer more of their own MI queries, or because junior pharmacists were less aware of the availability of the training sessions.

The feedback indicates the individualised nature of the session and time out from their usual workplace was valued.

The 1:1 sessions which support the UKMI strategy for education and training highlight that there is a need for regularly updating medicine information skills in clinical pharmacists.

For further information please contact gillian.stead@uhl-tr.nhs.uk
Introduction
In September 2007 UKMI published a strategy for “Effective Information for Managing Medicines” to facilitate the NHS medicines management agenda locally and nationally. In order to measure how successful UKMI is in supporting the key issues underpinning organisational change within the NHS, it is essential to develop a tool that enables assessment of the impact of enquiry answering.

Aims
• Design and validate a questionnaire.
• Analyse the data.
• Submit to the UKMI clinical governance group for approval to be used nationally.

Method
A survey form was designed listing all possible end outcomes of enquiry answering. A total of 249 surveys were mailed from five MI centres (Trent, Lincoln, West Midlands, Solihull and Birmingham City) for the pilot survey.

Results
138 enquirers returned the questionnaire. The survey outcomes are documented in Table 1. The proportion of responses from different healthcare professionals are shown in Figure 2.

Analysis
Response rate
An adequate response rate was seen in all healthcare professional groups contacted (55%).

Questionnaire design
The following observations were noted with some suggestions for improvement:

• No comments were made indicating difficulties using the form. However 15% of non pharmacists indicated that information resulted in a pharmacist intervention.

Adding an enquirer status box would allow pharmacists responses to be easily identified and then omit question 1.

• A small number of enquirers answered yes to questions 2-4. In the context of the questions this would have been unlikely. Simplify the questionnaire by omitting question 4 as this is covered by questions 2 and 3.

• None of the responses indicated any other outcome that could not be described by the statements on the form. However further questions that could be added include:
  Information provided prevented a hospital admission.
  The information was ignored as incomplete and the information was too late to utilise.

• Only 4 enquirers indicated that the information facilitated early discharge. Rephrase question 13 to say “information facilitated patient discharge” to capture TTO interventions and patient counselling.

Discussion
• The results show that 95% of the information and advice given in response to enquiries by a wide range of health professionals result in resolving prescribing and medicine management problems.
• 66% enquirers indicated they thought the information enhanced patient safety.
• The results show that the MI service is used by the health community to assist with the acute daily problems that it encounters and not an educational resource for literature searching alone.
• Hospital pharmacists are the biggest enquiry user group of MI and so it is important to measure the outcome of their enquiries. Our survey showed these enquiries do result in a positive outcome.

Conclusion
Although MI Databank captures enquiry category, it does not capture what actually happens to that information and the impact that it has. Equally the nationally used “user survey” is a useful indicator of customer satisfaction but does not identify how the information is used. If adopted nationally, this survey, with minor adjustments, would provide the basis of a useful tool on perhaps an annual basis. It would be appropriate to use this in addition to the existing user survey to measure the outcome of the information and advice given by MI pharmacists. This would enable MI departments to assess and be assessed nationally in a detailed manner in line with the strategic aims of UKMI and the NHS. Future developments could include adding a rating scale and a financial element.

Acknowledgements
West Midlands MI, Lincoln MI, Birmingham City MI, Solihull MI Pete Golightly, Denise Stevens and Clare Nelson.
For further information please contact gillian.stead@uhl-tr.nhs.uk
Information Resources for Hospital Pharmacies: Managing the Risk

By Sahera Uddin – MI Pharmacist, Louise Nolan – Senior MI Pharmacist, Gillian Stead – Principal Pharmacist MI
Trent Medicines Information Service, University Hospitals of Leicester

Introduction
• Access to current medical information is a necessity for pharmacy staff in order to support patient care and safety and to fulfil their role as guardians of medicine.
• The risk management policy for the NHS UKMI Medicines Information services has outlined that out of date resources are a risk.
• Risk management is encompassed within clinical governance and the ultimate aim of clinical governance is to provide a high quality service delivering the best level of care to patients and ensuring that systems are in place for quality improvement year on year.
• The solution would be to ensure that only the most up to date resources are used at all times but this is difficult because there is no resource management system in place to facilitate this.

Method
Stage 1 Data collection- all hard copy resources at all three pharmacy sites were audited by personal visit
Stage 2 Data entry- a database was designed on Microsoft Access to capture this information
Stage 3 Development of the ‘essential resource list’- MI pharmacists evaluated the official recommendations of resource requirements and recommended further resources that would be considered essential to hospital pharmacy practice.
Stage 4 Generation of reports from the database to highlight whether each site kept the most up to date essential resources
Stage 5 Development of a Standard Operating Procedure for the management of resources across UHL pharmacies.

Results
We found that the only formal requirements for resources in hospital pharmacies came from the Royal Pharmaceutical Society of Great Britain (RPSGB) for pre-registration sites. Further to this we recommended useful resources based on clinical practice at each site, cost and usefulness. Table 1 and 2 summarise all the essential resources and editions kept at each site at the time of audit. The red highlighted areas show that most were either out of date or unavailable therefore potentially posing a risk. The results show that there is a need for a resource management system to ensure pharmacies always have access to the most up to date resources.

Discussion
• Results show that hospital pharmacy departments are not necessarily adequately resourced to answer clinical enquiries and resources are often out of date.
• Review by MI resulted in purchase of an electronic Medicines Complete dispensary package, which includes Martindale, Stockley’s, BNF and BNF for Children for £250.00 per pharmacy site making a saving of £220.00. Other advantages of electronic access include:
  - Minimise risk of hard copies going missing
  - Minimise the risk of pharmacy staff using out of date resources
  - Access information at the point of care e.g. wards
  - Automate the process of updating and minimise workload
• The development of a system managed MI to facilitate the process for:
  - Screening various sources to identify new editions of the essential resources
  - Automatically ordering newly identified editions
  - Ordering, delivery and receipt of the new editions

Aim
• To establish the essential resources required in pharmacy departments
• To audit the hard copy resources kept at each pharmacy site and evaluate this against the essential resources to highlight any deficits
• Generate a resource management system to ensure that pharmacy departments always have access to the most up to date essential resources.

