

# Weiterbil-dung in der Arzneimittel-information

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# Overview of session

- UK Medicines Information (MI) network
- Training junior hospital pharmacists in MI
  - Objectives
  - Ideas for learning activities
  - Training Workbook and MiCAL
  - Risks associated with training in MI
  - Strategies to minimise the risks

# UK Medicines Information

- 16 regional centres supporting 250 local centres across UK
- Pharmacists and technicians
- National strategy set by *UKMi Executive*
- Support to primary and secondary care practitioners and patients



# UK Medicines Information

## ➤ Our roles

- Clinical enquiry answering
  - Including some specialist services (e.g. pregnancy)
- Managed entry of new medicines
  - National and local
- Quality assurance
  - National standards for e.g. enquiry answering
- Supporting other information providers
  - e.g. “NHS Direct”
- National electronic Library for Medicines (NeLM)
- Research
- Training

# Clinical enquiry answering



- Across UK, the service answers about half a million enquiries annually.

## At Southampton:

- 94% are about individual patients.
- 66% answered within 1 hour.
- 50% from pharmacists.
- 30% admin/dose; 17% choosing therapy; 15% interactions; 14% side effects.
- 17% answered in writing.

# Our websites

- UKMi site [www.ukmi.nhs.uk](http://www.ukmi.nhs.uk)
  - Our national standards and resources for information pharmacists.
  - Mostly free access.
  
- NeLM [www.nelm.nhs.uk](http://www.nelm.nhs.uk)
  - Information about medicines for professionals.
  - Mostly free access.
  - Can register for free daily news email.

UKMi Information	Information	MI News
 <p><b>34th UKMi Practice Development Seminar</b></p> 	<p><b>Welcome to the UK Medicines Information website.</b></p> <p>This site is designed to support the UKMi network. It hosts our strategy, policies, clinical governance standards and training materials, together with minutes of meetings of the UKMi Executive and its working groups.</p> <p>UKMi resources to support medicines management initiatives are hosted by the National electronic Library for Medicines (<a href="#">NeLM</a>).</p> <p>Resources for the public can be found at <a href="#">NHS Direct</a>.</p> <p>For UK health professionals, click on the map to search for your local medicines information centre.</p>	<ul style="list-style-type: none"> <li>Medicines Q&amp;A: <b>Finding SPCs not on the eMC</b> [<a href="#">LINK</a>] <b>NEW</b> (14/01/2009)</li> <li>Medicines Q&amp;A: <b>Corticosteroids for adrenal insufficiency and risk of osteoporosis</b> [<a href="#">LINK</a>] <b>NEW</b> (14/01/2009)</li> <li>Medicines evaluation (LNFG): <b>Botulinum toxin A (Xeomin)</b> [<a href="#">LINK</a>] <b>NEW</b> (09/01/2009)</li> <li>Medicines Q&amp;A: <b>Saliva substitutes - selecting and prescribing</b> (update) [<a href="#">LINK</a>] <b>NEW</b> (09/01/2009)</li> <li>Medicines Q&amp;A: <b>Managing depression during breast feeding</b> [<a href="#">LINK</a>] (09/01/2009)</li> <li>Medicine Q&amp;A: <b>Dosing in renal impairment</b> (update) [<a href="#">LINK</a>] (07/01/2009)</li> <li>Horizon scanning: <b>Prescribing Outlook - cost calculator 2008</b> (registration required) [<a href="#">LINK</a>] (07/01/2009)</li> <li>Medicines evaluation: <b>Icatibant</b> [<a href="#">LINK</a>] (07/01/2009)</li> <li>Medicines evaluation: <b>Retapamulin 1% ointment</b> [<a href="#">LINK</a>] (07/01/2009)</li> <li>Medicines Q&amp;A: <b>Proton pump inhibitor use during breast feeding</b> (update) [<a href="#">LINK</a>] (07/01/2009)</li> </ul> <p><a href="#">more &gt;&gt;&gt;</a></p>

[Simple list of standards A - E](#)

[Detailed list of standards A - E](#)

[List of standards for Specialist Advisory Services](#)

### Rolling Programme to Review UKMi Standards

[Rolling programme](#)

### Audit Toolkit

NB. This replaces the previous Assessors Pack.

The toolkit is a protocol for measuring quality of medicines information services.

[Audit Toolkit](#)

### Audit Report

[Audit Report Template](#)

UKMi National Medicines Information - UKMI Activities Research - Microsoft Internet Explorer

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Back Forward Stop Home Search Favorites Refresh Print Stop

Address http://www.ukmi.nhs.uk/activities/Research/default.asp?pageRef=15 Go Links

**UKMi** Uk Medicines Information **NHS**

Clinical UKMi UKMI Activities New on Site Links Feedback

Home | UKMI Activities | Research | Getting Started

**Research | Getting Started | Taking the first step**

**Getting Started | Taking the first step**

**Prof. Dave Brown, Head of Pharmacy and Biomedical Sciences, University of Portsmouth helps you to take those important first steps.**

- Clinical Governance ▶ first steps
- Information Technology ▶
- Manpower & Training ▶
- New Products ▶
- NHS Direct ▶
- Pharmline ▶
- Research ▶ Introduction
- Specialist Services ▶ Research Strategy
- UKMI Medicines Q&As ▶ Research Getting Started ▶ Taking the first steps
- MI Research to Date ▶ Research ideas
- Research Methods ▶ Funding
- Research Ethics and Governance
- Getting Published
- Research Group

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[Things to Think About Early!](#)  
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[The Research Process and Planning](#)  
[The Research Protocol](#)  
[Writing a Funding Proposal](#)  
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**Introduction ▲**

'Nobody's perfect' - we could all improve our practice 'somewhere, somehow, somewhen'. How often have you wondered:

what would happen if.....?  
 why did that occur.....?  
 how could I change this.....?  
 when would be the most effective time to.....?

As MI pharmacists, we are already attuned to the huge amount of published research available at our fingertips. We often participate, sometimes unwittingly, in other people's research projects by providing information from literature searches on for example, clinical trial outcomes, drug interactions, adverse events or pharmacoconomics. Most of us can also evaluate and present the results of other people's research in an unbiased, clear and helpful way.

Pharmacy practice research seeks to understand pharmacy and the way it is practised to ensure that the pharmacist's knowledge and skills are being used to best effect in solving NHS problems and addressing the health needs of patients.

