## **An Essential Companion for FRACGP Exam Success**

Navigating the rigorous FRACGP Fellowship examinations requires more than just clinical experience; it demands focused preparation and a deep understanding of the specific assessment formats. The **GP Institute: FRACGP Fellowship Exam Guide** emerges as an indispensable resource for General Practice trainees tackling the critical Applied Knowledge Test (AKT) and Key Feature Problems (KFP) exams.

Published by the reputable GP Institute of Australia, this guide is meticulously tailored to the needs of Australian GP registrars. It effectively demystifies the exam process, offering a clear pathway through the extensive curriculum. The content is strategically focused on high-yield topics, ensuring that study time is directed towards areas most likely to be assessed. Updated every 6 months.

"A great read, the FRACGP AKT and KFP Exam Guide is your essential study companion for RACGP Fellowship preparation. Focused on high-yield content, real-world guidelines, and proven exam high yield information stratergies, this guide helps you master both the AKT and KFP with confidence. Ideal for GP registrars and IMGs, it offers practical tips easy to assimilate and a structured support to boost your clinical reasoning, knowledge retention and exam performance."

★★★★★

**Prof. Tailley**

## About The Publisher

### GP Institute of Australia

ISBN 978-1-7641023-0-8

The GP Institute of Australia (GPI) is a premier educational organisation dedicated to supporting general practice trainees and international medical graduates (IMGs) in their pursuit of Fellowship with the Royal Australian College of General Practitioners (RACGP) and the Australian College of Rural and Remote Medicine (ACRRM).

FRACGP AKT KFP Fellowship exam preparation guide GPI Dr AGMatt

GP INSTITUTE OF AUSTRALIA

FELLOWSHIP EXAM PREPARATION GUIDE

# FRACGP

# AKT & KFP

First Edition

DR. A G MATT

SYDNEY, AUSTRALIA

# GP Institute of Australia

---

## FRACGP Fellowship Exam Guide

### AKT & KFP Exam Preparation

First Edition

Dr A G Matt

‘The eyes cannot see what the mind does not know’ – Unknown

**Acknowledgement of Country**

We acknowledge the Traditional Custodians of the land on which we work and live, and recognise their continuing connection to land, waters, and culture. We pay our respects to Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

**FRACGP Fellowship Exam Guide: AKT & KFP Exam Preparation**

First Edition

Dr A G Matt, GP Institute of Australia Press



Seven Hills Road, Baulkham Hills, Sydney, Australia



**Ordering Information:** Copies of this book may be ordered from the GP Institute of Australia website - https://gpinstitute.com.au or through authorised distributors.

**National Library of Australia Cataloguing-in-Publication entry:** A catalogue record for this book is available from the National Library of Australia at www.nla.gov.au

ISBN: 978-1-7641023-0-8 (Paperback)

Printed in Australia

# Preface

Embarking on the journey towards Fellowship of the Royal Australian College of General Practitioners (FRACGP) is a significant undertaking for every General Practice trainee. The Fellowship examinations, particularly the Applied Knowledge Test (AKT) and Key Feature Problems (KFP) exam, represent crucial milestones demanding not only broad clinical knowledge but also sophisticated clinical reasoning and application skills. Recognising the challenges and importance of these assessments, we at the GP Institute of Australia is proud to present this guide as part of our dedicated series to support GP trainees on their path to Fellowship.

**Purpose and Scope:** This book is specifically designed to be a comprehensive, high-yield resource focused squarely on preparing candidates for the FRACGP AKT and KFP examinations. Our primary purpose is to equip GP trainees with the knowledge, skills, and confidence needed to navigate these exams successfully. The scope encompasses the core domains of general practice as outlined in the RACGP curriculum, focusing on common and critical presentations, diagnostic strategies, and management principles frequently tested in the AKT and KFP formats. We aim to bridge the gap between clinical experience and specific exam requirements.

**Who is this Guide for?** This resource is tailored for General Practice registrars who begin their GP training for Year 1 and after they have passed their FRACGP Fellowship exams, particularly the AKT and KFP components. While clinical experience is irreplaceable, this guide serves as an essential adjunct to consolidate learning and hone exam-specific techniques.

**Key Features:** Understanding the unique demands of each exam component, this guide offers:

- **Targeted Content Review:** Concise summaries of high-yield topics relevant to the AKT & KFP blueprint.
- **Exam pearls:** A last-minute revision to brush up your consolidated knowledge.
- **Structured Approach:** Guidance to focus on identifying key features, and formulating concise, relevant answers.
- **Exam Strategies:** Practical tips and techniques for approaching both the AKT and KFP exams, including time management and question interpretation.

**Organization:** The book is structured logically to facilitate focused study. Initial sections concentrate on the breadth of knowledge required for the written exam, often organized by clinical domains. Subsequent sections delve into the KFP format, providing important differentials and red flags. Throughout the text, key learning points and exam tips are highlighted for easy reference.

# Using This Guide

We encourage trainees to integrate this guide into their overall study plan right from Day1 of your GP training as a Registrar. Use it alongside your clinical work, RACGP learning resources, and peer study groups. Consolidate your knowledge. Then work through the practice questions and cases under timed conditions to simulate the exam experience. At https://gpinstitute and our AGPT, AKT, KFP and CCE learning portals, we have organised chapters and thousands of practice questions into subject wise sections. We have used our past 30 years learning and mentoring experience and now pass it to you to deepen your understanding of the underlying principles to be a successful GP.