Table 1-Audit of RPSGB essential resources

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Most Recent Edition</th>
<th>Year</th>
<th>Site 1 Edition</th>
<th>Site 2 Edition</th>
<th>Site 3 Edition</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicines Ethics &amp; Practice</td>
<td>RPSGB</td>
<td>2006</td>
<td>30</td>
<td>6</td>
<td></td>
<td></td>
<td>£0.00</td>
</tr>
<tr>
<td>Martindale The Complete Drug Reference</td>
<td>Sweetman</td>
<td>2006</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td>£350.00</td>
</tr>
<tr>
<td>Drug Tariff</td>
<td></td>
<td>2007</td>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td>£0.00</td>
</tr>
<tr>
<td>Drug Interactions</td>
<td>Stockley &amp; C.</td>
<td>2006</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>£350.00</td>
</tr>
<tr>
<td>British National Formulary for Children</td>
<td>BMA &amp; RPSGB</td>
<td>2007</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>British National Formulary for Children</td>
<td>BMA, RPSGB</td>
<td>2007</td>
<td>53</td>
<td></td>
<td></td>
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<tr>
<td>Introduction to Pharmaceutical Calculations</td>
<td>Nees, T Smith</td>
<td>2008</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>£19.95</td>
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</table>

Table 2-Audit of MI recommended resources

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<th>Title</th>
<th>Author</th>
<th>Most Recent Edition</th>
<th>Year</th>
<th>Site 1 Edition</th>
<th>Site 2 Edition</th>
<th>Site 3 Edition</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Renal Drug Handbook</td>
<td>Ashley, C et al</td>
<td>2004</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>£40.00</td>
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<tr>
<td>The Syringe Driver</td>
<td>Dickman, A et al</td>
<td>2005</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>£25.00</td>
</tr>
<tr>
<td>Handbook on Injectable Drugs</td>
<td>Treas Lawrence A</td>
<td>2005</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Handbook of Drug Administration via Enteral Feeding Tubes</td>
<td>White, R</td>
<td>2007</td>
<td>1</td>
<td></td>
<td></td>
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<td>£39.95</td>
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<tr>
<td>The Maudsley Prescribing Guidelines</td>
<td>Taylor, D</td>
<td>2007</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>£22.95</td>
</tr>
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</table>

Key: Red= out of date or unavailable     Green= up to date

Further Work
Phase 2 of this project involves identifying the information needs of the specialist directorate pharmacy teams and other groups such as the aseptic suite and the training teams. Following a similar guideline, the resources would be regularly screened and on the availability of a new edition the directorate lead pharmacists would be alerted and they would be responsible for the purchasing within their budget.

The essential UKMI recommended resources for MI can also be screened for and ordered following a similar guideline.

Conclusion
All pharmacy departments need surveillance of their information resources

Acknowledgment
I would like to thank Gillian Stead, Louise Nolan, Clare Nelson and Denise Stevens for their support.
For further information please contact sahera.uddin@uhl-tr.nhs.uk
Introduction
A substantial number of enquiries regarding the safety and interaction potential of complementary therapies is referred to the Trent Medicines Information Centre by NHS Direct each year. The information available is generally very limited due to a lack of good quality clinical studies and post-marketing surveillance. Giving a definite answer is in most cases impossible. We felt that therefore the number of resources used, thus the time spent was disproportionate to the outcome. Most products are unlicensed in the United Kingdom and sold as food supplements. There is no guarantee for their quality or purity.

In 2002, the MHRA published a statement on the safety of complementary therapies, and recommend that certain patient groups should categorically be advised against using these products. These include: Patients with underlying cardiovascular disease, patients on conventional medicines with a narrow therapeutic index, pregnant and breast-feeding women, children and the elderly.

Aims
To rationalise and standardise the way complementary medicines enquiries referred by NHS Direct are handled by the Trent Medicines Information Service, thus optimising the number of resources used, research time, and consistency of the advice given.

Method
We analysed a sample of 100 NHS Direct call referrals from the category ‘Complementary Therapies’, capturing the following data:

• Resources used, and which ones provided the relevant information
• The highest grade evidence the answer was based on
• Time spent
• Medical history, and whether it is known or assumed
• Is a statement on limited evidence and potential risks of unlicensed medicines included?

Based on the findings, guidelines were developed, reviewed by staff in the Trent Medicines Information Centre, and subsequently implemented – in summary:

• Use the Natural Medicines Comprehensive Database as a only resource, unless the information cannot be found here
• Take a full medical history from the patient
• If in doubt, advise against the use of complementary therapies, particularly if the patient
  -has an underlying cardiovascular disease
  -is pregnant or breastfeeding
  -is a child or elderly
  -is taking a drug with a narrow therapeutic index

• Always include the following statement: “Most complementary medicines have not been formally assessed in well designed clinical trials, and available information is therefore limited and incomplete. They may cause drug interactions or adverse effects that are as yet unknown, and it cannot be recommended that they are completely safe to use. As most complementary medicines are unlicensed in the UK, their quality is not subject to the strict regulations that apply to conventional medicines.”

We analysed a second sample of 50 enquiries to establish whether the guidelines had made a difference to time and number of resources, and whether the above advice was documented as given to the enquirer. The results from both samples were compared using an independent t-test.

Results
First sample:
• There was no evidence to support an answer in 62% of enquiries.
• One answer was supported by level B evidence, the highest level overall in the sample – this patient was enquiring about Saint John’s Wort.
• 85% of enquiries were regarding potential interactions with conventional medicines; a further 5% of enquiries were about side effects of complementary therapies.
• 95% of all answers were based on the information found in the Natural Medicines Database. Where additional resources were consulted, they did not add to the information.
• The remaining 5% were answered without using the Natural Medicines Database, but the information would have been the same had it been used in 80% of these.

Before / after comparison:
• We reduced the average number of resources per enquiry from 3.19 to 2.52 after implementing the guidelines. This reduction was statistically significant. (Figure 1)
• We reduced the average time from 44.65 to 40.18 minutes. This reduction was statistically not significant. (Figure 2)
• In only 7% of enquiries during the first cycle was it documented that the patient was informed that there is limited information on complementary therapies due to lack of well designed studies, that their product is likely to be unlicensed and that there is no guarantee for its quality. After implementing the guidelines, we increased this to 78%. This increase was statistically significant. (Figure 3)

Discussion
The evidence for the use and safety of complementary therapies is poor, when applying the principles that are used for judging conventional medicines. Most patients were concerned about the safety of a product, however a definite answer can often not be given.

After implementation of the guidelines, a statistically significant reduction in the number of resources used per enquiry was seen. The average number of resources would have been expected to be between 1 and 2; the average was found to be 2.52 which suggest non- adherence to the new guidelines. Medicines Information pharmacists may not feel comfortable using one database as a single resource, particularly if little information is available. This is speculative, and to find out the actual reasons further investigations are required.

There was a reduction in the time per enquiry, but this was statistically insignificant. One obvious reason for this is the number of resources per enquiry, which was not reduced by as much as expected. However, a change in the collaboration between the Trent Medicines Information Service and NHS Direct meant longer telephone consultations with patients during the second cycle, which may have been a confounding factor.

The main benefit was a significant increase in the number of patients being advised regarding the limited information available on complementary therapies, and the risks associated with using unlicensed products. It means that a greater number of service users were enabled to make a fully informed decision about their self medication, and patient safety was improved.

