



**MEDICAL SCIENCES COUNCIL
OF NEW ZEALAND**

TE KAUNIHERA PŪTAIAO HAUORA O AOTEAROA

Competence Standards for Medical Laboratory Science Practitioners in Aotearoa New Zealand

(Revised February 2018)

The Medical Sciences Council of New Zealand is responsible for setting the standards of competence for Medical Laboratory Science Practitioners in Aotearoa New Zealand under the Health Practitioners Competence Assurance Act 2003

These Competence Standards were adopted following a public consultation undertaken in October 2017

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Introduction

The Medical Sciences Council is established under the Health Practitioners Competence Assurance Act 2003 (the Act). The Council has a primary responsibility in protecting the health and safety of the public by ensuring medical laboratory science practitioners are competent and fit to practise. Setting standards for practitioners' education and competence is a critical strategy for enabling the latter.

Competence standards need to be dynamic to reflect evolving changes to professional practice. The Council manages this through a regular schedule of review that is inclusive of a public consultation process.

The 2017 Review

A 2017 review of the competence standards for the practice of medical laboratory science took cognisance of the recent changes to the scopes of practice defined for the profession, including the introduction of a third scope of practice of Medical Laboratory Pre-Analytical Technician.

The Council sought to future-proof the competence standards through the adoption of an overarching framework based on the principles of flexibility and versatility. This is essential for medical laboratory science practice which occurs within a healthcare environment that is continually evolving, and is subject to ongoing advancements in technology. In addition the revised competencies framework is articulated in a framework that is similar to many other regulated health professions within Australasia.

The Council's competence standards is a "living document" and will continue to undergo a regular schedule of review to ensure the standards continue to be fit for purpose over time.

Competence Standards

Competence standards are a description of the ability of a medical laboratory science practitioner to practise safely and effectively in a variety of contexts and environments. Competence is influenced by many factors including, but not limited to, the practitioner's qualifications, clinical experience, professional development and his/her ability to integrate knowledge, skills, attitudes, values and judgements within a practice setting. A critical value of competence standards is the capacity to support and facilitate professional practice and growth.

The standards set out in this document are expressed as entry-level competencies and behaviours. However it is expected that all practitioners will successively build on these competence standards to levels expected of experienced practitioners.

The competence standards identify the minimum knowledge, skills and professional attributes necessary for practice. During any one procedure it is expected practitioners will demonstrate elements of practice across a number of broadly-defined domains of competence. This recognises that competent professional practice is more than a sum of each discrete part. It requires an ability to draw on and integrate the breadth of competencies to support overall performance.

Context of the Competence Standards

The competence standards are directly linked to the three medical laboratory science scopes of practice defined by the Council under the Act.

Medical laboratory science practitioners in Aotearoa New Zealand practise within a legislated regulatory framework under the Health Practitioners Competence Assurance Act 2003. Defining scopes of practice serves to protect the health and safety of the public through the use of protected professional titles. Only individuals who hold current registration with the Medical Sciences Council are permitted to use the professional titles of:

- Medical Laboratory Scientist
- Medical Laboratory Technician
- Medical Laboratory Pre-Analytical Technician

Application of the Competence Standards

The Council's competence standards are intended to be sufficiently flexible and versatile to be relevant to a variety of stakeholders.