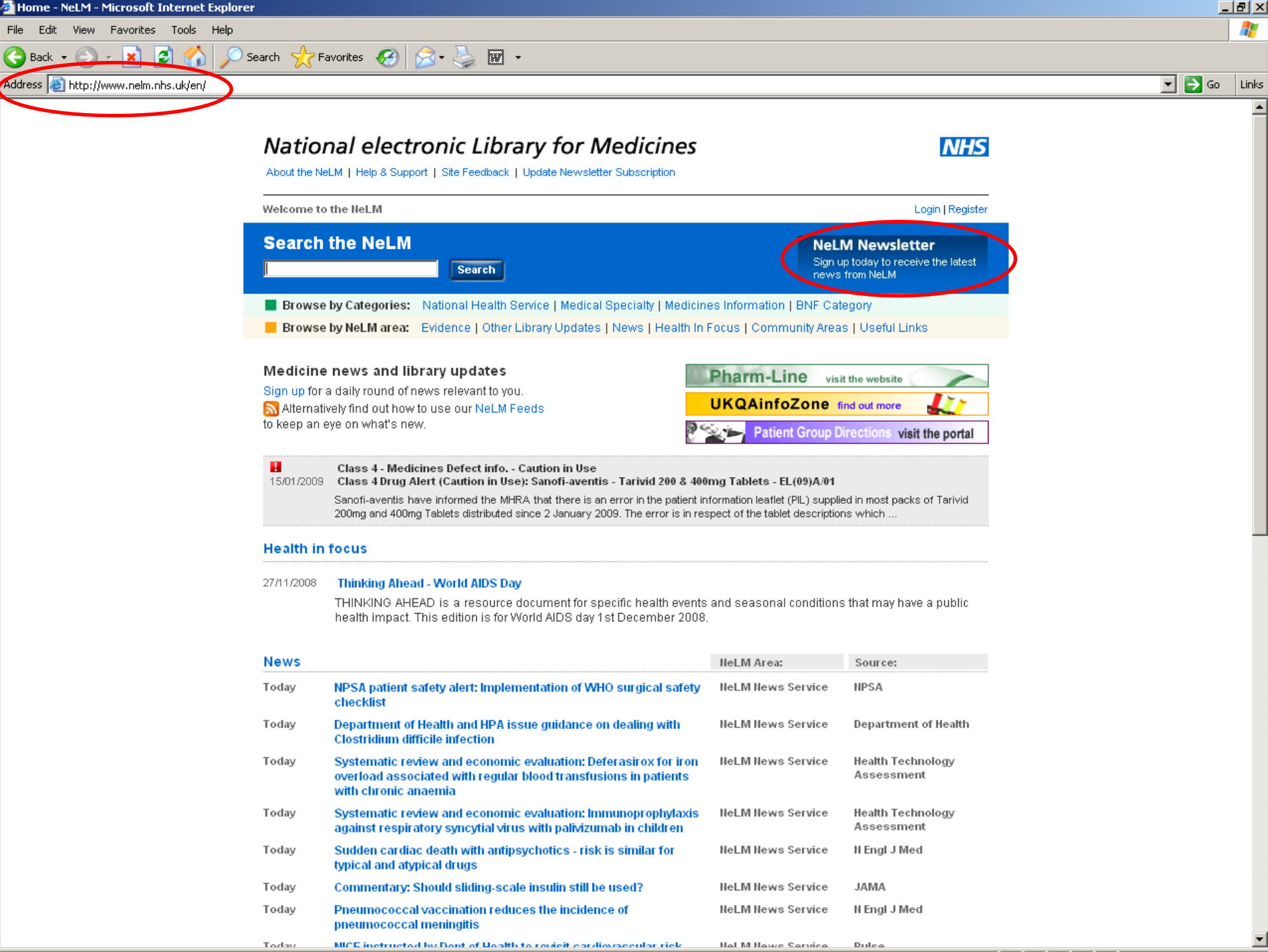
It is applied research, often multidisciplinary in nature, and draws on the social, psychological and economic sciences; both quantitative and qualitative techniques are employed.

It seeks to provide useful solutions to practical problems: the best research is always useful to somebody!

Remember that the results from your research might be used to instigate changes in practice that might have a profound effect on patient care and its cost.

Therefore it is vital that the research is based on sound methodology and carried out competently. It should be based on the cornerstones of consistency, honesty, diligence and patience - what professors of pharmacy practice might call 'academic rigour'!

Sooner or later we are likely to get involved more deeply in a research project, perhaps as a collaborator with other healthcare colleagues or in generating an evidence base on which to develop our own practice. Many of us have already had some experience of research design, either at undergraduate and possibly postgraduate level. Some of us may be involved with a research project at this very moment.



# National electronic Library for Medicines



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**Pharm-Line** [visit the website](#)

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**Class 4 - Medicines Defect info. - Caution in Use**  
 15/01/2009 **Class 4 Drug Alert (Caution in Use): Sanofi-aventis - Tarivid 200 & 400mg Tablets - EL(09)A/01**  
 Sanofi-aventis have informed the MHRA that there is an error in the patient information leaflet (PIL) supplied in most packs of Tarivid 200mg and 400mg Tablets distributed since 2 January 2009. The error is in respect of the tablet descriptions which ...

## Health in focus

27/11/2008 **Thinking Ahead - World AIDS Day**

THINKING AHEAD is a resource document for specific health events and seasonal conditions that may have a public health impact. This edition is for World AIDS day 1st December 2008.