Conclusion
The Natural Medicines Comprehensive Database is a suitable stand-alone resource for most complementary therapies enquiries from members of the public. The implementation of the guidelines was not fully successful, but an increase in patient safety was achieved.
The Mystery Shopper Project: A useful additional tool for Quality Assurance of Medicines Information services

Alison Innes and Davina Wraith, London (Northwick Park) and London & SE Medicines Information Services.

Background
The current UK Medicines Information (UKMI) Standards for Quality Assurance (QA) of Medicines Information (MI) services are comprehensive and robust. However, QA of enquiry answering services relies mainly upon retrospective analysis of a sample of enquiries based on the enquiry records. Mystery shopping has been used in health service evaluation and has been proposed as an additional tool for assessment of the quality of the UKMI enquiry answering service.

Aims
• To assess whether the Mystery Shopper approach provides any additional information to the current methods for QA of the MI enquiry answering service.
• To determine whether the Mystery Shopper approach is feasible in MI.

Objectives
• To develop and pilot a scenario suitable for use as a Mystery Shopper enquiry.
• To design and pilot data collection sheets for use by the Mystery Shopper.
• To assess the suitability of clinical pharmacists as Mystery Shopper.

Method
An enquiry scenario was developed from a previous enquiry that involved a commonly used drug in a common enquiry category adapted so that it might reasonably be asked by a clinical pharmacist. It was expected to take no longer than 30 minutes to answer.

A clinical pharmacist in each participating Trust was recruited as a Mystery Shopper and asked to contact their local MI centre the Mystery Shopper enquiry as if it was a real enquiry, only providing background details if asked by MI staff. They scored the processes of enquiry intake and communication of the answer using a traffic light scoring system (based on UKMI QA standards and the UKMI Competency Framework) that had been devised to make it easy for non-MI pharmacists to use. The clinical pharmacists were also asked to judge whether the documentation of the enquiry intake and the answer was an accurate reflection of the conversations that actually took place, and for any other comments.

Figure 1: Green (good) sections of the ‘traffic light’ system on the data collection sheets.

Enquiry intake
- It was easy to contact MI
- Person in MI identified themselves and the MI Service
- Person in MI was polite
- Person in MI was helpful
- Used logical, efficient & appropriate questioning
- Identified your information need
- Asked about medical conditions
- Asked about other medicines (doses, duration & indications)
- Asked about pregnancy / breastfeeding (if appropriate)
- Agreed an appropriate deadline for an answer

Communication of answer
- Answered on time
- Complied with the answer effectively & explained clearly
- Gave information and advice tailored to your enquiry need
- Checked your understanding of the answer
- Offered copies of published information (if appropriate)
- Answered any further questions
- You were satisfied with the answer

The highlighted statements are elements of the MI service that the Mystery Shopper approach could help to assess which would complement current QA processes.

12 MI staff considered the enquiry was a reasonable enquiry to ask and 5 did not (reasons: not our patient; 2; not our specialty; 1; Mystery Shopper too senior to ask the question (2)). 14 MIs dealt with the enquiry as usual and 3 did not (reasons: suspected project work (1); knew it was a Mystery Shopper (1); patient’s relative (1)).

11/21 MIs spent 30 minutes or less on the enquiry; 6 spent 30-60 minutes; and 4 spent over one hour (reasons included: full literature search because a senior clinical pharmacist; MI Databank time more than time spent; trainee answered enquiry).

Data collection sheets
The majority of clinical pharmacists found the data collection sheets quick and easy to use, and effectively used the traffic light system to score the enquiry intake and communication of the answer. However, 2 felt that the scoring system was a bit ‘black and white’ and hard to assign a ‘high’ (green) score.

The accuracy of the documentation of enquiry intake was judged as: accurate in 15/23 cases and partly accurate in 4. 21/23 judged documentation of the answer given as accurate and 1 partly accurate. None were deemed to be inaccurate.

Clinical pharmacists as Mystery Shopper & Feedback
The clinical pharmacists were generally positive about the project, though 2 felt uncomfortable asking a ‘fake’ question. Several felt that their position affected the enquiry handling and suggested someone outside pharmacy would be better placed to be a Mystery Shopper.

Feedback from MI staff was generally positive about all aspects of the project though some felt that the choice of Mystery Shopper affected enquiry handling. One MI centre was uncomfortable about the project (consent, QA, time).

Discussion
The Mystery Shopper scenario was considered appropriate in the majority of cases, and although the same scenario cannot be used again (as secrecy is essential) any future Mystery Shopper projects should develop a scenario that is:
- realistic and appropriate for all Trusts and situations
  • (a commonly used drug and common enquiry category in a common situation – harder to deviate than it sounds!!)
- carefully designed/phrased so that it takes no longer than 30 minutes.
- appropriate for the Mystery Shopper to ask.

The data collection sheets and traffic light system were found easy to use and could be used in future mystery shopper projects (the latter possibly for wider use for QA purposes), though further work should be done on the selection of statements included in the ‘green’, ‘amber’ and ‘red’ categories.

The use of a clinical pharmacist as a Mystery Shopper affected the way the enquiry was handled and answered in many cases. An external or non-pharmacy Mystery Shopper should be considered for any future projects. A single mystery shopper for all centres may help to minimise bias and variation in scoring.

Suspection by MI staff that the enquiry was a Mystery Shopper scenario was not a common problem.

This approach is able to provide a ‘snapshot’ of the handling of a single enquiry by many MI services and this could further complement the current QA system.

Conclusion
The Mystery Shopper approach was found to be a feasible approach for assessing certain elements of the quality of the MI enquiry answering service. The specific elements where it may be effective in providing supplementary information to current the current QA system include:
- handling of the enquiry intake (see highlighted elements in Figure 1)
- communication of the answer (see highlighted elements in Figure 1)
- accuracy of documentation (whether it reflects what was actually said)
- uniformity of enquiry answering (throughout the MI network)

Although the current UKMI QA processes are robust and involve a comprehensive review of the enquiry answering service, the Mystery Shopper approach can provide some additional and complementary information and should be considered as an additional tool for QA of MI services.

Further work should be undertaken to identify the ideal Mystery Shopper and whether this is a useful tool to assess the quality of specific areas of MI work.

References:

Does Medicines Information have an impact on patient care?

