**USER GUIDE**

**Using MiCAL v23 (Medicines Information Computer Aided Learning) Effectively**

## Contents

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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](http://www.midatabank.com)

# 2. What's in MiCAL

The MiCAL v23 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 third 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

| | |
|---|---|
| 🟩 Green | Advisable to complete |
| 🟧 Orange | Useful to complete |
| 🟥 Red | 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 | 🟩 Green | 🟩 Green | 🟩 Green | 🟧 Orange | 🟧 Orange | 🟩 Green |
| **Enquiry Answering Skills** | | | | | | |
| **Introduction To MI** | | | | | | |
| Introduction | 🟩 Green | 🟩 Green | 🟧 Orange | 🟥 Red | 🟥 Red | 🟩 Green |
| Documenting Enquiries | 🟥 Red | 🟩 Green | 🟧 Orange | 🟥 Red | 🟥 Red | 🟥 Red |
| **Questioning Skills** | | | | | | |
| Introduction | 🟩 Green | 🟩 Green | 🟩 Green | 🟧 Orange | 🟧 Orange | 🟩 Green |
| Scenarios | 🟩 Green | 🟩 Green | 🟩 Green | 🟧 Orange | 🟧 Orange | 🟩 Green |
| **Where To Look For Information** | | | | | | |
| Introduction | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟧 Orange |
| **Resources By Clinical Topic** | | | | | | |
| Introduction | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟧 Orange |
| Topics (Various) | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green |
| Searching Medline And EMBASE | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green |
| **Answering The Question** | | | | | | |
| Introduction | 🟧 Orange | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green | 🟩 Green |
| Scenarios | 🟧 Orange | 🟩 Green | 🟩 Green | 🟧 Orange | 🟧 Orange | 🟩 Green |
| **Clinical Tutorials** | | | | | | |
| Tutorials (Various) | 🟩 Green | 🟩 Green | 🟧 Orange | 🟧 Orange | 🟧 Orange | 🟥 Red |

| 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 | 🟥 | 🟧 | 🟥 | 🟩 | 🟩 | 🟩 |
| 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