## News

		NeLM Area:	Source:
Today	<a href="#">NPSA patient safety alert: Implementation of WHO surgical safety checklist</a>	NeLM News Service	HPSA
Today	<a href="#">Department of Health and HPA issue guidance on dealing with Clostridium difficile infection</a>	NeLM News Service	Department of Health
Today	<a href="#">Systematic review and economic evaluation: Deferasirox for iron overload associated with regular blood transfusions in patients with chronic anaemia</a>	NeLM News Service	Health Technology Assessment
Today	<a href="#">Systematic review and economic evaluation: Immunoprophylaxis against respiratory syncytial virus with palivizumab in children</a>	NeLM News Service	Health Technology Assessment
Today	<a href="#">Sudden cardiac death with antipsychotics - risk is similar for typical and atypical drugs</a>	NeLM News Service	II Engl J Med
Today	<a href="#">Commentary: Should sliding-scale insulin still be used?</a>	NeLM News Service	JAMA
Today	<a href="#">Pneumococcal vaccination reduces the incidence of pneumococcal meningitis</a>	NeLM News Service	II Engl J Med
Today	<a href="#">NICE instructed by Dept of Health to revisit cardiovascular risk</a>	NeLM News Service	Pulse

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| <input type="checkbox"/> Dentistry                            | <input type="checkbox"/> Menopause / hormone replacement therapy (HRT) | <input type="checkbox"/> Reproductive medicine  |
| <input type="checkbox"/> Dermatology                          | <input type="checkbox"/> Mental Health                                 | <input type="checkbox"/> Respiratory Medicine   |
| <input type="checkbox"/> Ear, Nose and Throat (ENT) disorders | <input type="checkbox"/> Neurology                                     | <input type="checkbox"/> Rheumatology           |
| <input type="checkbox"/> Emergency Medicine                   | <input type="checkbox"/> Nutrition and Metabolism                      | <input type="checkbox"/> Sports medicine        |
| <input type="checkbox"/> Endocrinology                        | <input type="checkbox"/> Obstetrics & Gynaecology                      | <input type="checkbox"/> Surgery                |
| <input type="checkbox"/> Family planning                      | <input type="checkbox"/> Oncology                                      | <input type="checkbox"/> Travel medicine        |
| <input type="checkbox"/> Gastroenterology                     | <input type="checkbox"/> Ophthalmology                                 | <input type="checkbox"/> Urology                |
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### NeLM news service

#### Systematic review and meta-analysis of lamotrigine for bipolar depression

Reference: **Br J Psych** 2009; **194**: 4-9.

Source: **Br J Psychiatry**

Date published: **08/01/2009 14:43**

#### Summary

by: Yuet Wan

The efficacy of lamotrigine in bipolar depressive episodes has been assessed in a systematic review and meta-analysis of individual patient data from RCTs comparing lamotrigine with placebo. Data were obtained on 1072 participants from 5 RCTs and the following findings were reported:

- More individuals treated with lamotrigine than placebo responded to treatment (relative risk = 1.27, 95% CI, 1.09 to 1.47,  $p = 0.002$ ) on the Hamilton Rating Scale for Depression (HRSD).
- The above finding was also reflected (1.22; 1.06 to 1.41,  $p = 0.005$ ) when measured on the Montgomery-Åsberg Depression Rating Scale (MADRS).
- There was an interaction ( $p = 0.04$ ) by baseline severity of depression: lamotrigine was superior to placebo in people with HRSD score  $> 24$  (1.47; 1.16 to 1.87,  $p = 0.001$ ) but not in people with HRSD score  $\leq 24$  (1.07; 0.90 to 1.27,  $p = 0.445$ ).

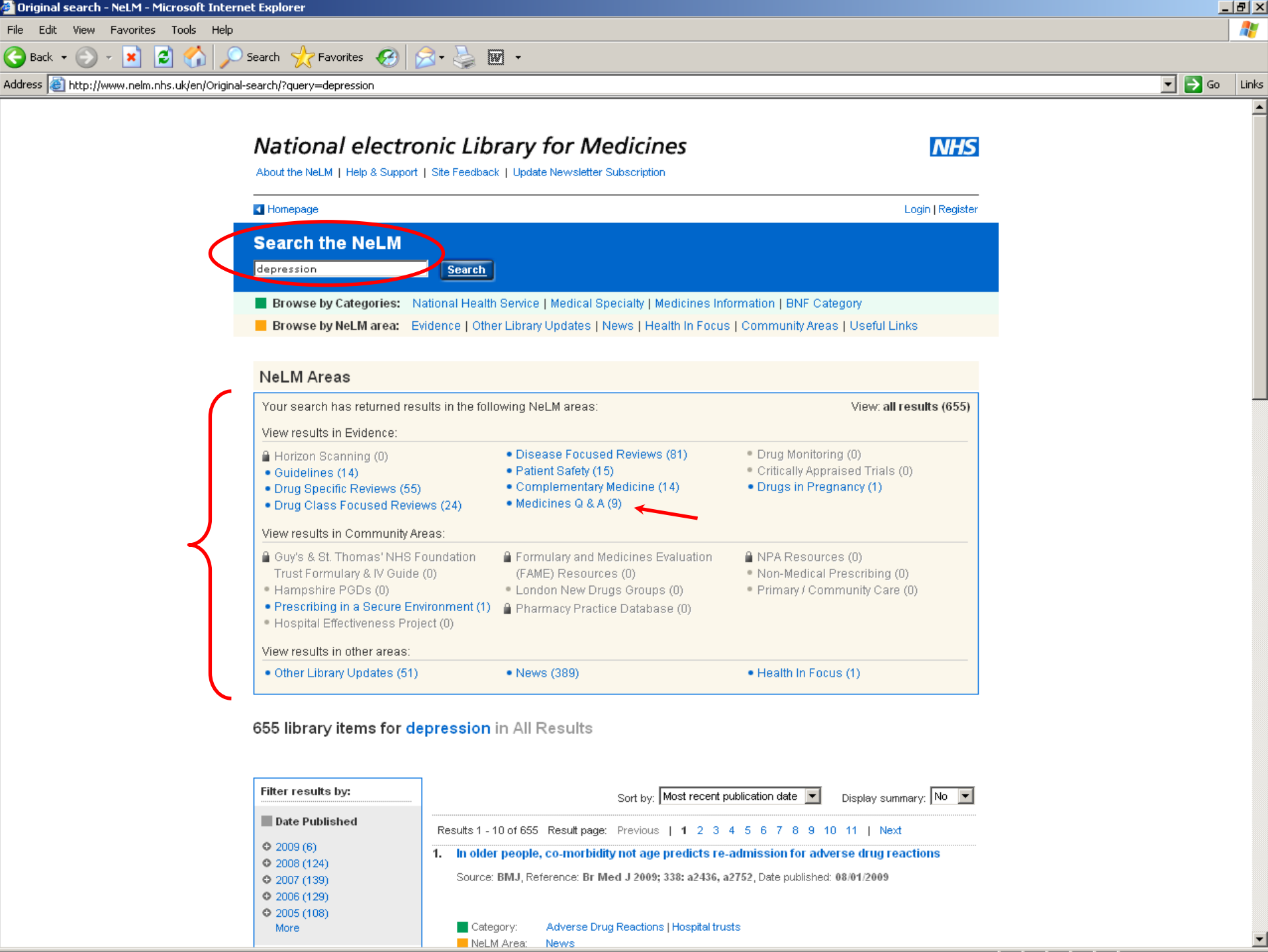
The researchers conclude from these findings that the overall effect of lamotrigine vs. placebo on depressive symptoms in the depressed phase of bipolar disorder was modest.