Mohandas C, Bramley D, Soor S, Erskine D, Oborne CA.
Department of Pharmacy, Guy’s and St Thomas’ NHS Foundation Trust, London

Background
- Medicines Information (MI) is a well-established service with evidence of high user satisfaction
- Little published work evaluating the direct impact of NHS MI enquiry answering services on patient care

Objectives
1. To assess whether MI advice to healthcare professionals in response to their enquiry is used
2. To assess whether advice impacts on patient care
3. To propose a UKMI standard for the minimum proportion of patient-specific enquiries that are used by health professionals in patient management

Method
- MI centres at 2 teaching hospitals
- Two weeks prospective data collection
- Patient-specific enquiries from health care professionals
  - 40 enquiries included
    - 17 (43%) Pharmacist
    - 16 (40%) Doctor
    - 6 (15%) Nurse
    - 1 (3%) Dentist
- Waiting for reply before action
  - 32 (80%) waiting for reply
  - 5 (12.5%) already had plan of action or already treating patient
  - 1 (2.5%) unsure how to proceed
  - 1 (2.5%) posthumous query
  - 1 (2.5%) info to write report
- Follow up
  - 32 (80%) callers followed up
  - 8 (20%) unavailable after four attempts

Results
- 30 (94%) MI advice used by health professionals (Figure 1, 2)
- 2 (6%) not used: no additional information provided, or wanted information for future reference

Discussion
- MI advice reported to have a positive impact on patient care
- Prior to this work, uptake of MI advice was not routinely quantified
- Trust has set a preliminary standard for patient-specific enquiries, that 90% of MI replies should be used by health professionals in patient management
- Specific questions from this work have been incorporated into the trust MI user satisfaction survey to ascertain if collation of data is feasible on a larger scale

Acknowledgements
We are grateful to Medicines Information staff and enquirers.

References
Medicines Q&As on NeLM: Are they useful and accessible to UKMi pharmacists?

Marc Miell & Kate Pickett, Wessex Drug and Medicines Information Centre, Southampton.

Introduction
The purpose of the Medicines Q&A section of the National electronic Library for Medicines (NeLM) is to answer common, difficult or time-consuming medicines information (MI) enquiries. They are written by MI pharmacists and the audience was originally MI pharmacists, but now includes all NHS healthcare professionals.

Aim
To establish how useful and accessible UKMi pharmacists find Medicines Q&As for answering clinical enquiries about patients.

Method
1. Pilot Questionnaire
In November 2007, a pilot questionnaire was sent to 17 local MI pharmacists in the Wessex Region to establish their opinions of Medicines Q&As.

2. Telephone Interviews
Based on the findings of the pilot study, a structured telephone questionnaire was developed of open and closed questions. Using a random number generator (accessed via www.graphpad.com) a sample of 50 MI pharmacists were selected using the UKMi Directory. Between December 2007 and June 2008 telephone interviews were conducted.

3. Quantitative Data
Data were obtained from NeLM for the 12 month period from 29th November 2006 – 29th November 2007 to establish the total number of visits to each Medicines Q&A and the target audience.

Results
1. Pilot Questionnaire
11 questionnaires were returned for evaluation (64.7% response rate)

2. Telephone Interviews
From the randomised sample of 50 MI pharmacists, 24 were contactable. This sample size was considered an achievable number in the time allowed and responses received allowed sufficient data for evaluation. 23 questionnaires were available for analysis as one respondent “very rarely used Medicines Q&As in the course of his work”.

Usefulness
• In an average week, all 23 respondents (100%) accessed Medicines Q&As at least once, with 91% (n=21) stating that Medicines Q&As helped them to answer between 1 and 5 enquiries.
• The Medicines Q&As that were used most often and/or were most useful were those which addressed the use of drugs in pregnancy and breastfeeding or central nervous system medicines.
• Most respondents (96%) felt that Medicines Q&As were up-to-date and that a 2 year expiry date was appropriate.

Content
• 11 respondents felt that the Medicines Q&As were “very good” or “good” with 10 commenting that they were “well laid out” and/or “easy to read”.
• 15 respondents stated that the Medicines Q&As were “easy to understand” or “straightforward” although a few felt that some were “a bit wordy” or “ambiguous”.
• Several suggestions for future topics were made, particularly pregnancy and breastfeeding topics.

Accessibility
The majority of users (96%, n=22) could find Medicines Q&A documents easily. 11 respondents accessed Medicines Q&As via an NeLM general search, 7 via the NeLM Medicines Q&A section* and 10 via the UKMi website (some respondents used more than one search method).

*this method of searching is currently not available on NeLM

Additional comments received were positive and included:
“Very useful. Use every day as part of search tool. No negative comments at all.”
“They are a very good, valuable resource”
“Excellent idea!”
“More please!”

3. Quantitative Data
From 29th November 2006 - 29th November 2007, 129 Medicines Q&As were available on NeLM (54 of which were added or updated during this year). The total number of visits to Medicines Q&As during this time was 262,950 and the five most viewed documents were as follows:

<table>
<thead>
<tr>
<th>Medicines Q&amp;A</th>
<th>Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the sodium content of medicines?</td>
<td>5714</td>
</tr>
<tr>
<td>Which medicines are stable in compliance aids (Pinderfields Guide)?</td>
<td>5475</td>
</tr>
<tr>
<td>What is the optimal management of depression in a breastfeeding mother?</td>
<td>5461</td>
</tr>
<tr>
<td>Glucosamine – drug interactions</td>
<td>5236</td>
</tr>
<tr>
<td>Are there any dose equivalents for different ACE inhibitors and any evidence based guidelines on how to switch between different drugs in this class?</td>
<td>5163</td>
</tr>
</tbody>
</table>

Target Audience*
*Excludes NeLM access as a guest user

<table>
<thead>
<tr>
<th>Hospital Pharmacist</th>
<th>5695 (63.4%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCO Pharmacist</td>
<td>1051 (11.5%)</td>
</tr>
<tr>
<td>Other</td>
<td>841 (9.6%)</td>
</tr>
<tr>
<td>Pharmacy Technician</td>
<td>245 (2.7%)</td>
</tr>
<tr>
<td>Pre-Registration Pharmacist</td>
<td>208 (2.3%)</td>
</tr>
<tr>
<td>Nurse/Midwife</td>
<td>179 (2.0%)</td>
</tr>
<tr>
<td>Community Pharmacist</td>
<td>176 (2.0%)</td>
</tr>
<tr>
<td>Health Authority Adviser</td>
<td>172 (1.9%)</td>
</tr>
<tr>
<td>Hospital Physician</td>
<td>155 (1.7%)</td>
</tr>
<tr>
<td>General Practitioner</td>
<td>105 (1.2%)</td>
</tr>
<tr>
<td>Pharmaceutical Industry</td>
<td>95 (1.1%)</td>
</tr>
<tr>
<td>Member of public</td>
<td>11 (0.1%)</td>
</tr>
</tbody>
</table>

Conclusion
Overall, the results demonstrate that the content and accessibility of Medicines Q&As is appropriate for UKMi pharmacists and that they are a popular resource. Suggestions for future topics will be incorporated into the Medicines Q&A workplan.

