RACGP | RACGP Education

Exam report 2016.1 AKT

Healthy Profession.
Healthy Australia.

RACGP Education: Exam report 2016.1 AKT

Disclaimer

The information set out in this report is current at the date of first publication and is intended for use as a guide of a general nature only and may or may not be relevant to particular circumstances. Nor is this publication exhaustive of the subject matter. Persons implementing any recommendations contained in this publication must exercise their own independent skill or judgement, or seek appropriate professional advice relevant to their own particular circumstances when so doing.

Accordingly, The Royal Australian College of General Practitioners (RACGP) and its employees and agents shall have no liability (including without limitation liability by reason of negligence) to any users of the information contained in this publication for any loss or damage (consequential or otherwise), cost or expense incurred or arising by reason of any person using or relying on the information contained in this publication and whether caused by reason of any error, negligent act, omission or misrepresentation in the information.

1. Exam psychometrics

Table 1 shows the mean and standard deviation of the entire cohort who sat the exam. These values can vary between exams and semesters. The reliability is a measurement of the consistency of the exam, with values between 0% and 100%. Although the RACGP target is 80% or above, literature suggests that above 75% is adequate.[1]

A candidate must achieve a score higher than the pass mark (or 'cut score') to pass the exam. The pass mark for the Applied Knowledge Test (AKT) and Key Feature Problem (KFP) is determined by the Modified Angoff method and outcomes vary between exams and different time periods. The Objective Structured Clinical Examination (OSCE) pass mark is determined by the well-accepted borderline group method (see the RACGP *Examination guide* for further details).

The 'pass rate' is the percentage of candidates who achieved the pass mark.

The RACGP has no quotas on pass rates – that is, there is no set number or percentage of people who pass the exam. Fluctuations in pass rates can be attributed to various factors. The number of candidates who sat the exam is the number of people present on the day. Enrolment figures may be higher due to withdrawals.

Table 1. 2016.1 psychometrics	
Year	2016.1
Mean score (%)	69.44
Standard deviation	9.61
Reliability (%)	87.31
Pass mark (cut score %)	66.32
Pass rate (%)	64.17
Number sat	1108

2. Candidate score distribution histogram

The histogram below shows the range and frequency of final scores for this exam. The vertical blue line is the cut score.
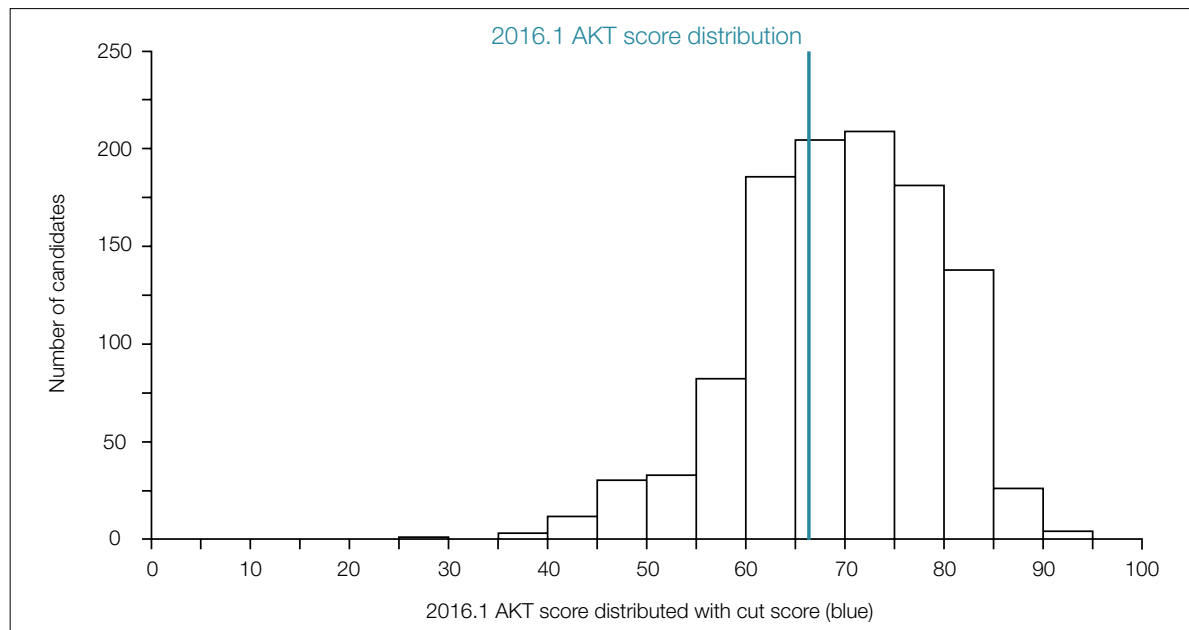
Figure 1. Final 2016.1 AKT score distribution

3. Candidate outcomes by exam attempt

Table 2 provides pass rates (%) displayed by number of attempts. There is a general trend that suggests candidate success diminishes for each subsequent attempt. Preparation and readiness to sit are paramount for candidate success.

Table 2. Pass rates by number of attempts	
AKT 2016.1	
Attempts (#)	Pass rate (%)
1	74.32%
2	51.09%
3	43.84%
4+	17.86%

4. Preparation – practice exams

Prior to each AKT and KFP exam, an online practice exam is made available to enrolled candidates. The purpose of this exam is to provide a simulated exam experience in preparation for the real exam. Candidates are provided with automated feedback to complete their experience.

The practice exam is not designed to provide a mark/grade as an indication of whether or not a candidate will pass.

However, it is evident to the RACGP that those who attempt the online practice exams performed better in the subsequent real exam. There are a number of factors that contribute to these statistics, indicating that success is not tied to attempts alone. However, attempting the practice exam is highly recommended.