#### About this library entry

**Category:** [4.2.3 Antimanic drugs](#) | [4.8 Antiepileptics](#) | [Drug reviews](#) | [Mood disorders \(including depression\)](#)

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depression

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View results in Evidence:

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- Guidelines (14)
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- Drug Class Focused Reviews (24)
- Disease Focused Reviews (81)
- Patient Safety (15)
- Complementary Medicine (14)
- Medicines Q & A (9)
- Drug Monitoring (0)
- Critically Appraised Trials (0)
- Drugs in Pregnancy (1)

View results in Community Areas:

- Guy's & St. Thomas' NHS Foundation Trust Formulary & IV Guide (0)
- Hampshire PGDs (0)
- Prescribing in a Secure Environment (1)
- Hospital Effectiveness Project (0)
- Formulary and Medicines Evaluation (FAME) Resources (0)
- London New Drugs Groups (0)
- Pharmacy Practice Database (0)
- NPA Resources (0)
- Non-Medical Prescribing (0)
- Primary / Community Care (0)

View results in other areas:

- Other Library Updates (51)
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655 library items for **depression** in All Results

Filter results by:

**Date Published**

- 2009 (6)
- 2008 (124)
- 2007 (139)
- 2006 (129)
- 2005 (108)
- More

Sort by: **Most recent publication date**

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Results 1 - 10 of 655 Result page: [Previous](#) | [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) | [Next](#)

1. **In older people, co-morbidity not age predicts re-admission for adverse drug reactions**

Source: **BMJ**, Reference: **Br Med J 2009; 338: a2436, a2752**, Date published: **08/01/2009**

Category: [Adverse Drug Reactions](#) | [Hospital trusts](#)

NeLM Area: [News](#)

## Filter results by:

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- 2009 (0)
- 2008 (5)
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- 2005 (0)

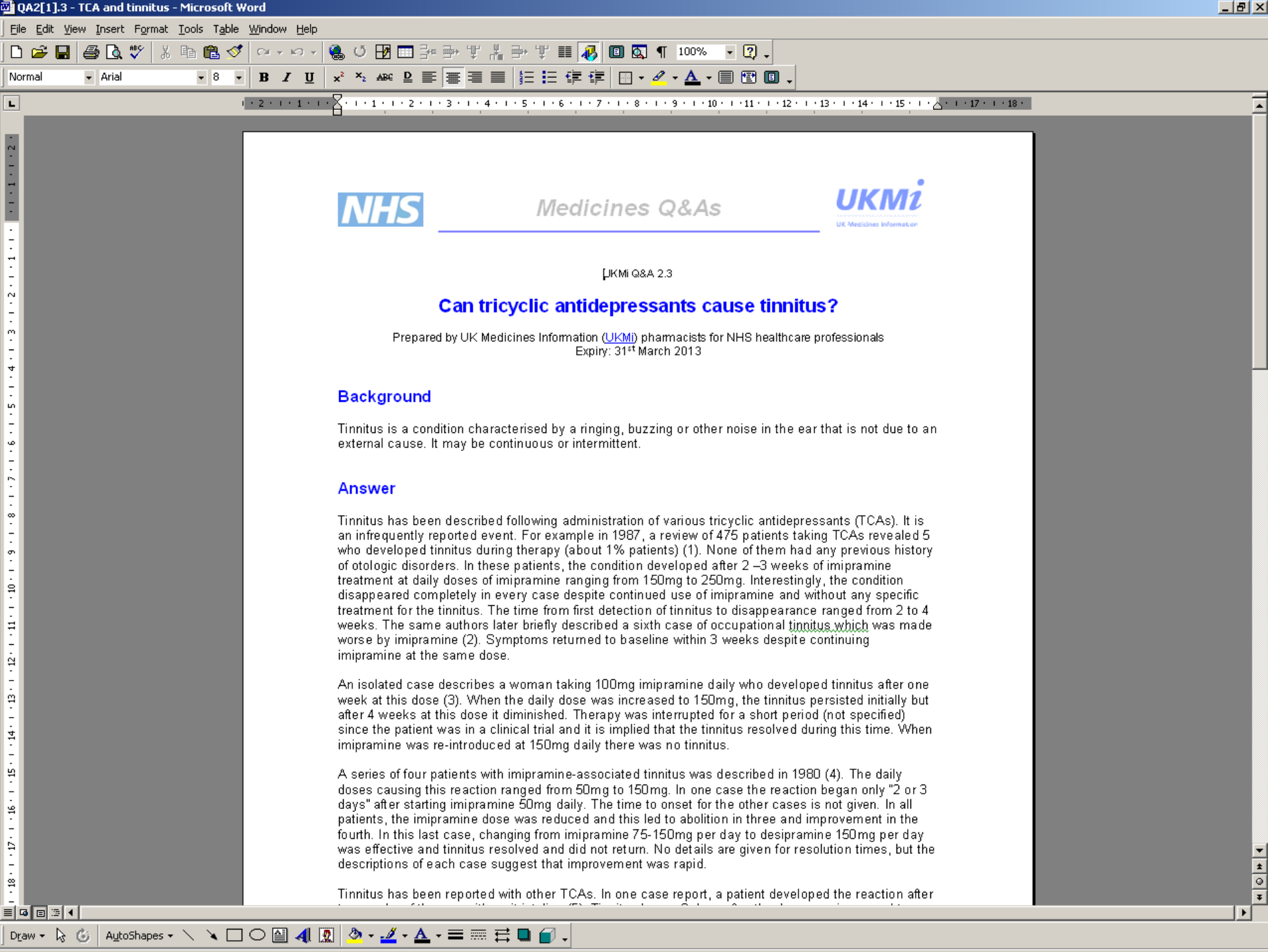
 Category

- BNF Category
- Medical Specialty
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Sort by: Display summary: 