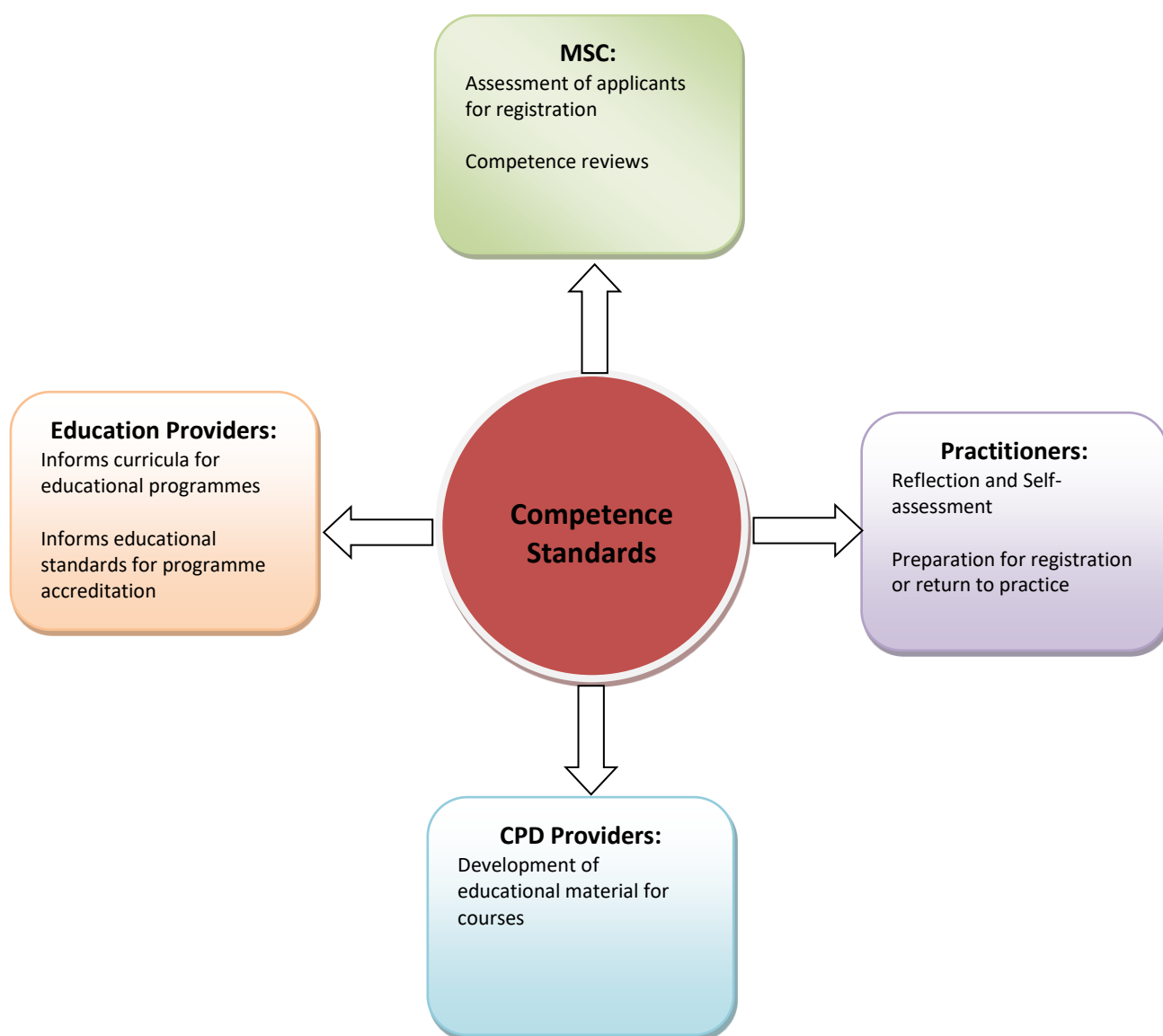
The Council uses the competence standards as a reference point of professional competence when exercising its statutory functions under the Health Practitioners Competence Assurance Act 2003, including for:

- Registration of practitioners qualified through an approved medical laboratory science programme in Aotearoa New Zealand
- Registration of practitioners who completed their initial qualification in other countries
- Recertification of practitioners who are registered and are returning to practice
- Evaluation of a registrant whose level of competence to practise may pose a risk of harm to the public (e.g. if the Council receives a complaint or notification about that registrant)

Individual practitioners should use the standards to guide their professional development including using a reflective approach to identify their particular learning needs based on the competencies required for their relevant scope of practice.

Providers of pre-registration education programmes are expected to use the competence standards to inform the development of graduate curricula. This will assist new registrants in understanding the professional competencies required of them once registered.

The competence standards can also be a useful resource reference/benchmark for other regulatory authorities, healthcare professionals, professional bodies, the public, and other stakeholders.



Structure of the Competence Standards

The competence standards have been articulated so as to be sufficiently broad-based to allow for universal applicability across a variety of practice settings, while at the same time being sufficiently focused to articulate the particular competencies specific to medical laboratory science practice.

Domains

Key competencies are arranged within a number of integrated themes called *Domains*. There are five domains of competence that apply to each of the scopes of practice for medical laboratory science practitioners. In addition competencies specific to each scope of practice are articulated in a number of subsets (5A to 5C) of the fifth domain.

Domain 1: Professional and Ethical Conduct

Domain 2: Communication and Collaboration

Domain 3: Evidence-Based Practice and Professional Learning

Domain 4: Safety of Practice and Risk Management

Domain 5: Medical Laboratory Science Practice

Domain 5A: Medical Laboratory Scientist

Domain 5B: Medical Laboratory Technician

Domain 5C: Medical Laboratory Pre-Analytical Technician

Each domain is then expanded on at three levels:

Key Competencies	Competency Indicators	Notes
The knowledge, skills, attitudes, values and judgements medical laboratory science practitioners require to practise safely and effectively in a range of contexts and situations	<p>Generic examples of competence performance.</p> <p>Indicators are neither comprehensive nor exhaustive – they provide examples of evidence of competence</p>	<p>Notes have been included against some of the indicator statements Notes beginning with “Must” indicate that all of the stated areas are mandatory to be assessed against</p> <p>Notes beginning with “May” indicate that any in the list are provided as examples and are not mandatory to be assessed against</p>

Interpreting Competency Indicators

Indicator statements include descriptors of the behaviours that characterise a practitioner's competence in practice:

Demonstrate Understanding:

The practitioner needs to understand the underpinning knowledge pertaining to specific areas of medical laboratory science practice. For example the practitioner is able to demonstrate through verbal or written testing, an understanding of the underpinning knowledge related to microbiology which is applied to inform laboratory procedures. For some competency indicators the practitioner may require the knowledge but not necessarily be required to perform specific procedures.