Acknowledgements
Angela Emerson (Principal Pharmacist, Research & Training) for her guidance and support throughout this research project.
How do community pharmacists answer questions about medicines 24/7?

David Brown and Muriel Eggbeer-Linde School of Pharmacy, University of Portsmouth and Angela Emerson, Wessex Drug and Medicines Information Centre, Southampton.

Background
The changing roles of community pharmacists require them to have reliable, up-to-date access to information about medicines around the clock. However previous work has demonstrated that they are often not able to answer questions about medicines from the information resources available to them. This may simply be due to insufficient information resources in the pharmacy, but could be due to a lack of awareness of the resources available or restricted information support outside office hours. UKMi needs to know how community pharmacists handle questions about medicines 24/7 and whether these practitioners require further support.

Aim
To establish how community pharmacists answer questions about medicines 24/7.

Method
Cross-sectional survey of community pharmacists working in Southampton and Portsmouth using a postal questionnaire.

Key results
Of the 120 pharmacists surveyed, 31 usable returns were received (26%).

Most respondents indicated that they had not experienced barriers to finding information about medicines during office hours (84%, n=26).

All used paper-based resources in the pharmacy (100%, n=31), but this mainly related to use of the BNF (100%, n=31); only 55% (n=17) used key resources such as Stockley's and Summaries of Product Characteristics.

In addition, as only 71% (n=22) of respondents had internet access, with the majority (67% n=21) having restricted access, only 45% (n=14) used electronic resources to answer questions about medicines.

Respondents indicated that they most commonly needed to find information about side effects, and pregnancy and breast-feeding (84%, n=26), followed by drug interactions (81%, n=25).

87% (n=27) of respondents indicated that they worked outside office hours, and the majority found it more difficult to find information about medicines during this time (61%, n=19)*.

Barriers listed included lack of resources in the pharmacy and lack of support services.

When asked to respond to several within and out-of-hour patient-specific medicines information queries, although respondents were able to formulate questions well, they often could not respond to the request appropriately because of these and other barriers, sometimes resulting in delayed action or sub-optimal advice being given.

(* Only 27 participants responded to this question)

Brief discussion
Previous studies have suggested that community pharmacists require better access to information about medicines. In this study respondents indicated that during office hours they were able to find the information they needed, but were sometimes not aware of the limitations of their resources (e.g. such as using the BNF for enquiries about medicines in pregnancy), or of the optimum resources to use for certain enquiry types.

Outside office hours respondents found it more challenging to answer medicines-related questions in part due to the lack of advisory services during this time; this is particularly important as community pharmacies are increasingly being used to support patient care out-of-hours following the Carson review.

Less than half of the respondents used electronic resources to resolve questions about medicines, and nearly one third did not have access to the internet in their pharmacies at all; these are key considerations if UKMi aims to support these community practitioners further.

Of importance is that the many respondents (55%, n=17) were not aware of the UK Medicines Information service and the support that it could offer; in developing strategies to help community pharmacists in answering questions about medicines, publicity will be key.

Conclusions and implications for UKMi
UKMi have the opportunity to influence relevant stakeholders to improve the access to medicines-related information resources in community pharmacies, to provide training on efficient searching appropriate to a busy community setting (e.g. bite-size search strategies), and to develop appropriate outputs targeted to primary care topics (e.g. Medicines Q&As).

Limitations
The key limitations relate to the low response rate and the use of a self-completion questionnaire which may have introduced bias through discrepancies in perceived behaviour and actual behaviour.

References
FACTORS THAT INFLUENCE THE LENGTH OF TIME IT TAKES TO HANDLE MEDICINES INFORMATION ENQUIRIES

William Horsley – Medicines Management Pharmacist
Elizabeth Mallett – Medicines Information Pharmacist, Gillian Masters – Statistician

Regional Drug and Therapeutics Centre - Newcastle upon Tyne

Introduction

Much research that is conducted concerning medicines information (MI) enquiries has focused on the quality and quantity of the information received and provided.¹ The aim of this research was to investigate some of the factors that influence how enquiries are handled in terms of the duration of time spent answering queries.

Method

Enquiries received during 2007 were identified from the centre’s electronic enquiry database. The time spent dealing with each enquiry was analysed to relate it to the following factors independently: the hour of the day when it was received, the enquirer type, and the enquiry category. The time spent dealing with an enquiry is recorded as non-linear categorical data and this was therefore adjusted to ordinal data to permit statistical investigation via ordinal logistic regression² performed using Minitab™ software.³

Results

During the 12 months from January to December 2007 inclusive the Newcastle MI centre received 1,429 MI enquiries.

Discussion

The main weakness in the data is that the time taken is subjectively assessed by staff. The duration recorded for each enquiry could also be affected by users relying on the default value of 4 - 24 hours rather than selecting a specific value. However as this selection accounted for < 5% of enquiries this is not believed to be the case. There is no rational explanation for the difference in time taken to complete an enquiry based upon the hour of the day that it was received. This relationship might reflect the personal attributes of MI staff. Some of the statistical tests were compromised by the large number of variables which resulted in poor fitting of the data to the assumed models and this is a weakness in the analysis.

Conclusion

This information can be used by MI managers to help with planning of their service. The data suggest that enquiries received earlier in the day, and enquiries from GP’s, hospital medics, and primary care pharmacists, and which are about adverse reactions, alternative medicine, or drug selection require a longer amount of time to answer than other enquiries. Enquiries about drug identification or requests for references take the least time. These conclusions should be verified using a larger data set.

References

3. www.minitab.com
Analysis of paternal exposure enquiries made to the National Teratology Information Service

Elizabeth Mallet MRPharmS - MI Pharmacist
Regional Drug and Therapeutics Centre, Newcastle upon Tyne.

Introduction

The National Teratology Information Service (NTIS) provides advice on the risks to the foetus following exposure to drugs or other agents during pregnancy, taking into account any pre-existing risk factors from the maternal history.

A small proportion (2-3%) of the enquiries to NTIS each year relate to paternal exposures. As there are only very limited outcome data in this area it can be difficult to accurately assess the risk to the foetus.

Aims

To investigate the number of paternal exposure enquiries to NTIS over the last five years.

To investigate which classes of drugs generated the most paternal exposure enquiries over the last three years and identify a ‘top-ten’ list of agents, to inform our monograph work programme.

To assess whether the agents involved in most calls are those likely to affect male reproductive function or increase the risk to the foetus.

To provide guidance on answering paternal exposure enquiries.

Methods

The number of paternal exposure enquiries taken from 1st April 2003 to 31st March 2008 were identified and are recorded in Figure 1 below.

Enquiries taken between 1st April 2005 and 31st March 2008 were identified and analysed to find which classes of drug are most commonly the subject of enquiries. This is shown in Figure 2 below.