**Acknowledgments:** This publication would not have been possible without the dedication and expertise of numerous individuals. In the interest of keeping this guide as concise as possible, we have given credit to our contributors who have made this guide possible in our website. https://gpinstitute.com.au. We extend our sincere gratitude to the experienced General Practitioners and medical educators who contribute content, review drafts, and share their invaluable insights into the Fellowship examination process. We also thank the dedicated editorial and production team at the GP Institute of Australia for their commitment to creating high-quality educational resources for Australian GPs. We would appreciate if you can contact us if you want to contribute to our texts or want to add more useful information for the benefit of fellow GPs.

Achieving FRACGP Fellowship is a testament to dedication, knowledge, and skill. We hope this guide proves to be an invaluable companion in your preparation, helping you approach the AKT and KFP exams with confidence and competence. We wish you every success in your examinations and your future career serving Australian communities.

**The Editorial Team**

https://gpinstitute.com.au

## **Disclaimer: **

Medicine is an ever-changing science. As new research and clinical experience broaden our knowledge, changes in treatment and drug therapy are required. The authors, editors, contributors, and the publisher of this work have checked with sources believed to be reliable in their efforts to provide information that is complete and generally in accord with the standards accepted at the time of publication. However, in view of the possibility of human error or changes in medical sciences, neither the authors, editors, contributors, nor the publisher, nor any other party who has been involved in the preparation or publication of this work warrants that the information contained herein is in every respect accurate or complete, and they disclaim all responsibility for any errors or omissions or for the results obtained from use of the information contained in this work.

Readers are encouraged to confirm the information contained herein with other sources. For example, and in particular, readers are advised to check the product information sheet included in the package of each drug they plan to administer to be certain that the information contained in this work is accurate and that changes have not been made in the recommended dose or in the contraindications for administration. This recommendation is of particular importance in connection with new or infrequently used drugs.

This book, *GP Institute: FRACGP Fellowship Exam Guide*, is intended as an educational resource to assist General Practice trainees in preparing for the FRACGP AKT and KFP examinations. It is not intended to replace individual clinical judgment, substitute for formal medical training or supervision, or guide specific patient care in any circumstances. The content reflects the knowledge and practices current at the time of writing, but standards and practices in medicine change. The views expressed are those of the authors/contributors and do not necessarily reflect the official policy or position of the GP Institute of Australia or any affiliated organisations. Reliance on information provided in this book is solely at the user's own risk.

## Table of Contents

# How to Use This Resource: Your Guide to GP Fellowship Success

This guide supports your Australian and NZ (RACGP) General Practice fellowship journey. Think of it as a concise, GP-focused UpToDate, providing high-yield information clearly for real-world practice.
Organized by clinical area, each chapter offers summaries of essential knowledge, diagnosis, and management relevant to ANZ and current guidelines.
We update this resource every few months. Email us with suggestions for additions, updates, or corrections.

**What are Exam Pearls?** Throughout chapters, find Exam Pearls – high-yield facts and crucial clinical insights frequently evaluated in exams. These key concepts are designed for easy learning and recall for exams and daily practice. Make notes or revise on the go.

**Navigating This Resource:**

- Start with chapters matching your learning needs. Follow sequentially or jump to specific topics.
- Read each chapter thoroughly, noting key concepts and recommendations. Content is concise yet comprehensive.
- Focus intently on "Exam Pearls" for exam preparation. Consider highlighting or creating flashcards.
- Integrate this resource with your clinical experiences to reinforce learning and apply evidence-based practices.
- Utilize this resource for exam revision. The structure and "Exam Pearls" are ideal for consolidating knowledge.

Remember, this guide supplements your formal training and supervision. Always refer to official guidelines and seek supervisor advice for patient management.
By using this resource effectively, you will build a strong knowledge base and clinical reasoning for your GP fellowship exams and providing quality patient care in Australian general practice.

# The Role of the General Practitioner in Australia

## Introduction

Australian GPs are central to the nation's primary healthcare. They provide comprehensive, person-centred, continuous care across all life stages. Operating within Medicare, GPs are the first patient contact, managing diverse conditions, coordinating care, advocating, and promoting health/preventing disease. The GP-patient relationship is key to effective primary care. Understanding this role's breadth is vital for effective practice and fellowship pathways.

## 1. Clinical Care and Diagnosis

GP's core function is direct clinical care, including:

Managing Undifferentiated Illness: Skilled in history, examination, and differential diagnoses for non-specific symptoms.

Diagnosing and Managing Acute Conditions: Common infections, minor injuries, chronic condition exacerbations, and identifying urgent cases.

Managing Chronic and Complex Conditions: Central to long-term management of diseases like diabetes, cardiovascular disease, asthma, COPD, arthritis, chronic kidney disease, and mental health. Includes monitoring, medication, lifestyle advice, and multidisciplinary care using Medicare's Chronic Disease Management (CDM) items. Managing multimorbidity is key.

Investigations and Prescribing: Ordering/interpreting tests (blood, pathology, imaging) for diagnosis and management. Prescribing safe, rational, cost-effective medications adhering to the Pharmaceutical Benefits Scheme (PBS).