Results 1 - 9 of 9 Result page: Previous | 1 | Next

1. [Can tricyclic antidepressants cause tinnitus?](#) Source: **Wessex Drug and Medicines Information Centre**, Date published: 27/04/2006 , Expires on: 31/03/2013 Category: [4.3.1 Tricyclic and related antidepressant drugs](#) | [Tinnitus](#) NeLM Area: [Evidence > Medicines Q & A](#) [View complete report](#)2. [How should antidepressants be discontinued?](#)Source: **Welsh Medicines Information Centre**, Date published: 19/05/2008 , Expires on: 31/03/2010 Category: [4.3 Antidepressant drugs](#) | [FAQs](#) | [NHS Direct / walk-in](#) NeLM Area: [Evidence > Medicines Q & A](#) [View complete report](#)3. [Switching between monoamine oxidase inhibitors and SSRI or tricyclic antidepressants](#)Source: **North West Medicines Information Centre**, Date published: 02/08/2007 , Expires on: 31/07/2009 Category: [4.3 Antidepressant drugs](#) | [FAQs](#) | [Mental Health](#) NeLM Area: [Evidence > Medicines Q & A](#) [View complete report](#)4. [Switching between tricyclic, SSRI and related antidepressants](#)Source: **North West Medicines Information Centre**, Date published: 02/08/2007 , Expires on: 31/07/2009 Category: [4.3 Antidepressant drugs](#) | [FAQs](#) | [Mood disorders \(including depression\)](#) NeLM Area: [Evidence > Medicines Q & A](#) [View complete report](#)5. [What is the \*\*antidepressant\*\* of choice in ischaemic heart disease?](#)Source: **London Medicines Information Service**, Date published: 03/06/2008 , Expires on: 31/12/2009 Category: [2: Cardiovascular system](#) | [4.3 Antidepressant drugs](#) | [Cardiovascular Medicine](#) | [FAQs](#) | [Mood disorders \(including depression\)](#) NeLM Area: [Evidence > Medicines Q & A](#) [QandA55\\_3\\_final.doc](#)6. [What is the most appropriate \*\*antidepressant\*\* to use in epileptics?](#)Source: **London Medicines Information Service**, Date published: 07/05/2008 , Expires on: 31/03/2010



UKMi Q&A 2.3

## Can tricyclic antidepressants cause tinnitus?

Prepared by UK Medicines Information ([UKMi](#)) pharmacists for NHS healthcare professionals  
Expiry: 31<sup>st</sup> March 2013

### Background

Tinnitus is a condition characterised by a ringing, buzzing or other noise in the ear that is not due to an external cause. It may be continuous or intermittent.

### Answer

Tinnitus has been described following administration of various tricyclic antidepressants (TCAs). It is an infrequently reported event. For example in 1987, a review of 475 patients taking TCAs revealed 5 who developed tinnitus during therapy (about 1% patients) (1). None of them had any previous history of otologic disorders. In these patients, the condition developed after 2–3 weeks of imipramine treatment at daily doses of imipramine ranging from 150mg to 250mg. Interestingly, the condition disappeared completely in every case despite continued use of imipramine and without any specific treatment for the tinnitus. The time from first detection of tinnitus to disappearance ranged from 2 to 4 weeks. The same authors later briefly described a sixth case of occupational tinnitus which was made worse by imipramine (2). Symptoms returned to baseline within 3 weeks despite continuing imipramine at the same dose.

An isolated case describes a woman taking 100mg imipramine daily who developed tinnitus after one week at this dose (3). When the daily dose was increased to 150mg, the tinnitus persisted initially but after 4 weeks at this dose it diminished. Therapy was interrupted for a short period (not specified) since the patient was in a clinical trial and it is implied that the tinnitus resolved during this time. When imipramine was re-introduced at 150mg daily there was no tinnitus.

A series of four patients with imipramine-associated tinnitus was described in 1980 (4). The daily doses causing this reaction ranged from 50mg to 150mg. In one case the reaction began only "2 or 3 days" after starting imipramine 50mg daily. The time to onset for the other cases is not given. In all patients, the imipramine dose was reduced and this led to abolition in three and improvement in the fourth. In this last case, changing from imipramine 75-150mg per day to desipramine 150mg per day was effective and tinnitus resolved and did not return. No details are given for resolution times, but the descriptions of each case suggest that improvement was rapid.

Tinnitus has been reported with other TCAs. In one case report, a patient developed the reaction after

# Training UK hospital pharmacists

# Training UK hospital pharmacists

- Four year undergraduate degree (MPharm)
- One year pre-registration hospital placement and examination
- One to two year post-registration hospital-based rotation with further study and examinations
- UKMi standards aim to streamline training

# UKMi training standards

- Standards apply to all hospital-based pre-reg and post-reg pharmacists (not undergraduates)
- Minimum of 4 weeks in MI (although in practice usually longer)
- Appropriate supervision
- Assessed against competency standards (RPSGB or UKMi Framework)
- Supported by the UKMi Training Workbook and MiCAL

# UKMi training aims and objectives

- **Overall aim of the training is to improve quality of patient care and reduce risk**
- To ask all the correct questions when taking in an enquiry
- To search for information from paper and electronic sources
- To evaluate the information found
- To communicate the answer to the enquiry clearly

# Learning activities

- Handling 'real' enquiries
- UKMi Training Workbook
- MiCAL
- Role play
- Coaching
- Shadowing
- MI team training sessions



# Developing the Training Workbook

- In 2002 existing training material
  - Out-of-date
  - Inadequate
  - Varied across the UKMi network
- New training material
  - Enable self-directed learning and small group tutor-led sessions
  - Support pre-reg and post-registration pharmacists
  - Easy to update
  - Record of achievement/competence /feedback

# Developing the Training Workbook

- Workbook paper-based format (cf computer-based programme)
- Proposed structure
  - 4 introductory sections
    - How to use the Workbook
    - Structure of UKMi
    - Enquiry answering techniques
    - Searching for information
  - 20 tutorials on selected clinical enquiry types

# Developing the Training Workbook

- Tutorials based around most common clinical enquiry themes including;
  - Pregnancy
  - Breast-feeding
  - Drug interactions
  - Adverse drug reactions
  - Parenteral drug compatibility
  - Drugs in liver disease
  - Drugs in renal disease



# Developing the Training Workbook

- Most tutorials - standard structure
  - Essential background information about the topic
  - Suggested questions to ask an enquirer
  - Suggested information resources to use
  - Exercises to test understanding (self-directed and tutor-led)
  - Real examples of questions and answers

