Understanding the AACP Stage Two Accreditation Assessment Process

1. Clinical MCQ assessment

The multiple-choice question (MCQ) component of the AACP accreditation assessment program has been designed to assess your competence in clinical pharmacy, therapeutics, pharmaceutical care and medication review. The questions assess your knowledge of the principles of geriatric pharmacotherapy, rational and safe use of medicines, and the appropriate use and interpretation of laboratory tests.

MCQ examinations are, arguably, the most reliable, valid and cost-effective method of assessing the clinical competence of candidates, especially for measuring their clinical knowledge.

The questions relate to the management of the following disease states:

- Cardiovascular disorders
- Complementary medicines
- Dermatological disorders
- Drug interventions
- Endocrine/exocrine disorders
- Gastrointestinal disorders
- Haematologic disorders
- Infectious diseases
- Musculoskeletal diseases
- Neurologic disorders
- Nutrition/hydration disorders
- Oncological disorders
- Ophthalmological disorders
- Psychiatric disorders
- Renal and urologic disorders
- Respiratory disorders.

In simple terms, the MCQ exam is an assessment process to ascertain whether you have the appropriate level of clinical knowledge in areas likely to be encountered when undertaking medication management reviews (MMRs). As such, and to preserve the integrity of the assessment instrument, feedback is **not** provided.

Sample MCQs

Sample MCQs which are similar in style and complexity to those randomly allocated in the examination process are available on the AACP website. The sample MCQs have been provided to guide candidates to the types of questions they can expect in the actual MCQ assessment and, as such, feedback is provided. Candidates are encouraged to undertake the sample MCQs before attempting the actual MCQ assessment. The sample MCQs can be done a number of times if required. Forty sample MCQs are available after logging in to the AACP website, via the AACP Portal Assessment Area www.aacp.com.au

The sample MCQs are also **accredited for CPD purposes**. On successful completion of the initial attempt of the sample MCQs, **4 accredited group two credits can be claimed for each set of ten questions.** These group two credits can only be claimed if a score of 70% or greater is achieved on this **initial attempt** only. If **unsuccessful on the initial attempt**, and for a**ll subsequent attempts** only **group one credits can be claimed.**

For further information on claiming CPD credits for the sample MCQs see the Assessment Area of the AACP website (log in required)

Review the ***MCQ Answer guide*** (detailed slides voice-over presentation) located on the AACP website Assessment Resources via the AACP Portal www.aacp.com.au

This is a voice over power point presentation (VOP) which is designed to guide you through a series of worked MCQs and to provide you with strategies to assist in answering the questions.

It is strongly recommended that you attempt the sample MCQs and watch the MCQ Answer Guide VOP.

Please note that simply repeating the sample questions until you have learnt the answers does not prepare you adequately for the MCQ assessment. These sample questions will help you identify areas of strengths and weakness in pharmacy knowledge and where to spend additional reading and review time.

If you get one of the sample questions incorrect, you should read through the reasons given and reflect whether your knowledge concerning the particular therapeutic area targeted in the question is adequate. You can then investigate further until you understand why your answer was incorrect.

It is also recommended when a correct answer is achieved, that you also read the short explanation of the answers, as this may assist in your technique and thought processes for other questions.

Structure of MCQ assessment

The MCQ assessment is an open-book examination with some time parameters imposed to reflect the real-life situation. It comprises 40 questions that will be released to you in four sets of 10 questions. There is only one correct answer for each question.

There is a mixture of five short MCQs and five scenario-based MCQs in each set of 10. They are not specifically linked to any one therapeutic group in each part. The questions are randomly allocated from an ever-increasing bank of questions. However, due to the laws of probabilities, do not be surprised if you receive a same question in a second or subsequent attempt at the MCQ if this occurs.

The pass mark for the MCQ assessment is 75%.

The MCQ is 'marked' by the computer system and the results are advised to you by email and telephone. There is no intervention from 'markers'.

Time allowed

You have two hours to complete each set of 10 MCQs (i.e. up to 8 hours to complete 40 MCQs) and 60 days to complete the entire MCQ assessment.

The 60-day timeframe commences on the date that you receive the AACP's email and phone call advising that the MCQ assessment is available to you online.