Minor Procedures: Performing appropriate minor surgical and therapeutic procedures like skin lesion assessment/excision, biopsies, suturing, wound care, abscess drainage, joint injections, cryotherapy, and long-acting reversible contraception insertion/removal.

## 2. Continuity of Care

Continuity of care is ongoing, relationship-based care by a GP over time, a defining feature of Australian general practice.

Longitudinal Relationship: Building trust through repeated consultations allows deep understanding of patient history, circumstances, values, and beliefs.

Benefits: Linked to improved patient satisfaction, adherence, health outcomes (especially chronic disease), reduced hospitalisation, and lower costs.

Monitoring Health Trajectories: GPs monitor physical, mental, and social changes, enabling early detection and proactive interventions.

Care Transitions: GPs ensure smooth transitions, following up hospital discharge summaries/specialist letters, reconciling medications, and integrating specialist advice.

## 3. Whole-of-Life Care and Prevention

GPs provide care across the lifespan, from prenatal to end-of-life, with a strong focus on preventive health.

Preventive Activities:

Immunisations: Delivering vaccines under the National Immunisation Program (NIP), seasonal influenza, COVID-19, and travel vaccines. Maintaining accurate records (Australian Immunisation Register - AIR).

Screening: Facilitating national cancer screening (cervical, breast, bowel). Performing cardiovascular risk assessments, diabetes risk screening (e.g., AUSDRISK), osteoporosis risk assessment, and STI screening.

Lifestyle Modification: Providing evidence-based advice and support for smoking cessation, nutrition, alcohol reduction, and physical activity (SNAP framework). Using behaviour change techniques.

Life Stages:

Antenatal/Postnatal: Offering GP-shared antenatal care, managing pregnancy ailments, providing postnatal checks.

Child and Adolescent Health: Monitoring growth/development, managing common illnesses, providing adolescent health checks (e.g., HEADSSS), addressing mental and sexual health.

Women's Health: Contraception advice/procedures, managing menstrual disorders, menopause, sexual health.

Men's Health: Addressing prostate health, erectile dysfunction, cardiovascular risk.

Aged Care: Conducting comprehensive health assessments (e.g., MBS item 705), managing polypharmacy, frailty, cognitive decline/dementia, falls prevention, and providing care in Residential Aged Care Facilities (RACFs).

Mental Health: Assessing, diagnosing, and managing common conditions. Developing Mental Health Treatment Plans (MHTPs) under Medicare. Some GPs provide Focused Psychological Strategies (FPS). Managing crises and coordinating with mental health services.

Palliative Care: Providing symptom management and support for life-limiting illnesses, often with specialists. Facilitating Advance Care Planning.

## 4. Care Coordination and System Navigation

GPs are central coordinators within the Australian healthcare system.

Referral Management: Assessing need for specialist input and making timely referrals with effective letters. Understanding tiered referral systems.

Coordination with Allied Health: Referring to and collaborating with physiotherapists, dietitians, podiatrists, psychologists, exercise physiologists, occupational therapists, social workers, etc., often via CDM items (TCAs).

Multidisciplinary Care: Organising or participating in case conferences (MBS items available) for complex needs.

Communication Hub: Primary communicator between healthcare providers, ensuring appropriate information sharing (with consent).

Patient Advocacy: Assisting patients to navigate the system, understand options, access services (e.g., NDIS, My Aged Care, Centrelink), and advocate for their needs.

## 5. Emergency and After-Hours Care

While mostly during standard hours, GPs contribute to acute and after-hours care, especially in some settings.

Initial Emergency Management: Providing initial assessment and stabilisation for emergencies (e.g., cardiac events, trauma, acute asthma, anaphylaxis) prior to transfer, particularly in rural/remote areas. Basic and advanced life support skills needed.

After-Hours Services: Participating in rosters, working in dedicated clinics, or providing services via deputising services or telehealth.

Urgent Care Settings: Involvement in Urgent Care Clinics/Centres for less critical conditions.

Collaboration: Working with ambulance services, retrieval teams (e.g., RFDS), and local hospitals during emergencies.

## 6. Special Roles in Rural and Remote Areas

Rural and remote GPs often have a broader scope than urban counterparts.

Expanded Clinical Scope: Frequently possess extra skills in emergency medicine, obstetrics (including deliveries), anaesthetics, minor surgery, and inpatient care.

Hospital Role: Often hold Visiting Medical Officer (VMO) or Senior Medical Officer (SMO) roles in local rural hospitals, providing inpatient care, emergency coverage, and procedures.

Aboriginal and Torres Strait Islander Health: Providing primary care to Indigenous communities, requiring cultural safety, understanding specific health priorities (e.g., chronic disease, rheumatic heart disease), Closing the Gap initiatives, and collaboration with Aboriginal Community Controlled Health Organisations (ACCHOs) and Aboriginal Health Workers/Practitioners. Utilising relevant MBS items like the 715 Health Assessment.

Challenges & Rewards: Navigating isolation and resource limits while enjoying community integration and diverse practice.

## 7. Administrative and Professional Duties

Beyond patient care, GPs have significant professional responsibilities.

Medical Records: Maintaining accurate, legible, contemporaneous, and comprehensive records is legal and ethical. Proficiency with practice software and understanding health informatics (including My Health Record) are essential.