The data were further analysed to identify the drugs which generate the most requests for advice - Figure 3.

Figures for three years were used as they produced a more manageable number of enquiries to analyse.

Known and predicted risks relating to paternal exposures were identified and used to determine whether the drugs which were the subject of enquiries were likely to affect reproductive function or increase the risk to the foetus.

An approach to answering paternal exposure enquiries was identified and is presented below.

Results

The number of paternal exposure enquiries to NTIS has remained fairly constant over the last five years. Over the last three years, the most common agent involved was methotrexate, for which an NTIS monograph was produced in 2006. Immunosuppressants drugs, antineoplastic agents and drugs with hormonal effects made up the majority of enquiries.

Discussion

The mechanisms by which agents might affect male reproductive function are:

1. Effects on sexual function e.g. erectile or ejaculatory dysfunction.
2. Effects on spermatogenesis i.e.
   - Direct damage to developing and mature spermatozoa
   - Damage to other cells in the male reproductive system which might affect the composition or volume of seminal fluid
     This might cause morphological or functional abnormalities of the spermatozoa making them unable to fertilise an ovum or reduce the number of spermatozoa produced overall.
3. Adverse chromosomal effects in the germ cells (the cells which develop into spermatozoa) e.g. a gene mutation or an alteration in chromosome structure or number.
   If fertilisation occurs, most chromosomal abnormalities would result in foetal death. If the foetus survives then an increased risk of malformations or genetic disorders can not be excluded(1).

Some agents are excreted in the semen and might be absorbed into the maternal circulation, exposing the foetus via this route(2).

The agents which generated the most requests for advice are those which, using this information, could be predicted might have adverse effects i.e. cytotoxics, immunosuppressants and drugs with hormonal effects.

25% of enquiries were about drugs for which an adverse effect would not be expected e.g. NSAIDs, bisphosphonates, sildenafil.

Enquiry Answering

In order to assess the overall risks to the foetus it is important to take a detailed medical, obstetric and family history of malformations for both partners(1).

Check the following resources to see if any adverse effect following paternal exposure has been identified or might be expected.

NTIS monographs via www.toxbase.org – there may be a Paternal Exposure monograph for that drug, or information in the relevant section of the main monograph for the drug.

Reprotx and Teris monographs from Micromedex

SPC via eMC. Look for information in the following sections: Precautions, Pregnancy & Lactation, Undesirable Effects. Pharmacodynamic Properties – might state whether the drug was found to be mutagenic in preclinical tests. Pharmacokinetic Properties – might indicate whether the drug is excreted in the semen.

Schaefer et al: Drugs During Pregnancy & Lactation 2nd Ed

Consider whether the information found indicates that the drug might have the effects outlined above.

NTIS advise generally, that at present there is insufficient evidence to justify termination of pregnancy following paternal exposure to drugs or chemicals. There is inconsistent advice as to whether or not chromosome analysis should be performed after paternal exposure to cytotoxic or mutagenic substances. In practice, it is advisable to wait about six months (two sperm cycles) after such exposures before conception is planned(1).

References

Introduction

Varenicline (Champix®) was launched in December 2006 to aid smoking cessation. Following spontaneous reports of depression and suicidal thoughts & behaviour via post-marketing surveillance, a Europe-wide review of safety data was initiated. In December 2007, advice was issued and product information updated warning about an increase in psychiatric adverse effects. Patients are advised to cease treatment immediately if suicidal thoughts occur.

Adverse drug reactions (ADRs) can be reported to the Medicines and Healthcare products Regulatory Agency (MHRA) via the voluntary Yellow Card scheme www.yellowcard.gov.uk, which collects information from healthcare professionals and patients on suspected ADRs, thus contributing significantly to patient safety by monitoring the risk-benefit ratio of medicines, vaccines and herbal preparations. The work of the MHRA is supported by five regional Yellow Card Centres (YCCs), who promote ADR and herbal preparations. The work of the MHRA is supported by safety by monitoring the risk-benefit ratio of medicines, vaccines

Discussion

Varenicline, as with all new drugs denoted by a black triangle (▼), is closely monitored by the MHRA. As such, all suspected ADRs should be reported via the Yellow Card scheme. It is generally accepted there is considerable under-reporting of ADRs for new drugs and reporting tails off over time. Research suggests that only 10% of serious and 2-4% of non-serious reactions are reported. It is therefore reasonable to conclude that under-reporting of varenicline ADRs in YCCNY is likely. It has not been possible to compare the reporting of varenicline with that of any other black triangle drug, as the reasons for reporting ADRs are multi-factorial and any comparison could be misleading. The evidence from YCCNY demonstrates that the volume of ADRs reported can be influenced by prescribing rates and by raising awareness about specific ADRs. It has not been possible to investigate why Yellow Card reporting rates were not sustained in YCCNY after the initial warnings regarding psychiatric reactions, and why they did not increase when further information was published, but the reasons are likely to be numerous and diverse. The MHRA has recently reassued advice regarding psychiatric adverse effects with varenicline, urging continued reporting of all suspected ADRs and an increase in Yellow Card reporting over the coming months is anticipated.

Results

- Uptake of varenicline prescribing has been extremely rapid, particularly in the two months preceding the ban on smoking in public places in England in July 2007 (Figure 1). In the same month NICE issued guidance recommending varenicline as an option for smoking cessation.
- Prescribing rates in the area covered by YCCNY are comparable to those in England.
- The number of suspected varenicline ADRs reported via the Yellow Card scheme in YCCNY is proportional to the varenicline prescribing rates (correlation = 0.85 [p<0.0005]), echoing the national picture. (Figure 1)
- November 2007: US Food and Drug Administration issued initial warnings about severe changes in mood and behaviour. December 2007: MHRA issued warnings of the risk of developing depression, suicidal thoughts and behaviour whilst using varenicline, although smoking cessation itself could exacerbate underlying psychiatric conditions.
- The number of suspected varenicline ADRs reported in YCCNY peaked between November 2007 and January 2008. (Figure 1)
- February 2008: MHRA published further advice for healthcare professionals. However, this did not stimulate reporting in YCCNY as it did nationally, where reporting rates remained elevated until May 2008.

Gastrointestinal reactions were the most frequently reported, nausea and vomiting being the most common and are well recognised from clinical trials.

Reports of psychiatric reactions (e.g. insomnia, suicidal ideation, depression, anxiety) increased in November 2007 and although levels have declined they remain higher than previously. Nationally, the numbers of reports of psychiatric reactions have increased significantly since November 2007.