If you do not complete each set of 10 MCQs within the two-hour limit, you will be marked on the answers that have been submitted.

If you do not complete the 40 MCQs within the 60-day time limit, the program will be automatically deactivated and you will be marked on the answers that have been submitted. You will receive an alert email at 21 days if you have not completed the 40 MCQs.

Attempts

Candidates are allowed two attempts at the actual MCQ assessment under the initial payment. If you have not achieved the 75% pass mark for the 40 MCQs at your first attempt you will be required to do the MCQs again with a different set of 40 questions. Once you have requested AACP to reactivate the second batch of 40 MCQs, you have 60 days to complete the entire MCQ assessment again.

If you have not achieved the 75% pass mark for the 40 MCQs at your second attempt you will be contacted by the AACP Chief Executive Officer or designee to discuss remedial action to assist you to reach the required standard of competency. This may include recommendations for further study, or other activities that will assist you to achieve competency in this section of the AACP accreditation assessment process. In situations where remedial action is required, the candidate's application will be held in abeyance whilst the appropriate action is taken, and the completion date for the stage two accreditation process will be amended accordingly. You will be required to pay an additional fee before a third set of questions is released to you. You will then have another 60 days to complete the 40 MCQs.

If you have not achieved the 75% pass mark for the third set of 40 MCQs at your first attempt you will be required to repeat the MCQs again with a different set of 40 questions. Once you have requested AACP to reactivate the second batch of 40 MCQs, you have 60 days to complete the entire MCQ assessment again.

If you are again unsuccessful with your second attempt at the third set of MCQs you will again be contacted by the Chief Executive Officer or designee to discuss your application for the stage two accreditation assessment process.

On successful completion of the MCQs you then progress to the case studies part of the assessment process.

Hints and tips for you

As outlined above, the MCQs contain both short questions and 'longer' scenario-based questions. There is only **ONE** correct answer to each question.

The short questions often address one specific therapeutic area or disease. These short questions often require knowledge of efficacy and side effects of medicines, and management of disease symptoms. These MCQs will often be asking the select the most or least appropriate choice or the select a response that is true or false. Read the question well.

The scenario-based questions are designed to assess your application of clinical knowledge and clinical judgment, interpretative skills, reasoning and critical thinking, as opposed to simple recall (or looking up) of facts. These scenario-based questions are developed to stress the general principles

and concepts that can be applied to other situations, as well as to address issues that are particular to the patient. The scenario-based questions do not necessarily address one specific therapeutic area or disease. They often contain multiple problems, medications and comorbidities which need to be considered in determining your answer. These questions require you to identify the relevant information and apply it to the clinical scenario, based on the information provided.

Structure of an actual question

Some explanation of MCQ terminology may assist in understanding how a question is structured and aid in your interpretation and understanding of what is being sought.

An individual question (often called a unit) comprises a 'stem' and several options. The 'stem' is the actual question, statement or lead-in to the question. The possible answers are called 'options, 'alternatives' or 'choices'. The correct answer is called the 'keyed response' – the incorrect answers are called the 'foils' or 'distractors'.

MCQ writers are very clever and hence even the incorrect options look realistic and plausible. If something looks unrealistic, implausible or clearly impossible then it is – and probably shouldn't have been there in the first place.

A common break-up of the options in each MCQ is to have one completely correct answer (or best option considering clinical judgment), one that is clearly wrong and two or three 'distractors' that look plausible but are incorrect. Distractor statements are frequently accurate but do not fully meet the requirements of the question, while incorrect statements are often worded so that they seem right to the candidate.

No one said that MCQs were designed to be easy, in fact they are a legitimate and searching test of a person's knowledge and are able to separate those who know the subject and those who don't.

If you undertake the sample questions, you will become familiar with the style and reasoning (as feedback is provided in the sample tests) of the questions and be better equipped to undertake the examination.

Clinical judgment vs black and white answers

A number of questions, especially the scenario-based questions, are asking for you to apply your clinical judgment as you are required to do in real life MMRs. Hence, they will have terms such as 'which one of the following strategies is the most (or least) appropriate'. The options to choose from may not present all the alternatives, but the question usually focuses on selecting the best (or worst) of the options that are provided. The correct answer is based on the latest evidence, and as part of the development process of the questions, they have been validated by a group comprising accredited, non-accredited clinical pharmacists and pharmacy educators.