Ethical and Legal Practice: Adhering to the Medical Board of Australia's code of conduct. Understanding informed consent, confidentiality, privacy, mandatory reporting, and professional boundaries.

Medicare Compliance: Understanding the Medicare Benefits Schedule (MBS), billing accurately, meeting item descriptors, and maintaining records. Understanding Practice Incentives Program (PIP) requirements.

Continuing Professional Development (CPD): Engaging in ongoing learning to maintain skills, fulfilling Medical Board and college (RACGP or ACRRM) requirements.

Teaching and Supervision: Many GPs teach medical students and supervise GP registrars.

Practice Management and Quality Improvement: Participating in meetings, audits, developing policies, and engaging in quality improvement activities (e.g., PIP QI data submission).

## 8. Alignment with RACGP/ACRRM Core Domains

GP roles align with RACGP and ACRRM core competency domains for training and assessment:

Communication and the Patient-Doctor Relationship: Empathy, listening, shared decision-making, clear information, cultural competence.

Applied Professional Knowledge and Skills: Integrating knowledge, procedural skills, and evidence-based practice.

Population Health and the Context of General Practice: Understanding epidemiology, prevention, screening, health promotion, social determinants, and the healthcare system.

Professional and Ethical Role: Demonstrating integrity, ethics, self-reflection, managing uncertainty, lifelong learning, fitness to practice.

Organisational and Legal Dimensions: Understanding practice management, Medicare, record-keeping, teamwork, quality improvement, and medico-legal responsibilities.

Demonstrating competence across these domains is fundamental to fellowship.

# CARDIOVASCULAR DISEASES

# Cardiomyopathy

Cardiomyopathies are diverse heart muscle diseases causing structural and functional abnormalities, distinct from IHD, hypertension, or valvular issues, though these can coexist. Crucial for GPs, they manifest as heart failure (HF), arrhythmias, or sudden cardiac death (SCD), especially in younger individuals.

**Classification** is based on morphology and physiology: Dilated (DCM), Hypertrophic (HCM), and Restrictive (RCM), plus Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) and Takotsubo Cardiomyopathy. Pathology can be cardiac (primary/genetic/idiopathic) or systemic (secondary). GP role: recognition, initial investigation, timely referral, HF/comorbidity co-management, and family history for genetic implications.

## Types of Cardiomyopathies

### Dilated Cardiomyopathy (DCM)

**Diagnosis Essentials**

Presentation usually with Heart Failure (HF) symptoms/signs.

Echocardiogram confirms: Left ventricular (LV) dilation and impaired systolic function (LVEF ≤ 40%), excluding other causes like severe hypertension or valve disease.LV walls may be thin or normal.

Right ventricular (RV) dilation/dysfunction may worsen prognosis.

**General Considerations**

Most common cardiomyopathy, major HFrEF cause leading to transplant. Unlike IHD-related HFrEF, DCM's primary driver isn't ischaemia. Prognosis varies, often poor with symptom onset (historically ~50% 5-year mortality, improving with modern HFrEF therapies).

**Aetiology**

Often 'idiopathic', but underlying causes include:

Genetic/Familial: 20-50% of idiopathic DCM, often autosomal dominant. Check family history (HF, DCM, arrhythmias, SCD). Specialist-coordinated genetic testing.

Myocarditis (Viral/Inflammatory): Post-viral or autoimmune can cause DCM.

Toxic:

- Alcohol Excess: Common, reversible with dose-dependent effect. Quantify intake.
- Chemotherapy: E.g., Anthracyclines, Trastuzumab. Monitor during/after.
- Illicit Drugs: Cocaine, amphetamines.

Tachycardia-Induced Cardiomyopathy: Persistent rapid heart rates cause reversible LV dysfunction. Rate/rhythm control is key.

Peripartum Cardiomyopathy: Late pregnancy or early postpartum, diagnosis of exclusion.

Metabolic/Endocrine: Thyroid disease, Acromegaly, Phaeochromocytoma (rare). Diabetes is a major risk factor/comorbidity.

Nutritional Deficiencies: Severe thiamine, selenium, carnitine (rare in Australia).

Infiltrative Diseases: Haemochromatosis, Sarcoidosis, Amyloidosis (can present as DCM later).

**Clinical Findings**

Symptoms: Insidious HF onset: dyspnoea on exertion, fatigue, orthopnoea, PND, peripheral oedema. Acute presentation possible.

Signs: Tachycardia, late hypotension, elevated JVP, displaced/diffuse apical impulse, S3 gallop, functional mitral/tricuspid regurgitation murmurs, pulmonary crackles, peripheral oedema, ascites.

**Investigations (GP Role)**

History: Symptoms, NYHA class, risk factors, 3-generation family history, alcohol/drug use, medications.

Examination: Assess for HF signs and potential causes.

ECG: Often abnormal, non-specific. May show sinus tachycardia, LBBB (worse prognosis), LVH pattern, AF, ventricular arrhythmias, poor R wave progression.

CXR: Cardiomegaly, pulmonary congestion, pleural effusions.

Bloods: BNP/NT-proBNP (elevated), FBC, UEC, LFTs, TFTs, HbA1c, Iron Studies. Consider Troponin (acute/suspected myocarditis), specific serology/autoimmune screen if indicated.