Conclusion

The experience in YCCNY indicates that ADR reporting rates may be related to the volume of items prescribed and the amount of publicity concerning ADRs. Yellow Cards for varenicline ADRs have reduced over time and are likely to reduce further unless safety messages are repeatedly reinforced amongst the healthcare community. Varenicline is a timely reminder that reporting of suspected ADRs is a crucial factor in helping to maintain patient safety.

www.yellowcard.gov.uk

References

Analysis of Poisons Enquiries from Hospital Pharmacists to the National Poisons Information Service (NPIS)

Paula Russell MRPharmS
Regional Drug and Therapeutics Centre, Newcastle upon Tyne.

Introduction

Approximately 1% of enquiries to NPIS each year are from hospital pharmacists. The quality of the information gathered is important in determining the quality and appropriateness of the response.

Aims

- To investigate the types of poison enquiries from hospital pharmacists to NPIS over a one year period.
- To investigate the proportion of hospital pharmacist enquiries that did not provide the essential data for a risk assessment over six months within that year.
- To provide guidance on answering potential toxic exposure enquiries.

Methods

- Hospital pharmacist enquiries taken from Medinfosys® between 1st July 2006 and 30th June 2007 were analysed on the basis of call reason.
- Circumstance and location were noted for the patient specific cases.
- Patient specific enquiries for six months between 1st Oct 2006 and 31st March 2007 were further analysed.
- The presence or absence of data was noted and the percentage of this for each category of missing information was calculated.
- An approach to answering toxic exposure enquiries was identified and is presented below.

Results

There were 16,631 calls to Newcastle NPIS from 1st July 2006 to 30th June 2007 of which 175 calls (1%) were from hospital pharmacists. Of the patient specific enquiries (n=99), 18 out of the 29 ‘medication error’ calls occurred in hospital.

Further analysis of the six months data (n=55) showed no indication of age was given in 12% of enquiries while 38% were noted only in terms of ‘adult’ and ‘child’, meaning that the age of the patient was not provided in 51% of enquiries.

Discussion

- While the percentage of total poisons enquiries from hospital pharmacists remained constant over the 4 years to July 2007, the absolute number increased from 88 to 579. This is a considerable number of enquiries which merits action in seeking to improve standards.
- Medication error was the reason for 29% of the hospital pharmacist enquiries and 62% of those occurred in hospital. Hospital pharmacists are increasingly involved in A&E, ITU/HDU and MAU. Thus they are well placed to pursue this type of enquiry provided the appropriate standards.
- Hospital pharmacists receive MI training and as such would be expected to be competent in gathering essential information such as patient ID, age, amount, agent and time. However only 58% provided a patient ID which is required for any follow up, 51% provided patient age and 33% provided an indication of the amount, 22% provided the time since incident (Figure 3). Only 16% of enquiries provided NPIS with all nine pieces of essential information (Figure 2).
- Features were not provided in 44% of enquiries. While descriptions such as ‘respiratory depression’ and ‘renal dysfunction’ were accepted in this study, to ensure their usefulness in patient assessment, they should be supported with relevant clinical parameters. Features and trends in monitoring parameters are very important in assessing a patient. This has not been a part of MI training heretofore and is not included in the suggested background information in the Poisoning or Overdose section of the UKMI Medicines Information Enquiry Answering Guidelines. However, as there is an increasing number of enquiries to NPIS from hospital pharmacists and their roles increase potential for involvement in NPIS enquiries, perhaps it is time for this aspect of a poisoning enquiry to be included.

Conclusion

Poor provision of data means that we are unable to provide appropriate timely advice. The enquiry can be unnecessarily prolonged as further necessary information is gathered, thus potentially delaying patient treatment. The UKMI Enquiry Answering Guidelines on Poisoning and Overdose should provide a useful training and support tool to improve the handling of poisons enquiries by hospital pharmacists.

References

Developing the “Drug Use in Liver Disease” Service

Smita Bhikha, Medicines Information Pharmacist, Leeds General Infirmary, Leeds

The Leeds Medicines Information Centre provides a specialist advisory service on the use of drugs in patients with liver disease. This involves answering enquiries concerning adult or paediatric patients with acute or chronic liver dysfunction, and patients who have undergone a liver transplant. The most frequently asked questions relate to the choice of drug (and dosage) in patients with liver disease.

Introduction

The Leeds Medicines Information Centre provides a specialist advisory service on the use of drugs in patients with liver disease. This involves answering enquiries concerning adult or paediatric patients with acute or chronic liver dysfunction, and patients who have undergone a liver transplant. The most frequently asked questions relate to the choice of drug (and dosage) in patients with liver disease.

The Maps

Liver dysfunction covers a wide spectrum of disease states (both acute and chronic) of varying complexity. A series of maps have been produced to highlight the various areas of concern in patients with each aspect of the disease. These include factors which may alter the handling of a drug in a patient with liver dysfunction, and clinical aspects which may be aggravated due to the use of a drug. These maps are centred around the five liver disease states that patients typically fall into:

- Acute Liver Failure
- Cirrhosis (compensated and decompensated)
- Cholestasis
- Hepatitis
- Decompensated Cirrhosis

Due to the complexity of the maps, a series of scope notes were written to provide additional information to aid understanding. An example is shown below.

The Monographs

The various considerations highlighted for each disease state have been used to form a Monograph Template. Information is being gathered regarding a variety of drugs to form a series of Drug Use in Liver Disease Monographs. The monograph is fully referenced, and is easily incorporated into answers of a written format.

The Monograph Template has also become the backbone format for answering the liver enquiries. This way, no relevant issues are missed when researching and answering the query. Additionally, when looking back at past queries (on MIDatabank) where this format was employed, information needed for new queries has become much easier to locate, extract and reference.

Training

Staff undergo a series of training sessions focusing on anatomy and physiology of the liver, interpretation of tests, and factors that may impact on drug therapy. The monographs and liver maps have been incorporated into these sessions. Following training, staff became more mindful of the extent of information needed from the enquirer. However, they were still struggling with the complexity of the disease state and issues that needed to be considered when researching the enquiry. Further discussion with senior colleagues was able to help with understanding of the disease state. To make the gathering of information easier, a "search strategy" has been written.

Conclusion

The liver disease maps and monographs have been well received within the centre. Enquiry answering has become much quicker, and past enquiries (with the help of MIDatabank) have become a valuable resource. At present, monographs have been written for various antibiotics, and it is intended to extend these across a wide range of drug therapies. All staff "manning" phones receive basic training regarding information needed from the enquirer. Those staff members who are newly "liver" trained still find undertaking the queries difficult. However, resources such as the liver maps, monographs and the search strategy should make thinking around the subject easier, and discussion with senior colleagues with regard to each enquiry is encouraged.

Elevated INR - May be due to acute liver failure, chronic cholestasis or decompensated cirrhosis. The INR is significantly elevated if it is greater than or equal to 1.4 (or PT is greater than or equal to 18 seconds). This will increase the risk of bleeding (see deranged clotting).