2016.1 AKT online practice exam				
Attempted the practice exam?	Proportion of candidates	Passed the real exam (#)	Total (#)	Pass rate
No	8%	31	93	33%
Yes	92%	680	1015	67%
Grand total	100%	711	1108	100%

5. Feedback report on 2016.1 Applied Knowledge Test

This feedback document will be published following each AKT exam in conjunction with candidate results. All of the questions in the AKT are written by experienced GPs who currently work in clinical practice and are based on clinical presentations typically seen in the general practice setting in Australia. The questions should therefore be answered in the context of Australian general practice.

This feedback document should illustrate the importance of reading the clinical scenario and the question carefully. Although more than one option may be plausible, only the most likely or most appropriate option for the clinical scenario provided should be selected.

It is important not to base a substantial part of exam preparation on complete or partially reconstructed AKT papers, as these papers may not accurately reflect the content of the AKT exam. This is especially the case if the candidate's recall of the question is incorrect or incomplete. It is also not advisable to memorise questions and answers from these reconstructed AKT papers, as minor modifications to the clinical scenario or the question being asked may alter the correct response.

It is useful to identify areas of weakness in your clinical practice through a process of self-reflection and feedback from your supervisor, and use this information to develop an appropriate learning plan to assist with future preparation for the AKT exam.

All questions in the AKT exam undergo extensive quality assurance with questions being reviewed by GPs currently in clinical practice, both when the AKT exam is being drafted and post-AKT exam during the standard setting.

This report will go through a small sample of clinical scenarios that some candidates found challenging, look at the alternative options selected by candidates and explain the reasoning behind the correct answer.

Example 1

The clinical scenario describes a 48-year-old man who migrated from Syria eight years ago and presents with recurrent bouts of cough with sputum over the past two years. There has been a recent exacerbation of his symptoms associated with an episode of haemoptysis. Examination shows bilateral basal crackles and digital clubbing.

The question asks for the MOST likely diagnosis. The correct response is bronchiectasis. The recurrent nature of his symptoms and the presence of bilateral chest signs make bronchiectasis the most likely diagnosis.

Some candidates selected bronchial carcinoma and tuberculosis.

The haemoptysis and clubbing may suggest lung cancer but the prolonged, recurrent and intermittent nature of his symptoms should redirect you to the other possible diagnoses.

Tuberculosis is less likely as a diagnosis because he would have been screened for the disease on his arrival in Australia. The clinical scenario also mentions that he has not been overseas since migrating to Australia, which would not support the diagnosis of tuberculosis.

Example 2

This question is about the use of prophylactic oseltamivir in an aged care facility where there has been a case of influenza A.

The question asks for the most important result to review before prescribing oseltamivir.

The correct response is eGFR.

Oseltamivir carboxylate, the active agent, is eliminated by glomerular filtration and renal tubular excretion. The dosing frequency of oseltamivir needs to be adjusted in renal impairment and data is available on the appropriate dosing frequency to use, depending on the degree of renal impairment. This information confirms that eGFR is the most important result to review before prescribing oseltamivir.

Some candidates selected liver function tests. Oseltamivir is converted to the active agent oseltamivir carboxylate by hepatic enterases, but as hepatic exposure is brief and hepatic metabolism is minimal, dose adjustment is not required for impaired liver function.

Example 3

This question refers to a 40-year-old man who presents with a swollen right knee. He landed heavily on his bent knee after jumping a fence. Examination shows maximal tenderness over the medial joint line, which is worse on varus stressing of the joint.

The question asks for the MOST likely diagnosis. The correct answer is meniscal injury. The nature of the injury described in the clinical scenario is the usual type of injury that causes meniscal tears. Meniscal tears occur as a result of a twisting force on a weight loaded flexed knee. The examination findings are also consistent with a meniscal injury.

Some candidates selected collateral ligament injury. The mechanism of injury and examination findings would not support the diagnosis of collateral ligament injury.

Example 4

The clinical scenario describes an 11-year-old girl with acute abdominal pain. There is no associated vomiting. She has not opened her bowels for 36 hours. Examination findings include a fever, generalised abdominal tenderness, which is worse with percussion.

The question asks for the MOST appropriate diagnosis. The correct response is appendicitis.

Appendicitis is a common cause of abdominal pain in children and may present with atypical symptoms. Acute appendicitis in young children may not have the classical symptoms of nausea, vomiting and loss of appetite. Percussion of the abdomen elicits a form of 'rebound tenderness' when there is peritoneal irritation.

Some candidates selected constipation and mesenteric adenitis.

The presence of fever in the examination findings makes constipation an unlikely diagnosis. Mesenteric adenitis is often associated with an upper respiratory tract illness and usually presents with right lower quadrant tenderness rather than generalised tenderness.

Example 5

The clinical scenario describes a 46-year-old woman who mentions a six-year history of bilateral nipple discharge when she presents for a breast check. The discharge occurs with expression, is yellowish and comes from more than one duct. Examination is normal and a mammogram 12 months ago was also normal.

The question asks for the MOST appropriate next step. The correct answer is to advise that no further investigation is required. The history and examination findings are consistent with a physiological discharge. Physiological discharge is usually yellow, milky, or green in appearance; does not occur spontaneously; and can be seen originating from multiple ducts. Physiological nipple discharge is no cause for concern and requires no specific investigation.

Some candidates selected 'obtain a smear of the discharge for cytology' as the MOST appropriate next step. The six-year history, the features of the discharge, normal examination findings and normal screening mammogram 12 months ago make a malignant cause unlikely.

6. *Further information*

Please refer to the RACGP *Examination guide* for further exam-related information.

Reference

1. Tavakol M, Dennick R. Making sense of Cronbach's alpha. Int J Med Educ 2011;2:53–55.