Echocardiogram: Key diagnostic test. Confirms LV dilation, LVEF ≤ 40%, assesses RV/diastolic/valve function, pulmonary pressures. GP referral essential.

Specialist Investigations: Cardiac MRI, Coronary Angiography, Genetic testing, Endomyocardial biopsy (rare, specific cases).

**Management in General Practice**

Follows HFrEF guidelines, address specific cause.

Referral: Cardiology for confirmation, cause investigation, specialist advice, advanced therapies. GP-specialist co-management typical.

Lifestyle Modification: HF guidelines (SNAP).

Treat Reversible Causes: Alcohol abstinence, thyroid treatment, rate/rhythm control for tachy-cardiomyopathy.

Pharmacotherapy (HFrEF 'Quad Therapy'): Initiate, titrate, monitor per HF guidelines:

- ARNI/ACEi/ARB
- Beta-Blocker
- MRA
- SGLT2 Inhibitor

Diuretics: Loop diuretics for congestion.

Iron Deficiency: IV Iron if criteria met.

Anticoagulation: For concurrent AF or LV thrombus. Not routine for DCM/HFrEF in sinus rhythm.

Device Therapy Awareness: Refer if LVEF ≤ 35% despite ≥3 months optimal medical therapy (OMT) for ICD or if LBBB + QRS ≥ 130-150ms + symptoms for CRT.

## Hypertrophic Cardiomyopathy (HCM)

**Diagnosis Essentials**

Genetic, unexplained Left Ventricular Hypertrophy (LVH), typically asymmetric.

Primary issue: impaired diastolic relaxation/filling.

May have Dynamic Left Ventricular Outflow Tract (LVOT) Obstruction (~70%).

Leading SCD cause in young, especially athletes.

**Clinical Findings**

Presentation: Variable, often asymptomatic. Symptoms: Dyspnoea on exertion, Angina, Palpitations, Presyncope/Syncope (exertional - Red Flag!), Fatigue. SCD may be first sign.

Signs: Harsh systolic ejection murmur (lower left sternal border/apex) varying with preload. May have S4 gallop, prominent apical impulse, bisferiens carotid pulse.

**Diagnosis**

Family History: Crucial – inquire about HCM, unexplained syncope, or SCD at young age.

ECG: Often abnormal (~90%).

Echocardiogram: Key test. Confirms unexplained LVH, assesses LVOT obstruction, SAM, diastolic dysfunction, LA size.

Specialist Investigations: Cardiac MRI, Holter, Exercise stress test, Genetic testing.

**Management in General Practice**

High Suspicion: Young athletes with syncope or relevant family history.

Referral: ALL suspected/confirmed HCM patients to Cardiology, ideally with HCM expertise.

Initial Advice (Pending Specialist Review): Avoid high-intensity sports, maintain hydration, avoid certain drugs.

Medical Therapy (Specialist Initiated): Beta-blockers (first line), Verapamil/Diltiazem (second line). Avoid pure vasodilators if significant LVOT obstruction.

SCD Prevention: Specialist SCD risk assessment crucial. High-risk get Implantable Cardioverter-Defibrillator (ICD).

Septal Reduction Therapy: For severe drug-refractory LVOT obstruction. Options: Surgical Septal Myectomy or Alcohol Septal Ablation.

Family Screening: First-degree relatives: ECG, Echo + /- genetic testing.

## Restrictive Cardiomyopathy (RCM)

**Diagnosis Essentials**

Stiff, non-compliant ventricles impairing diastolic filling.

Systolic function (LVEF) often normal/near-normal initially.

Caused by myocardial infiltration or scarring.

Presentation often dominated by right-sided HF signs.

**Aetiology**

Less common than DCM/HCM. Usually secondary to infiltrative/fibrotic processes: Amyloidosis, Sarcoidosis, Haemochromatosis, Endomyocardial Fibrosis, Radiation Therapy, Scleroderma, Loeffler Eosinophilic Endocarditis.

**Clinical Findings**

Symptoms: Dyspnoea, fatigue, exercise intolerance.

Signs: Prominent Right HF signs: Elevated JVP, peripheral oedema, hepatomegaly, ascites. Left HF signs less prominent initially. S3/S4 gallops may be heard. Arrhythmias (AF) common. Signs of underlying cause may be present.

**Diagnosis**

High suspicion needed, often "HFpEF plus".

ECG: Often non-specific. Low limb lead voltages with LVH on echo suggests Amyloidosis. Conduction abnormalities common. AF common.

Echocardiogram: Key test. Non-dilated, often thickened ventricles with preserved initial LVEF. Prominent bi-atrial enlargement. Doppler shows impaired diastolic filling. Myocardial 'speckling' suggests amyloid. Strain imaging shows 'apical sparing' in cardiac amyloidosis.

Bloods: BNP/NT-proBNP markedly elevated. Specific tests for suspected cause (e.g., for Amyloid, Haemochromatosis, Sarcoidosis).

Specialist Investigations: Cardiac MRI (CMR), Nuclear Scintigraphy (PYP scan), Biopsy.

**Management in General Practice**

Recognition & Referral: Suspect RCM in HFpEF with right HF signs or systemic features. Essential Cardiology referral for diagnosis and cause investigation. Further referral depends on cause.

