



USER GUIDE

Using MiCAL v24 (Medicines Information Computer Aided Learning) Effectively

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Please refer to the document on [Setting Up And Using MiCAL With MiDatabank \(MiD\) Trainer Version 3.2](#) for guidance on the following:

- Getting access to MiCAL
 - Getting started with MiCAL
 - Logging in and setting up locations, organisational leads, assessors and learners on MiCAL
 - Viewing the answers and rationales for the MCQs on MiCAL
 - Submitting Yellow Card reports on Adverse Drug Reactions to the MHRA using MiCAL Installing and using MiDatabank Trainer with MiCAL
 - Documenting enquiries using MiDatabank Trainer
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1. Introduction to MiCAL and MiDatabank

The purpose of the medicines information computer aided learning package (MiCAL) is to provide the core knowledge and skills required to effectively answer questions relating to medicines use.

Pharmacy staff will deal with medicines related questions in most aspects of their role from ward based services, dispensary to supply issues and medicines information.

MiCAL is aimed at any healthcare professional wishing to gain (or improve) the basic and advanced skills considered necessary to reduce the risk to enquirers from the provision of inappropriate advice relating to medicines.

The package is designed to assist in developing the skills and knowledge of those in a wider range of roles as well as remote users.

MiCAL is written with the use of the UKMi approved enquiry recording database (MiDatabank) in mind and provides training on using MiDatabank effectively through completion of the example enquiries in conjunction with MiDatabank Trainer. It is, however, possible to use MiCAL in conjunction with non-MiDatabank enquiry recording systems. For more information on MiDatabank and MiDatabank Trainer, please refer to the document on [Setting Up And Using MiCAL With MiDatabank \(MiD\) Trainer Version 3.2](#) or visit www.midatabank.com

2. What's in MiCAL

The MiCAL v24 content has been divided into process categories to assist in the efficient answering of medicines related questions.

Using MiCAL

- The learning outcomes for each section of MiCAL
- How to move around the package and other helpful tips on using MiCAL

Enquiry answering skills

- Introduction to medicines information services
- The purpose of documenting medicines related questions, research and answers
- Questioning skills – including interactive scenarios
- Where to look for information by clinical topic – including test yourself questions and exercises. Topics available:
 - General Resources
 - Adverse Effects
 - Complementary Medicine
 - Contraception and Hormone Replacement Therapy
 - Drug Abuse
 - Drug Administration
 - Drug Interactions
 - Infections and Microbiology
 - Legal and Ethical
 - Paediatrics

- Palliative Care
- Pharmaceutical
- Pregnancy and Lactation
- Psychiatry
- Renal and Liver Impairment
- Therapeutics and Medicine
- Travel
- Using Medline and EMBASE effectively
- Answering the question - including interactive scenarios

Clinical tutorials

This section provides learners with a refresher on their basic clinical skills for a variety of topics. For each topic, learners are given an introduction, suggested factors to consider in relation to medicines and then test yourself questions. Topics available:

- Adverse Effects
- Complementary Medicine
- Contraception and Hormone Replacement Therapy
- Drug Abuse
- Drug Administration
- Drugs in Breast feeding
- Drugs in Pregnancy
- Drug Interactions
- Infections and Microbiology
- Legal and Ethical
- Paediatrics
- Palliative Care
- Pharmaceutical
- Psychiatry
- Renal and Liver Impairment
- Travel

Enquiry answering scenarios

This section consists of fifteen interactive example enquiries based around various clinical topics. At the end of each example enquiry, learners can compare their completed enquiries with pre-set suggested results and answers.

Disclaimer: the pre-set suggested results and answers are provided as *example* results and answers only and should not be relied on for medical decisions. Online resources are regularly updated; consequently suggested results and answers may not always reflect the MOST current medical information and advice.

Also included:

- Multiple choice questions (pre and post example enquiry) to test knowledge gained from working through the example enquiries.
- Table 1 lists the case scenario topics available.

Table 1: Example enquiry titles, complexity, and clinical topic.