The short questions are more black and white and often ask 'which of the following is correct/incorrect OR not appropriate/appropriate'.

Positive vs negative questions

While generally it is considered that negative questions (e.g. 'least appropriate' 'less effective' are more difficult for the candidate to understand, they do remain good choices in some circumstances and are used in the MCQ assessment.

Techniques to consider

The simplest tip on technique that can be given regarding MCQs is to read the question carefully. Be sure to take notice of words such as 'best', 'most appropriate', 'least' 'optimum', 'most closely related to' etc. These are so-called niceties of the language and in reality, can be distracting and time-wasting as there is only ONE correct answer.

Be familiar with the various reference books and resources (see below). Search facilities on the electronic versions of the key drug information resources certainly make life easier. And remember that no two indexes are the same. Reference books and resources are designed to supplement your knowledge, not replace it and do not necessarily negate the need to study or prepare for the examination.

How to prepare for the examination

Remembering that you only have 60 days from when you are allocated a password, go to the sample MCQs and look at the format of the questions. If you feel comfortable with the questions, attempt the entire sample test, using your usual set of resources (giving yourself a time limit is a good idea). Feedback is provided on each response for you to judge how you are going. The results of this sample test will also help you identify areas where additional reading or study may be required.

If your overall result for the 40 sample questions is 75% or more, within the designated time limit (two hours for every 10 MCQs), you may wish to go ahead and sit the examination. If you achieve less than 40% for the sample questions, additional study on the disease states in which questions were not answered correctly is likely to be required in order for a pass mark to be achieved in the examination.

Look at the various MMR-related or other case studies in each of the pharmacy journals e.g. *Australian Pharmacist*, *AJP*, *Pharmacy News*, *and Retail Pharmacy* and see what issues are being raised and addressed.

Be familiar with the latest clinical research trials and their major findings. A good source for this is the Clinical News section of the AACP Newsletter and website, the latter being searchable. NPS MedicineWise resources are also invaluable in this regard.

Do the sample test again!!!

Resources to assist you in the MCQs

There are a number of high quality drug information resources that are of immense value for pharmacists undertaking medication reviews and the assessment process including the case studies and the MCQs. It is suggested that *at a minimum* you have access to the latest editions of:

1. *Australian Medicines Handbook*
2. *Therapeutic Guidelines*
3. *MIMS*
4. *AMH Aged Care Companion*

There are other excellent resources to assist you, including:

1. *Australian Pharmaceutical Formulary & Handbook* (APF) 23rd edition available from the Pharmaceutical Society of Australia http://www.psa.org.au/apf
   Relevant sections include:

Section B - Principles of drug therapy (including *Drug Interactions* and *Medicines and Older People* which has specific information on medications of concern in the elderly and common presentations of adverse reactions).

Section C - Therapeutic Management (including *Normal Physiological Values*)

2. *The Royal College of Pathologists of Australasia Manual*
   Available from https://www.rcpa.edu.au/Library/Practising-Pathology/RCPA-Manual/Home
3. *AusDI*
   Available from http://ausdi.hcn.com.au/index.hcn
4. *Australian Prescriber*
   Available from https://www.nps.org.au/australian-prescriber
5. *TGA Medicines Safety Update*
   Available from http://www.tga.gov.au/hp/msu.htm
6. *Merck Manual*
   Available from http://www.merckmanuals.com/professional/
7. *NPS MedicineWise* publications
   See http://www.nps.org.au/
8. *Australian Family Physician*
   Free access at http://www.racgp.org.au/afp
9. *Medscape*
   Free access and register for Medpulse at http://www.medscape.com

2. The AACP case study assessment

The aim of the case studies is to assess your competency to provide quality medication management reviews. The case studies have been specifically designed to assess your ability to:

1. identify gaps in the information available and to suggest methods for obtaining that information
2. accurately identify actual, suspected or potential drug-related problems
3. identify and prioritise recommendations using clinical judgment and skills
4. use appropriate references to justify recommendations
5. use appropriate communication and language for recommendations.

The assessment is based on how well you have met these objectives in each of the case studies. How you attempt these online case study reviews is how you would attempt a medication review in a real life setting. The online system allows you to undertake the assessment in your own time using whatever resources you would use in your actual practice.