General Management (awaiting specialist): Careful Diuresis, Rate Control for AF.

Treatment of Underlying Cause (Specialist-led): Key but challenging. (e.g., Chemotherapy for AL Amyloid, Tafamidis for ATTR Amyloid, Immunosuppression for Sarcoidosis, Iron chelation/Venesection for Haemochromatosis).

## Takotsubo Cardiomyopathy (Stress-Induced Cardiomyopathy)

**Diagnosis Essentials**

Acute, transient LV systolic dysfunction (apical ballooning), often after intense stress.

Primarily in postmenopausal women.

Mimics Acute Coronary Syndrome (ACS).

Normal coronary arteries on angiography.

LV function typically fully recovers.

**Clinical Findings & Diagnosis**

Presentation: Acute chest pain/dyspnoea after clear stressor.

ECG: Often anterior ST elevation or deep T wave inversions. QT prolongation possible.

Biomarkers: Troponin elevated, often less than expected. BNP/NT-proBNP usually high.

Echocardiogram: Characteristic regional wall motion abnormality ('apical ballooning').

Coronary Angiography (+ /- Ventriculography): Essential to rule out obstructive CAD. Confirms typical systolic LV shape ('octopus pot').

**Management**

Acute Phase: Manage as suspected ACS initially. Supportive care: treat HF, manage arrhythmias. Anticoagulation if severe LV dysfunction/apical thrombus suspected.

Long-Term: Usually continue ACEi/ARB and/or Beta-blocker until LV function recovers. Follow-up echo needed. Address stressors. Low recurrence.

## Selected Secondary Cardiomyopathies

### 1. Cardiac Amyloidosis

Aetiology: Infiltrative, amyloid fibril deposition.

Symptoms: Right HF, syncope, thromboembolism, extracardiac signs.

Diagnosis: Echo, ECG (low voltage), biopsy. Cardiac MRI/bone scan for ATTR.

Treatment: Diuretics, pacemaker, underlying amyloidosis treatment. Transplant if needed.

### 2. Cardiac Hemochromatosis

Aetiology: Intracellular iron accumulation (hereditary), restrictive progressing to dilated cardiomyopathy.

Symptoms: Diastolic dysfunction, arrhythmias, bronze skin, arthritis, diabetes, cirrhosis.

Diagnosis: Iron markers, liver tests, genetic testing, echo, cardiac MRI for iron quantification.

Treatment: Iron chelation, phlebotomy, associated disease treatment.

### 3. Cardiac Sarcoidosis

Aetiology: Inflammatory, noncaseating granulomas in myocardium, often systemic.

Symptoms: HF, arrhythmias, SCD, systemic.

Diagnosis: Imaging (PET-CT, MRI), biopsy, exclude other causes.

Treatment: Standard HF therapy, arrhythmia management, ICD for SCD prevention, immunosuppressants, regular cardiac monitoring.

### 4. Endocrine-Related Cardiomyopathies

Acromegalic Cardiomyopathy: Growth hormone excess. Treatment: GH control, optimal HF management.

Diabetic Cardiomyopathy: Structural/functional abnormalities. Treatment: Optimize HF and diabetes management.

### 5. Chemotherapy-Related Cardiomyopathy

Aetiology: Cardiotoxic agents.

Symptoms: HF signs with reduced LVEF.

Diagnosis: Reduced LVEF on echo, serial monitoring.

Treatment: Stop chemotherapy if severe, standard HF therapy, consider secondary prevention.

### 6. Other Cardiomyopathies

Myocarditis: Myocardial inflammation. Treatment: HF management, pacing, transplant in severe cases.

Peripartum Cardiomyopathy: Late pregnancy or early post-partum. Treatment: HF management, avoid teratogens, echo monitoring, avoid future pregnancies with persistent low EF.

## Conclusion

Cardiomyopathies are significant heart muscle diseases in general practice, often presenting as heart failure or arrhythmias. Recognising DCM, HCM, and RCM patterns via history, examination, ECG, and echo is key. GPs identify reversible causes, initiate HFrEF therapies for DCM, recognise red flags for urgent referral, coordinate with specialists, manage comorbidities, and assess family history. Familiarity is essential for primary care and fellowship exams.

## References


National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand. (2018).

Ommen, S. R., et al. (2020). *Circulation, 142*(25), e558-e631.

Elliott, P. M., et al. (2014). *European Heart Journal, 35*(39), 2733-2748.

Garcia-Pavia, P., et al. (2021). *European Heart Journal, 42*(16), 1556-1570.

Ghadri, J. R., et al. (2018). *European Heart Journal, 39*(22), 2032-2062.

Therapeutic Guidelines: Cardiovascular. (Current Version).

Australian Family Physician / AJGP Archives.

Heart Foundation Australia.

# AKT & KFP EXAM TECHNIQUES

# KFP and AKT Exam Technique Advice

To perform well in the exam, consider the following techniques, focusing on using the information provided in the case scenarios:

Focusing on key information: Focus on the key information in the scenario and provide the most likely answers, avoiding a comprehensive list of all possible causes.

- *Example:* In a case presenting prolonged cough and haemoptysis in a young male patient recently arrived from Papua New Guinea, focus your considerations on the most likely differential diagnoses in that specific context, rather than listing all potential causes of haemoptysis.