An elevated INR may be due to cholestasis (due to reduced absorption of vitamin K causing a reduced synthesis of clotting factors) or impaired synthetic function (due to a reduction in functioning hepatocytes) (see impaired metabolism).

The Monographs

The various considerations highlighted for each disease state have been used to form a Monograph Template. Information is being gathered regarding a variety of drugs to form a series of Drug Use in Liver Disease Monographs. The monograph is fully referenced, and is easily incorporated into answers of a written format.

Example of a monograph

The monograph template has also become the backbone format for answering the liver enquiries. This way, no relevant issues are missed when researching and answering the query. Additionally, when looking back at past queries (on MIDatabank) where this format was employed, information needed for new queries has become much easier to locate, extract and reference.

Training

Staff undergo a series of training sessions focusing on anatomy and physiology of the liver, interpretation of tests, and factors that may impact on drug therapy. The monographs and liver maps have been incorporated into these sessions. Following training, staff became more mindful of the extent of information needed from the enquirer. However, they were still struggling with the complexity of the disease state and issues that needed to be considered when researching the enquiry. Further discussion with senior colleagues was able to help with understanding of the disease state. To make the gathering of information easier, a "search strategy" has been written.

Conclusion

The liver disease maps and monographs have been well received within the centre. Enquiry answering has become much quicker, and past enquiries (with the help of MIDatabank) have become a valuable resource. At present, monographs have been written for various antibiotics, and it is intended to extend these across a wide range of drug therapies. All staff “manning” phones receive basic training regarding information needed from the enquirer. Those staff members who are newly “liver” trained still find undertaking the queries difficult. However, resources such as the liver maps, monographs and the search strategy should make thinking around the subject easier, and discussion with senior colleagues with regard to each enquiry is encouraged.

The Monographs

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Leeds Teaching Hospitals NHS Trust traditionally provided training for three student pharmacy technicians annually, who worked toward the City and Guilds National Vocational Qualification (NVQ) Level 3 in Pharmacy Services, whilst rotating through various pharmacy departments within the Trust. Service demands and the enhanced roles undertaken by pharmacy technicians in the Trust resulted in the student cohort for 2007/8 being increased by 500%. The three-week rotation that students previously undertook in the MI centre often resulted in them having to gain further evidence once they had left the centre, leading to delays in completion of unit 3, ‘Providing Pharmaceutical Information and Advice’. Feedback from students and the peripatetic assessor indicated that the assessment tools previously used were inefficient and time-consuming.

The appointment to the permanent MI team of a qualified assessor with a commitment to holistic assessment practice offered an opportunity to improve training and assessment of competence.

**Objectives**

- Student pharmacy technicians receive relevant and meaningful training in basic MI skills and the use of resources.
- Assessment is carried out using realistic methods and demonstrate that skills and knowledge gained is used for patient benefit.
- Patients continue to receive high quality information and advice from the MI centre.

**Outcome**

- Development of a specific training workbook for student technicians, based upon an abridged version of the UKMi Training Workbook and in-house training for new resident pharmacists, incorporating written questions to assess knowledge.
- Holistic assessment practice using simulation and direct observation of work on actual enquiries provides evidence for several units of the award.
- Quality of information and advice provided to enquirers is maintained by the use of an accuracy check by a qualified pharmacist.
- Assessment results and positive feedback from students, line managers and the internal verifier demonstrate that the new workbook and training programme are producing a positive outcome for students undertaking unit 3, with most students completing the unit within six weeks. Line managers and students have consistently reported increased confidence and enhanced patient care as students use their new customer service, communication and research skills to good effect in other service areas.
- Assessor attends a meeting of the new student intake to explain how the MI rotation is set out and how evidence can be also gained whilst working in other areas, such as ward support, aseptics and the out-patient dispensary.

**Reference:**


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Methoden

Internet based Database for management and documentation of medicines information in German hospital pharmacies

S. Amann 1, G. Kirsch 2, J. Menchini 3, C. Mildner 1, U. Mühlhäuser 2, C. Querbach 2, F. Rasche 3, C. Schuhmacher 1, D. Strobach 1, C. Vetter-Kerkhoff 1, correspondence: Christiane.Querbach@lrz.tum.de

1 Committee for Drug Information & Communication and 2 Working Group FAQ, German Society of Hospital Pharmacists (ADKA), 3 Webmaster of www.adka-aminfo.de, Germany

According to a survey commissioned by the German Society of Hospital Pharmacists (ADKA) in 2002, members showed great interest in having their own documentation system for medicines information (MI). Providing MI on a professional basis is a growing topic in clinical pharmacy services. To do this service efficiently, the internet based ADKA Arzneimittel-Info-Datenbank (D) was established in 2003 as a tool for organising and documenting MI in German hospital pharmacies.

Methods

• Technical requirements: Internet access, internet browser, JavaScript activation
• Data security: Password protected area (user: hospital pharmacies, authorized staff)
• Usage fee per hospital pharmacy (including regular updates and customisation): € 250 per year
• Login to database: no software installation required, worldwide access (http://www.adka-aminfo.de)

Results

Background/Objectives

Discussion

Currently, 84 German hospital pharmacies (among these are 16 university hospital pharmacies) utilise the D. The D can be used as an activity confirmation for
- physicians and nursing staff:
  - Quality improvement, saving of time and labour, improved cooperation between physician and pharmacist, or pharmacist and ward respectively
  - Director of Pharmacy:
    - Structured approach guarantees quality standards, optimisation of operations in the area of MI, insight into time and effort used
    - Head of Administration:
      - Documentation of quantity and quality work performed, quality improvement, drug safety, transparency of activity “MI”, justification of financial and human resources

Conclusion

In Germany, clinical pharmacy services have increased in practice during the past few years. However, compared to Great Britain only a number of German hospital pharmacies also function as MI centres. The establishment of requirements for a larger number of professional MI centres is a growing challenge for German hospital pharmacists, to demonstrate that the quality of MI has a substantial influence on the success of drug therapy. This internet based D represents a practical choice to ensure a high standard on quality of management and documentation of MI. It provides corporate identity, information exchange via FAQs, extensive search and timesaving features for provision of the MI-service.

Results

66 completed forms were received.

Twice as many enquiries were from women.

Enquiries were primarily from people over 60 or under 20. All enquiries involving those under 20 were made by parents.

Doctors and nurses only accounted for 18% (n=12) of the enquiries.

Enquiries were mostly face-to-face (64%, n=42), but most doctor (n=7/9) and nurse (n=2/3) enquiries were by phone.

Enquiry types are shown in chart 1

Conclusion

Community pharmacists frequently field medicine information-type enquiries.

Most enquiries centre on problems associated with medicine taking.