Four case studies are assessed – two HMR and two RMMR cases.

The Case Study Process

Once you have successfully completed the MCQ assessment the initial HMR case study will be released to you.

The AACP has **mandatory** formatting requirements for all case studies:

- Your response must be **a minimum of 11 pages in length, but must not exceed 22 pages**, as follows:
  - Question 1: **not less than three pages, and not exceeding six pages in length**
  - Question 2: **not less than six pages, and not exceeding 12 pages in length**

    - Question 3: **not less than two pages, and not exceeding four pages in length**
- You must use one of the following fonts:
    - Calibri
    - Aerial
    - Times New Roman
- Margins, Font size and line spacing **must be the default for Windows**
- Page numbers must be used.

Please note that if you do not meet the minimum page numbers, or you exceed the maximum number of pages, **your case study will be returned to you for either additional information or to edit the information submitted**.

When you have completed the initial case study and uploaded it to the AACP database, it will be assessed by a marker.

If the marker assesses that you are competent on your initial case study, the next HMR case will be released to you.

If the marker assesses that you are not yet competent (NYC) to progress to the next HMR case study, you will be required to resubmit the initial case study.

If you are again unsuccessful on your second attempt, the case study, together with your file, will be referred to the AACP Chief Executive Officer or nominee for review. If your application is permitted to continue, you will be issued with a "new" initial case study and will be required to pay an additional fee for the assessment by your marker ($100.49).

Note: If improvement has been noted in your resubmission, the nominee may agree to a third attempt at the case study (the additional assessment fee will be $66.99). In some situations, a candidate may be permitted to revise and resubmit the report to the GP rather than the entire case study (the additional assessment fee is $40.19).

If you are unsuccessful with the new case, you will be required to resubmit the case study for reassessment by your marker, however, if your resubmission is again unsuccessful you will be contacted by the AACP Chief Executive Officer or nominee to discuss remedial action to assist you reach the required standard of competency. This may include recommendations for further study or other activities that will assist you to achieve accreditation. In situations where remedial action is required, the candidate's application will be held in abeyance whilst the appropriate action is taken, and the completion date for the stage two accreditation process will be amended accordingly.

Whether you are successful or not, the marker will provide comprehensive formative feedback on your work.

If the case study has been completed successfully, the remaining three case studies, randomly drawn from a bank of case studies, will be released individually:

- Successful completion of the initial case study will result in the release of the second HMR, with a 60-day completion period
- Successful completion of case 2 will result in the release of the first RMMR case study, with a 60-day completion period
- Successful completion of case 3 will result in the release of the second RMMR, with a 60 day completion period.

Once you have successfully completed all the cases you will be offered accreditation.

Marking criteria

The case studies are assessed according to the following criteria:

1. ability to identify gaps in the information available and to suggest methods for obtaining that information

2. ability to accurately identify actual, suspected or potential drug-related problems

3. ability to identify and prioritise recommendations using clinical judgment and skills

4. ability to use appropriate references to justify recommendations

5. ability to use appropriate communication and language for recommendations.

Each of the four case studies will be marked overall as ***Competent (C)*** or ***Not Yet Competent*** **(NYC).**

Each case study is marked against 16 performance criteria with a rating of consistently, usually, sometimes or rarely. Candidates are required to meet each of these performance criteria 'consistently' or 'usually'. A mark of 'sometimes' or 'rarely' against any performance criteria will mean an overall assessment of *Not Yet Competent*.

Hints and Tips for Candidates

The following information is provided to assist you in undertaking the case study assessment. You are also advised to refer to HMR and RMMR and QUM guidelines available on the PSA website at https://www.psa.org.au/practice-support-and-tools/guidelines-and-tools/cpa-guidelines

The *Australian Pharmaceutical Formulary & Handbook* (APF) 23rd edition available from the Pharmaceutical Society of Australia http://www.psa.org.au/apf has a section on Medicines Review.

The Society of Hospital Pharmacists (SHPA) Standards of Practice for Clinical Pharmacy Services provide valuable background and are available here:

https://www.shpa.org.au/resources/standards-of-practice-for-clinical-pharmacy-services

It is important to remember that the purpose of a comprehensive medication review is to ensure quality use of medicines, minimise medication misadventure and assist the patient in gaining the most benefit from their medicines.