Identifying key patient information: Identify and use key patient demographic information, such as age and gender, to inform your assessment and responses.

- *Example:* When assessing acute onset of back pain in a 62-year-old woman, ensure your considerations are relevant to her age and gender; listing causes typically seen in male patients would NOT be appropriate.

Considering key features in the clinical scenario: Base your answers on the key features presented in the clinical scenario provided. Do not include information or diagnoses that rely on history or details NOT explicitly included in the scenario.

- *Example:* When presented with a young female patient experiencing vaginal bleeding in early pregnancy, avoid providing differential diagnoses that rely on history or details not provided in the scenario.

Considering all key features of the case: Ensure your responses consider ALL the key features presented in the case.

- *Example:* An example of an error here would be providing responses that do not take into consideration all the key features of the case.

Using key features of the case to inform answers: Use the key features of the case to provide answers that are congruent with the clinical presentation.

- *Example:* When presented with an adult woman with a wide variety of symptoms including fatigue, weight gain, and joint pains, ensure differential diagnoses provided are consistent with the detailed clinical features.
- *Example:* In a case of a 28-year-old woman with a positive home pregnancy test, ensure answers consider the key features of the case and are applicable for the stage of gestation.

Relevance to key features: Ensure ALL answers provided are pertinent and relevant to the key features of the case presentation.

- *Example:* This includes avoiding suggesting investigations that are NOT appropriate given the patient's presenting symptoms.
- *Example:* Similarly, providing a management plan that does NOT address the patient's social circumstances is considered an error.
- *Example:* In a case focused on diabetes management, for example, answers should focus on diabetes management, NOT unrelated issues like lipids or hypertension unless pertinent to the scenario.

- *Example:* In a case of a young child presenting with skin lesions, provide specific management details; while answers like 'topical antifungal' and 'antifungal cream' scored a mark, more marks were available for being as detailed as possible about the medication and its regimen.
- *Example:* In a case of a young adult male with poorly controlled asthma, avoid answers such as 'inhaled steroids' without being specific about the drug and dose.
- *Example:* General answers such as 'educate', 'refer', 'reassure', or 'review', as in a case of mild-to-moderate postnatal depression, do not score without specific detail.
- *Example:* When a question asks for 'specific' treatment, as in a case of allergic contact dermatitis or acute management, provide dose, frequency, and duration (if applicable) of any medication listed, and the appropriate dosing regimen.
- *Example:* In the non-pharmacological management component, avoid vague, non-specific answers, such as providing education or referral to various allied health professionals, without specifying the content of the education or the purpose of the referral.
- *Example:* When answering ECG questions, as in a case of a young adult male presenting with acute onset of anterior chest pain asked for specific abnormal findings, provide the specific abnormalities shown, including the leads in which the changes can be seen, not just diagnoses.
- *Example:* Avoid providing non-specific answers; for example, instead of "analgesia", specify which type, dose, and frequency.
- *Example:* Providing lifestyle advice such as "lose weight" or "exercise more" is considered non-specific; provide specific and detailed advice.
- *Example:* Providing non-specific answers such as 'alcohol', 'medication', or 'lifestyle' as a cause of osteoporosis do not score marks; include the level of alcohol consumption that would pose a risk, or a medication class known to reduce bone density.
- *Example:* When being asked for specific management actions, answers such as 'monitor thyroid to titrate dose', 'repeat levels in six weeks', 'repeat tests', or 'monitor thyroid function regularly', as in a case of a female patient presenting with fatigue seven months post-partum with a history of gestational diabetes, are not specific enough.
- *Example:* When asked about specific investigations, as in a case of an older male Aboriginal patient with a non-healing wound, be explicit in your request; simply answering 'Doppler' scored zero, while 'Doppler arterial ultrasound of the patient's legs' was appropriate.
- *Example:* Avoid articulating elements of physical examination or history. For example: infant with respiratory features; or as in a case of a mother post-partum with mastitis; that lacked specificity to the case and did not add diagnostic value.
- *Example:* In a case of an infant presenting with features suggestive of developmental delay, avoid providing answers that lacked specificity.

Adhere to Question and Format: Pay close attention to the specific wording of the question and any instructions regarding the number of answers or format (e.g., short answers, one answer per line).

- *Example:* When asked for a specific number of answers, ensure you provide only that number. Using phrases/words like "for example," "because" or "and" often indicates including extra responses, resulting in a penalty.

## Answering Within Context

It is crucial to tailor your responses to the specifics of the presented case, utilizing all the information provided and framing your approach appropriately for a general practice environment.

Answer within the Specific Context of the Case and Patient: Ensure your responses are tailored to the individual patient described, including their age, gender, comorbidities, medications, social circumstances, and the specific details provided in the scenario. Avoid generic answers or those appropriate for a different patient or context.