## 4. Drugs in Pregnancy



### General Principles

- ⊙ Agents or factors that cross the placenta to cause congenital malformations are defined as teratogens (from the Greek *teratos* meaning monster). This strict definition is often relaxed to include any agent that directly or indirectly, causes structural or functional abnormalities in the foetus or child after birth when administered to a pregnant woman. Teratogens do not cause abnormalities in all foetuses exposed at the critical period. For example thalidomide, which is a highly teratogenic drug, caused abnormalities in less than half of all foetuses exposed during the critical period.
- ⊙ The incidence of major congenital malformations in the general population is estimated to be between 2-3%. Over 75% of these malformations are of unknown aetiology; only 1-2% are thought to be due to drugs.
- ⊙ Exposure to a drug during the pre-embryonic phase of pregnancy, which lasts until the 17th day after conception, will either result in survival of the intact embryo or death. This is sometimes referred to as the 'all or nothing principle'. If most cells are affected the pregnancy is spontaneously miscarried. If only a few cells are damaged the embryo is normally unaffected. Most women will not have missed their first period and not even realise they are pregnant.
- ⊙ The embryo is most vulnerable to teratogens during the embryonic phase, from days 18 to 55, when the cells differentiate and the major organs are formed. If differentiated cells are

## Drugs in Pregnancy

### Questions to Ask an Enquirer

- ⊙ Assess whether prospective or retrospective exposure (ie is the woman actually pregnant now, or planning to become pregnant?).
- ⊙ Identify the drug, indication, dose, frequency, route and the duration of exposure.
- ⊙ How many weeks pregnant was the woman when she first started taking the drug?
- ⊙ How many weeks pregnant is she now?
- ⊙ Has the woman had any previous pregnancies and what were the outcomes?
- ⊙ What drug has the woman taken during previous pregnancies for any similar condition?
- ⊙ Has the woman taken the drug in question during a previous pregnancy?
- ⊙ Is there a family history of malformations or history of recurrent abortions?
- ⊙ Have any investigations been performed (eg ultrasound scans)?
- ⊙ For chemical exposure enquiries additional questioning may be needed to establish substance involved, approximate quantities, duration of exposure per day, protective measures taken etc.

### Example Sources to Use in Answering Enquiries

## Example Sources to Use in Answering Enquiries

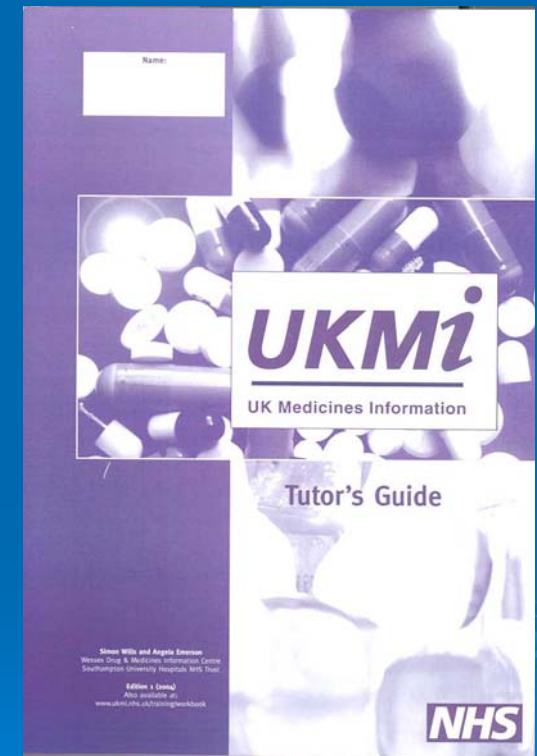
- ⦿ Drugs in Pregnancy and Lactation (Briggs, Freeman and Yaffe, Lippincott Williams and Wilkins 2005) an in-depth textbook that has individual monographs for each drug.
- ⦿ Therapeutics in Pregnancy and Lactation (Lee, Radcliffe Medical Press 2000) a helpful reference book that approaches the subject from a disease perspective.
- ⦿ Medical Disorders in Obstetric Practice (De Swiet, Blackwell Science 2002) a comprehensive textbook on the management of medical disorders in pregnancy.
- ⦿ Drugs During Pregnancy and Lactation (Schaefer, Elsevier Science 2001) written by members of the European National Teratology Information Service, this useful textbook considers drugs by therapeutic class and makes practical recommendations.
- ⦿ Check your in-house enquiry archiving database.
- ⦿ Medline/Embase.
- ⦿ Reprorisk/Reprotox via Micromedex.
- ⦿ SPCs often contraindicate drug use in pregnancy, but manufacturers' Medical Information Departments may be able to offer more information particularly on very new drugs where published literature is often lacking.
- ⦿ The National Teratology Information Service in Newcastle can assist with the answering of enquiries relating to any aspect of drug and chemical exposure in pregnant women or women wishing to become pregnant. Visit the password-protected website ([www.spib.axl.co.uk](http://www.spib.axl.co.uk)) or phone them direct, but only after a thorough search.

# Using the Workbook in practice

- UKMi training standards require;
  - Pre-reg pharmacists to complete first 7 tutorials
  - Post-reg pharmacists to complete next 7 tutorials
- Students aim to complete 1-2 tutorials weekly in the workplace either independently or in small groups
- Tutor gives feedback on exercises and answers trainees' questions
- Supplement with real enquiries to support learning
- Complete and document performance review against agreed competency standards
- Next edition of Workbook due 2009

# Supplements to the Workbook

- Quick question guide (see handout)
- Tutor's Guide
  - Support guide to training in MI
    - Planning your time with trainees
    - Interacting with trainees and checking their work
    - Suggested training programme
  - Covers common problem areas
    - Trainee doesn't like answering the phone
    - Too slow
    - Too confident
    - Doesn't document enquiries properly
  - Next edition due 2009, lead centre Wessex



# Medicines Information Computer Aided Learning (MiCAL)

- Complements Training Workbook
- Enables a blended learning approach (different learner styles)
- Content
  - General MI knowledge and skills (critical appraisal, searching, writing and referencing)
  - 26 additional practice enquiries to test questioning, searching, appraisal and communicating the answer
  - MiDatabank Trainer

Enquiry

Work In Progress

Search

Adv. Search

Timer is On

MiCAL+MiDatabank

**Login**

# MiCAL + MiDatabank Trainer

Username

Password

MI Centre

**OK**

**Cancel**

**Please enter your username and password**

**MiCAL v8** © Copyright 2008 CoAcS Ltd and London MI Service (Northwick Park)

**MiDatabank v2.1** © Copyright 2004 - 2008 CoAcS Ltd

Enquiry

Work In Progress

Search

Adv. Search

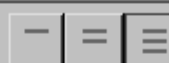
Sam Smith (SS)

Timer is On

Tray

Show My Enquiries

Show All Enquiries



Sort By

Due By Date

In Tray

2



Atorvastatin And Erythromycin - Clinical Significance Of The Interaction?