Note: A medication review is for an ***individual*** person. Medication reviews must be patient-centred, with a focus on medication.

The following three questions are to be addressed in each case study:

Consider the patient needs or concerns, medication-related problems and medication management issues.

1. What further information would assist in making your assessment of this patient? Explain reasons for obtaining this information. Who/where would you obtain this information?

2. Based on the information provided, identify potential and actual medication-related and disease-related problems, and patient concerns. Suggest how these could be addressed and/or monitored.

3. Write a letter or report to the referring GP, outlining your key findings for this patient and your suggestions or recommendations.

General Comments

Some general comments on the various sections that you are asked to address in the assessment process follows:

- **Information Collection**: You should identify what information is needed to assist you in assessing the patient's/resident's clinical status and medication regimen and from where this could be obtained. You may only have access to partial information from the GP. What the patient tells you might be different from or in addition to information provided to the GP, carer or in the patient's notes. Is the information on medications being taken complete? How could you find this out? Is there a full understanding of what the patient is taking and when and how? Consider the clinical need for laboratory test results and document the reasons for their need. Do not suggest routine laboratory tests without any justification.

- **Medication-related problems:** all actual and potential medication-related problems should be identified in question 2. It is useful to consider the eight medication-related problem categories:[i]
    - need for additional drug therapy
    - wrong drug
    - dose too low
    - dose too high
    - adverse drug reaction
    - drug interaction
    - compliance
    - drug use without indication

These medication-related problems should be referenced (see reference guide below).

The following table provides a brief explanation of categories of medication-related problems.

CATEGORIES OF MEDICATION-RELATED PROBLEMS	
Category	***Definition***
Need for additional drug therapy (untreated indication)	Patient has a medical problem that requires drug therapy but is not receiving a drug for that problem
Wrong drug (improper	Patient has a medical problem that requires medication

medication selection)	therapy but is taking the wrong drug
Subtherapeutic dosage	Patient has a medical problem that is being treated with too little of the correct medication
Failure to receive medication	Patient has a medical problem but is not receiving the prescribed medication
Overdosage	Patient has a medical problem that is being treated with too much of the correct medication
Adverse drug reaction	Patient has a medical problem that is the result of an adverse drug reaction or effect
Drug interaction	Patient has a medical problem that is the result of a drug-drug, drug-food, or other interaction
Drug use without indication	Patient is taking a medication for no medically valid indication

Additional tools for identifying medication-related problems include:

- Beers[ii]
- McLeod explicit criteria[iii]
- STOPP/START[iv]
- Medication Appropriateness Index (MAI)[v]
- Inappropriate Medication Use and Prescribing Indicators tool[vi]

- **Prioritise Recommendations:** Make a prioritised list of the major points of clinical significance from the actual or potential problems you have identified. Use your clinical judgment. Identify if any immediate communication needs to take place with the GP or facility about urgent action. The purpose is to bring to the notice of the GP or aged care facility the most important clinically significant findings that need to be addressed. Commence with the one that will have the greatest impact on the patient's health outcome. Always address the GP's reason for referral, regardless of any actual drug-related problem. Not all medication-related problems will necessarily be included in the written report or verbal communication with the GP.

- **Reference your work:** Make sure that you back up recommendations or statements with an appropriate reference where appropriate. Drug-related problems identified in question 2 should be referenced. Not all recommendations or statements will necessarily require referencing in question 3. The provision of information in the context of patient care relies on clear concise explanations such as those found in authoritative reference sources such as the *Australian Medicines Handbook* and *Therapeutic Guidelines*. Both of these are endorsed by GP organisations and are accessed by GPs. The latest editions should always be used. The resources published by NPS MedicineWise are also valuable and authoritative sources of information. See www.nps.org.au

- **Communication:** Communicate **clearly** and **concisely**. Prioritise problems in order of clinical significance and list suggested interventions in that order. Start with a statement of fact (i.e. the patient's signs or symptoms), link to medications or disease states and then recommend a solution to the problem. Do not merely reiterate common knowledge. Avoid making statements of diagnosis. The value of a medication review is telling the GP something they don't know. Tell the GP something they may not be aware of that will affect the patient's health outcomes. Again, make sure you have addressed the concern/reason why the review was requested in the first place. Include information on any advice or recommendations

given to the patient at the time of the interview.