Example Enquiry	Enquiry Summary Title	Enquiry Complexity*	Clinical Topic (main)
1	Co-amoxiclav use in breast-feeding mother?	2	Drugs in Breast-feeding
2	Can ibuprofen, sulfasalazine or hormone replacement therapy cause posterior vitreous detachment?	2	Adverse Drug reactions
3	Malaria prophylaxis for travel to Ghana, Tanzania, and Egypt.	1	Travel Medicines
4	Where is iron absorbed?	2	Pharmacokinetics
5	Compatibility of sodium chloride, potassium chloride and magnesium sulphate in the same infusion bag	2	Compatibility of Parenteral Drugs
6	Calculating the dose of CosmoFer® (iron dextran)	2	Administration of Medicines
7	Sulfasalazine - side effects when just starting treatment	1	Adverse Drug reactions
8	Ibuprofen in the second trimester	2	Drugs in Pregnancy
9	Garlic - any interaction with enalapril or aspirin?	2	Drug Interactions
10	Sotalol - safety in pregnancy.	3	Drugs in Pregnancy
11	Identification of a tablet.	1	Product Identification
12	Pamidronate infusion - frequency of administration.	1	Administration of Medicines
13	Methotrexate - advice for overdose.	2	Administration of Medicines
14	Dose of diuretic for treating ascites in liver disease.	3	Drugs in Liver Disease
15	Covert drug administration	3	Administration of Medicines

The enquiry complexity levels are for **guidance only, some of the example enquiries on MiCAL may be borderline.*

Advanced skills

- Critical appraisal skills for randomised controlled trials
- Calculations commonly encountered in pharmacy practice
 - Dilutions of solutions
 - Dilutions of solid preparations
 - Mixing of solutions
 - Displacement values
 - Converting dosing formulations
 - Half-lives
- Patient safety
- Effective writing skills

3. Using MiCAL effectively

MiCAL is a training tool to assist tutors in delivering the knowledge and skills required to answer medicines related questions effectively. It can be used in situations where a tutor is unable to provide continuous one-to-one support, e.g. remote learners.

MiCAL can be used to address identified training needs and each section is designed as a standalone module.

MiCAL learners who are completing a pharmacy rotation should complete the relevant sections as indicated by their tutor. Learners completing MiCAL for self-directed continuing professional development (CPD) may undertake sections as deemed appropriate. Table 2 gives guidance on sections of MiCAL recommended for different types of pharmacy staff.

Table 2: Recommended MiCAL completion profile

	Advisable to complete
	Useful to complete
	Not essential to complete

Ultimately, the final decision on which areas to complete will lie with the tutor responsible for the learner and the relevant teaching programme.

MiCAL Section	Pharmacy Undergraduate	Trainee Pharmacist	Pharmacist In Foundation Training / Rotation Medicines Information Staff	Advanced Pharmacy Framework / Permanent Medicines Information Staff	Independent Prescribers	Medicines Information Training / Medicines Information Technicians Training
Using MiCAL						
Enquiry Answering Skills						
Introduction To MI						
Introduction						
Documenting Enquiries						
Questioning Skills						
Introduction						
Scenarios						
Where To Look For Information						
Introduction						
Resources By Clinical Topic						
Introduction						
Topics (Various)						
Searching MEDLINE And EMBASE						
Answering The Question						
Introduction						
Scenarios						
Clinical Tutorials						
Tutorials (Various)						

MiCAL Section	Pharmacy Undergraduate	Trainee Pharmacist	Pharmacist In Foundation Training / Rotation Medicines Information Staff	Advanced Pharmacy Framework / Permanent Medicines Information Staff	Independent Prescribers	Medicines Information Training / Medicines Information Technicians Training
Enquiry Answering Scenarios						
Various Real-Life Based Scenarios With MCQs						
Advanced Skills						
Patient Safety (Including IRMIS)						
Critical Appraisal						
Effective Writing Skills						
Calculation Scenarios						
MiDatabank Trainer						

4. Further help and contact details

The MiCAL feedback button emails CoAcS Ltd. An acknowledgement email will be issued on receipt of feedback.

For queries about technical issues relating to MiCAL or MiDatabank Trainer, please refer to the document on [Setting Up And Using MiCAL With MiDatabank \(MiD\) Trainer Version 3.2](#) or visit <https://www.midatabank.com>