Open

Due By: 31/01/2009

Enquirer: Butler Caroline

Allocated to SS

Comments:

Taken By DW on 02/09/20

In Progress

1



Carbamazepine - Various Adverse Effects



Open

Due By: 31/01/2009

Enquirer: Pinder Alan

Allocated to SS

Comments:

Taken By JR on 04/09/20

Awaiting Authorisation

0

Reply Authorised

0

All Pending Enquiries

3

Quick Search of Pending Enquiries:

Search input field

Search

Enquiries Summary:

Today

This Week

This Month

This Year

Received Completed

0 0



Edit Windows MICAL Help  
 Enquiry Work In Progress Search Adv. Search Sam Smith (SS) Timer is On MiCAL+MiDatabank  
 Input Research Answer Completion Allocated to: SS Allocate to Me Enq No: 170 Due: 31/01/2009 12:00:00 Recorded Time: 00:07:53  
 Taken By: DW Status: In Tray  
 Add Source  
 Add Source  
 Add Source

**Add Source**

Paper Source
  e-Source
  Advice

Title	Author/Editor	Publis...	Edition	URL	Media	Cate
<Internet Search>					e-Sour...	Geni
<Other E-Source>					e-Sour...	Geni
<Standard Search Pattern>					e-Sour...	Addi
ADIS R & D Insight		ADIS	online	http://...	e-Sour...	Geni
Bandolier		Pain R...	online	www.jr...	e-Sour...	Guid
BNF (British National Formulary)	Mehta D (ed)	BMA &...	online ...	www.b...	e-Sour...	Geni
BNF for Children		BMA, R...	online ...	www.b...	e-Sour...	Paec
BNF for Children (British National Formulary)		BMA, R...	online ...	http://...	e-Sour...	Paec
BP (British Pharmacopoeia)		Britph...	online	www.p...	e-Sour...	Geni
Clinical Evidence	Godlee, F et al	BMJ P...	online	www.n...	e-Sour...	Guid
Drug Interactions	Stockley, I	Pharm...	online ...	www....	e-Sour...	Drug
Drug Tariff		Surelin...	online	www.p...	e-Sour...	Geni
Drugdex		Micro...	online	www.t...	e-Sour...	Geni
FDA (Food & Drug Administration)		FDA	online	www.f...	e-Sour...	Govt
Food Additives and Ingredients Advisory Ass...		Owned...	online	www.f...	e-Sour...	Phar
Google			online	www.g...	e-Sour...	Sear
Handbook of Pharmaceutical Excipients	Rowe RC, Sheske...	Pharm...	3rd ed,...	www....	e-Sour...	Phar
Health Protection Agency		UK gov...		www.h...	e-Sour...	Infe
IDIS World Medicines		IDIS	online	www.i...	e-Sour...	Avai
IV Guide		Consor...	online	http://...	e-Sour...	IV &
Martindale: The Complete Drug Reference	Sweetman, S (ed)	Pharm...	online ...	www....	e-Sour...	Geni
Medline		Nation...	online		e-Sour...	Geni

Sources Used: Add Source

BNF (British National Formulary)  
Martindale: The Complete Drug Reference  
**Drugdex**  
<Other E-Source>  
Drug Interactions

Source: Drugdex

Edition: online

[www.thomsonhc.com/home/dispatch](http://www.thomsonhc.com/home/dispatch)

Date added:

06/01/2009 12:00

Source Notes:

Research:

A Arial 10 B I U 100%

### 3.5.1.S Erythromycin

- 1) Interaction Effect: increased **atorvastatin** exposure and an increased risk of myopathy or rhabdomyolysis
- 2) Summary: The coadministration of clarithromycin with **atorvastatin** significantly increased **atorvastatin** exposure (Ams et al, 2002a). Clinically significant rhabdomyolysis has been cited in case reports of patients treated concomitantly with **atorvastatin** and clarithromycin (Sipe et al, 2003a; Ming & Gill, 2003). Similar to clarithromycin, erythromycin is a known inhibitor of cytochrome P450-3A4, for which **atorvastatin** is a substrate. The concomitant administration of erythromycin and **atorvastatin** has the potential to increase the bioavailability of **atorvastatin**. Coadministration of erythromycin and **atorvastatin** may increase plasma concentrations of **atorvastatin** by approximately 40% (Prod Info Lipitor(R), 2004).
- 3) Severity: major
- 4) Onset: delayed
- 5) Substantiation: probable
- 6) Clinical Management: Avoid concomitant use of **atorvastatin** and erythromycin where possible, or use together with great caution. Consider alternate antimicrobial therapy where appropriate. If concomitant therapy is necessary, monitor CK level when erythromycin is added to, changed during, or discontinued from concomitant treatment with **atorvastatin**. Monitor patients for symptoms of myopathy or rhabdomyolysis (myalgias, muscle stiffness and weakness, darkened urine).
- 7) Probable Mechanism: inhibition by erythromycin of cytochrome P450 3A4-mediated **atorvastatin** metabolism

Angela Emerson 06/01/2009 12:06:07--

Attachments

Add...

Input Research Answer Completion

Allocated to: SS

Allocate to Me

Enq No: 170  
Taken By: DW

Due: 31/01/2009 12:00:00  
Status: In Progress

Recorded Time: 00:20:30

**Search Summary**  
**Summary)**  
**Source:** online March 2007  
**URL:** www.bnf.org.uk  
**Date Added:** 06/01/2009 11:59:52  
**Source Notes:**  
**Search:**  


---

**Source:** Martindale: The Complete Drug Reference  
**Version:** online 34th ed, 2004  
**URL:** www.medicinescomplete.com  
**Date Added:** 06/01/2009 12:00:05  
**Source Notes:**  
**Search:**  


---

**Source:** Drugdex  
**Version:** online  
**URL:** www.thomsonhc.com/home/dispatch  
**Date Added:** 06/01/2009 12:00:10  
**Source Notes:**  
**Search:**  
**1.S Erythromycin**  
**Interaction Effect:** increased atorvastatin

**Answer:**

Attachments

A Verdana 10 B I U [List Icons] 100%

Consider stopping statin for duration of antibiotic, or monitor for symptoms of myopathy during and after course of antibiotic, or use alternative antibiotic.