Sample Case Studies

The AACP has examples of case studies, one HMR and one RMMR available in the Case Studies section on the Assessment Resources page (available after login) at the AACP website www.aacp.com.au.

Also available on the website are **four voice over power point presentations (VOPs)** of Clinical Case Study Preparation Guides. These VOPs have been designed to assist candidates as they complete the case study component of the AACP accreditation process. They each provide an overview of an appropriate answer to an AACP case study, discuss some of the common issues encountered when completing the case studies and illustrate different ways of addressing the case study questions.

The AACP recommends that candidates view the power point presentations before attempting their initial case study.

The *Tips for the Case Study Assessment*, a collection of articles which have appeared in the AACP's e-newsletter, *The Accredited Pharmacist*, will also be of great value.

The AACP urges all candidates for accreditation to undertake the sample MCQs and view the VOPs of the four worked case studies **prior** to commencing the assessment process.

Reference Guide

Introduction: Direct quotations, facts and figures, as well as ideas and theories, from both published and unpublished works, must be referenced for the accreditation process. Referencing is necessary to avoid plagiarism, to verify information and evidence, and to enable readers to follow-up and read more fully the cited author's arguments.

While it is not necessary to reference every statement, the use of key references demonstrates to the markers that the candidate has researched thoroughly and the recommendation made is clinically sound and can be supported. References may enhance the impact of the HMR or RMMR report and potentially increase the chance of uptake of any recommendation.

The use of relevant references in the assessment case studies should also reflect actual practice, adding to the validity of the report and is the reason for the emphasis placed on them in the marking of the case studies.

In general, it is not necessary to reference well established facts, for example, in approved product information (PI) (e.g. MIMS).

Reference Style: There are many ways of setting out bibliographies and reference lists.

The *International Committee of Medical Journal Editors (ICMJE) Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals: Sample References* can be viewed at http://www.nlm.nih.gov/bsd/uniform_requirements.html

The Vancouver style of referencing is predominantly used in the medical field. The citation style was originally based on the rules proposed by the International Committee of Medical Journal Editors; they are now maintained by the US National Library of Medicine.

Further information on the Vancouver style can be found in;

- University of Queensland References/Bibliography Vancouver Style "How-to" Guide www.library.uq.edu.au/training/citation/vancouv.pdf
- Monash University Library http://guides.lib.monash.edu/c.php?g=219786&p=1454371
- Deakin University Vancouver Referencing http://www.deakin.edu.au/students/study-support/referencing/vancouver

You should also review the *Referencing Guide* available from the Case Studies section on the Assessment Resources page (available after login) at the AACP website www.aacp.com.au.

Need help?

If you have any questions regarding the Stage Two process, please do not hesitate to contact the AACP support team on (02) 6120 2800 or aacp@aacp.com.au.

References

i. Strand LM, Morley PC, Cipolle RJ, Ramsey R, Lamsam GD. Drug-related problems: their structure and function. DICP, The Annals of Pharmacotherapy 1990;24:1093-7.[PubMed]
ii. American Geriatrics Society. Updated Beers Criteria for potentially inappropriate medication use in older adults. J Am Geriatr Soc 2012;60:616–31. [PubMed]
iii. McLeod PJ, Huang AR, Tamblyn RM, et al. Defining inappropriate practices in prescribing for elderly people: a national consensus panel. CMAJ 1997;156:385–91. [PubMed]
iv. Gallagher PF, O'Connor MN, O'Mahony D. Prevention of potentially inappropriate prescribing for elderly patients: a randomized controlled trial using STOPP/START criteria. Clinical pharmacology and therapeutics 2011;89:845–54. [PubMed]
v. Lund BC, Carnahan RM, Egge JA, et al. Inappropriate prescribing predicts adverse drug events in older adults. Ann Pharmacother 2010;44:957–63. [PubMed]
vi. Basger BJ, Chen TF, Moles RJ. Inappropriate medication use and prescribing indicators in elderly Australians: development of a prescribing indicators tool. Drugs Aging 2008;25:777–93. [PubMed]