- *Example:* When looking at possible differential diagnoses, ensure they are within the context of the liver function results provided, or describe the results rather than just listing all possible causes or describing the results without linking to a diagnosis.
- *Example:* It is important to answer in the context of the patient's age and medications, as in a case of a 68-year-old woman with renal disease and anaemia; blood donation, while a cause of anaemia in younger patients, would not be appropriate here as she is likely ineligible.
- *Example:* In a case describing symptoms of six months' duration, differential diagnoses that have either an acute onset or are of greater chronicity will not score.
- *Example:* Avoid giving an "all cause" list of joint pains when the scenario describes new onset of symmetrical significant joint pains; focus on diagnoses that fit the specific presentation.
- *Example:* Despite the history and findings, as in a case of persistent shortness of breath and evolving COPD, avoid focusing on cardiac disease or identifying pulmonary neoplasms that were not evident if the scenario information does not support them.
- *Example:* Avoid providing management options that do not align with the patient's age or medical history, such as options contraindicated by the patient's comorbidities (as seen in several mentions).
- *Example:* When presented with a toddler returning from an overseas trip with diarrhoea, ensure all the information in the scenario is considered and that the answer is provided in the context of that specific scenario.
- *Example:* When presented with an older male patient with a compression fracture, avoid providing causes and treatments that are typically relevant only for a female patient, as this is wrong for the gender of the patient.
- *Example:* Avoid providing differential diagnoses such as acute cholecystitis or ascending cholangitis if they would not present asymptomatically as described in the scenario.
- *Example:* When required to provide differential diagnoses, ensure your answers are relevant to the patient's age or other details in the scenario.
- *Example:* Avoid prioritising alcohol-related dementias over the most common causes like vascular and Alzheimer's disease in an older Aboriginal male patient with cognitive decline, as this may indicate stereotyping.
- *Example:* Avoid providing diagnoses not relevant or likely given the information in the scenario, such as when irrelevant diagnoses were provided based on a collateral history not included in the case of an older female patient who presented with collapse.

## Utilise All Provided Information:

- *Example:* Ensure you answer the question exactly as asked, as seen in a case of an elderly male patient with multiple symptoms asked for diagnoses other than hearing loss, and in a case of an elderly patient with lower thoracic midline pain asked for non-pharmacological treatment. A significant number of errors resulted from misreading these questions.
- *Example:* When asked for the specific abnormal findings on the ECG, provide the specific abnormalities shown, including the leads, as seen in a case of a young adult male presenting with acute onset of anterior chest pain, not just diagnoses.
- *Example:* When asked for specific examination findings for one condition, as seen in a case of an elderly man with dementia attending for driving licence medical asked for examination findings, avoid listing generic examinations or findings for unrelated conditions like Parkinson's disease.
- *Example:* When asked for a diagnosis rather than results or investigations, as seen in a case of a middle-aged diabetic patient who presents for routine diabetic review, provide the diagnosis.
- *Example:* Ensure you read the question correctly, as seen in a case of a female patient with a six-week-old baby asked for management/advice on feeding.

Contextualise for General Practice: Frame your management and approach within the context of a general practice environment, considering what is appropriate and feasible in this setting (e.g., immediate management, urgency of referral, scope of practice). Demonstrate insight into the urgency of referrals where appropriate.

- *Example:* In a case of suspected deep venous thrombosis in an elderly female patient in a residential facility, appreciate that initiating GP-based treatments with anticoagulants is not appropriate and urgent input from secondary care is required.
- *Example:* Avoid providing answers that are emergency-department-focused, such as attempting to obtain intravenous access, which is not appropriate in a general practice environment, when managing a rapidly deteriorating child.
- *Example:* In a case of a 2-year-old boy with a persistent cough possibly due to an inhaled foreign body, demonstrate insight into the urgency of the referral; a simple answer of "refer" would not score marks.
- *Example:* When identifying skin lesions, avoid generic terms such as 'reassure' or 'excise' with no details if the question is asking for specific management in a general practice context.

## Utilise All Provided Information:

Carefully consider and use all the information given in the scenario, including the stem, history details, examination findings, etc. Avoid relying on or including external information, history, or details not explicitly present in the case. Do not create and solve problems not listed in the scenario. Do not repeat information already provided in the stem, as this will not gain marks.

- *Example:* When required to give details about the history of presenting complaint, include only information present in the scenario.
- *Example:* Avoid making unjustified assumptions or addressing issues not given in the scenario when answering questions, as seen in a case of a patient with severe abdominal pain.
- *Example:* Avoid enquiring about information already provided in the scenario, as seen in a case of a vulnerable adult with intellectual disability.

- *Example:* Ensure you read the question correctly, as seen in a case of a female patient with a six-week-old baby asked for management/advice on feeding.

Contextualise for General Practice: Frame your management and approach within the context of a general practice environment, considering what is appropriate and feasible in this setting (e.g., immediate management, urgency of referral, scope of practice). Demonstrate insight into the urgency of referrals where appropriate.

  - *Example:* In a case of suspected deep venous thrombosis in an elderly female patient in a residential facility, appreciate that initiating GP-based treatments with anticoagulants is not appropriate and urgent input from secondary care is required.
  - *Example:* Avoid providing answers that are emergency-department-focused, such as attempting to obtain intravenous access, which is not appropriate in a general practice environment, when managing a rapidly deteriorating child.
  - *Example:* In a case of a 2-year-old boy with a persistent cough possibly due to an inhaled foreign body, demonstrate insight into the urgency of the referral; a simple answer of "refer" would not score marks.
  - *Example:* When identifying skin lesions, avoid generic terms such as 'reassure' or 'excise' with no details if the question is asking for specific management in a general practice context.