--Sam Smith 06/01/2009 12:10:06--

Research and Answer Complete

New Enquiry

Work In Progress

Search

Adv. Search

Sam Smith (SS)

Timer is On

MiCAL+MiDataba

Input

Research

Answer

Completion

Allocated to:

SS

...

Allocate  
to Me

Enq No: 170

Taken By: DW

Due: 31/01/2009 12:00:00

Status: In Progress

Recorded Time:

00:21:02

## Reply to Enquirer \*

- Telephone  
 Letter  
 Via Third Person  
 Fax  
 E-mail  
 Person  
 Reply Not Possible

## Reply Notes

## Workload Data:

On time:  Yes  No

Response Time: Under 1 Hour

Enquiry Level: Level 1

Time Taken: 21 min 

## Keywords

Add...

Remove

ATORVASTATIN  
 ERYTHROMYCIN  
 MYOPATHY

Scan Question and Answer for keywords:

Auto Keyword

## Origin \*:

Base Organisation

&lt;none&gt;

Base Organisation

Base Organisation Affiliates

NHS Direct

Non NHS

Other NHS

Primary Care

Secondary Care

Enquiry Number

Enquiry ID:

on 02/09/2008 11:35:00

Print Enquiry...

## Enquiry Follow Up/Notes

Edit Last Note...

Remove Last Note...

 Enquiry Completed compulsory data is missing

Checkbox for 'Research & Answer Complete' not checked  
 Reply Route is not set

# MiCAL

- Complements Training Workbook
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- Content
  - General MI knowledge and skills (critical appraisal, searching, writing and referencing)
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  - MiDatabank Trainer
  
- **Next edition in 2009, lead centre Northwick Park, London**

# Training in MI: what are the risks?

- Using enquiries about real patients
- Balance between minimising the risk and maximising the trainee's learning experience
- IRMIS report September 2008
  - *'Inadequate analysis and search combined with high workload, urgent deadlines and inexperienced staff answering enquiries, continue to be the most frequently occurring cause of errors. In some cases the reporter noted a lack of robust checking procedures or failure of the checking process as contributing to the error'.*

# Training in MI: what are the risks?

- You are the MI pharmacist in charge of a busy MI centre answering over 30 enquiries daily with 2 other experienced MI pharmacists
- You are responsible for 2 trainee pharmacists who are halfway through their 6 week MI training programme and are starting to take enquiries over the telephone, undertake their own research and evaluation, and communicate their answers back to enquirers
- Consider where errors may occur and what strategies can be used to minimise risk

# Risks associated with training in MI

- Numerous and forever changing
- Relate to
  - Receiving the enquiry
  - Undertaking the research
  - Evaluating the information and communicating the answer

# Receiving the enquiry

## ➤ Minimising the risks

- Role play prior to receiving 'real' enquiries (Workbook and MiCAL)
- Using the Quick Question Guide
- MI pharmacist listens to the trainee receiving the call (telephone technology, data protection)
- MI pharmacist checks that the enquiry is entered correctly into MI Databank and countersigns it
- Timely feedback to the trainee on questioning skills
- Ensure that trainee's clinical pharmacy knowledge is developed and maintained

# Undertaking the research

## ➤ Some examples....

- Incorrect/out-of-date resources used
- Correct resources used incorrectly (i.e. not searched properly)
- Insufficient resources used (i.e. conclusions drawn prematurely)
- Enquiry that is too complex allocated to the trainee
- More than one MI pharmacist checking an individual enquiry
- Not being able to disregard irrelevant information

# Undertaking the research

## ➤ Minimising the risks

- Search strategies
- Training in search techniques throughout placement (Workbook and MiCAL)
- Ensure enquiries are suitable to be answered by trainees (MI pharmacist allocates appropriate enquiries)
- Very careful checking of enquiry and feedback to trainee
- Ensure the same MI pharmacist supervises the trainee throughout the whole enquiry if possible (saves time too)

## Standard Search Pattern: Drugs in Breastfeeding

### [SPC \(on eMC\)](#)

Drug (incl Generic name, Brand & Manufacturer):  
Date last updated:

### [Hale \(Medication and Mothers' Milk\)](#)

### [Schaefer \(2<sup>nd</sup> edition, 2007\)](#)

### [Briggs \(8th edition, 2008 + paper updates\)](#)

### [Lee \(1<sup>st</sup> edition, 2000\)](#)

### [Drugs in Lactation website](#)

### [Drugs and Lactation Database \(LactMed\)](#)

### [IDIS Web](#)

(State search terms)

### [Medline](#)

Dialog (State search terms & dates searched)

### [Embase](#)

Full Screen ▾

Close Full Screen

# Evaluating information and communicating answers

## ➤ Some examples....

- Incorrect interpretation of the information found
- Not all the relevant points included in the final answer
- Answer too complex to be communicated verbally (written answer may be more suitable)
- Answer communicated in inappropriate language (e.g. too technical for a patient)
- Answer communicated incorrectly
- Trainee attempts to answer follow-up questions alone

# Evaluating information and communicating answers

## ➤ Minimising the risks

- Training on evaluation, especially information that is conflicting
- Training on how to prepare and communicate the answer (role play, Workbook, MiCAL)
- Careful checking of answer by MI pharmacist before it is communicated
- Follow-up questions anticipated and MI pharmacist and trainee agree boundaries
- MI pharmacist on hand to intervene in phone call if necessary
- Give answer in writing if complex/legal implications

# Training in MI: minimising the risks

- Undertake regular risk assessment (proforma on UKMi website)
- Clear standard operating procedures (e.g. how trainees' work is checked)
- Clear responsibility (trainees must have a named supervisor at all times)
- Learning from mistakes

# Summary

- Training in MI
  - Challenging but rewarding
  - Support tools and templates

# Finally...

- We can all learn from each other!
  - Maybe 1 or 2 pharmacists would like to work with us for a year?
  - Handout with our contact details if interested.
  
- Any questions?