Apply Knowledge:

The practitioner is required to apply their detailed knowledge to perform procedures, and engage in professional and safe practice. These are the *doing* elements.

Competence Standards for Medical Laboratory Science Practitioners in Aotearoa New Zealand

An Overview of the Competencies Domains

Domain 1: Professional and Ethical Conduct

This domain covers practitioners' responsibility to be professional and ethical and to practise within the current medico-legal framework. Includes their responsibility for ensuring patient confidentiality/privacy is maintained at all times while recognising the potential role as a patient advocate.

Domain 2: Communication and Collaboration

This domain covers practitioners' responsibility in utilising appropriate, clear and effective communication and their responsibility for ensuring they function effectively as a member of a health team at all times.

Domain 3: Evidence-Based Practice and Professional Learning

This domain covers practitioners' responsibility to engage in evidence-based practice and to critically monitor their actions through a range of reflective processes. It includes their responsibility for identifying, planning and implementing their ongoing professional learning needs.

Domain 4: Safety of Practice and Risk Management

This domain covers practitioners' responsibility to protect patients, others and the environment from harm by managing and responding to the risks inherent in both healthcare and medical laboratory science practice. It includes their responsibility for ensuring high quality professional services are provided for the benefit of patients and other service users.

Domain 5: Medical Laboratory Science Practice

This domain covers the knowledge, skills and capabilities practitioners need to practise the profession of medical laboratory science. Elements in this domain are common to all medical laboratory science practitioners, taking into account the different requirements of each scope of practice.

Domain 5A: Medical Laboratory Scientist

This domain covers the additional knowledge, skills and capabilities specific to the Medical Laboratory Scientist scope of practice.

Domain 5B: Medical Laboratory Technician

This domain covers the additional knowledge, skills and capabilities specific to the Medical Laboratory Technician scope of practice.

Domain 5C: Medical Laboratory Pre-Analytical Technician

This domain covers the additional knowledge, skills and capabilities specific to the Medical Laboratory Pre- Analytical Technician scope of practice.

Domain 1: Professional and Ethical Conduct

Ref	Key Competencies	Ref	Competency Indicators	Notes
1.1	Practise in an ethical and professional manner consistent with relevant legislation and regulatory requirements, and knowledge of service provisions and resource management	1.1.a	Apply knowledge of legal responsibilities	Must include an understanding of responsibilities contained in NZ legislation and regulations, specific responsibilities to maintain confidentiality, confirm informed consent and exercising duty of care
		1.1.b	Manage personal, mental and physical health to ensure fitness to practise	Must include competence, professionalism, including a sense of responsibility and accountability, self-awareness and professional values, sound mental health and the capacity to maintain health and wellbeing for practice
		1.1.c	Apply knowledge of mandatory and voluntary reporting obligations	Must include making a notification about the health (impairment), conduct or performance of a registered health practitioner who may be posing a risk of harm to the public, as well as their own impairment to practise
		1.1.d	Apply knowledge of the basic principles underpinning ethical practice within medical laboratory science practice	Must include the Medical Sciences Council's Code of Ethics Must include respect of the rights of the individual, respect of the autonomy of the individual, cause no harm, and advance the common good
		1.1.e	Provide relevant information to the patient and apply knowledge of appropriate methods to obtain informed consent	Must include an understanding of patients having a clear choice about the procedure proposed by the health practitioner
		1.1.f	Apply knowledge of the New Zealand health system	May include knowledge of service provision and resource management arrangements, the structure and role of public and private providers and reporting requirements
		1.1.g	Apply knowledge of appropriate levels of autonomy and professional judgement in a variety of medical laboratory science practice settings	Must include knowledge of limits of personal practice and when to seek advice or refer to another health professional Must include recognition of the need to manage own workload and resources effectively and to be able to practise safely and effectively

Competency Indicators		Notes	
Demonstrate Understanding	Understanding underpinning knowledge relating to practice. Does not necessarily undertake the procedures	Must	All in the list are mandatory to be assessed against
Apply Knowledge	Needs detailed knowledge that is applied within practice	May	Any in list can be included to be assessed against but not all are mandatory

Ref	Key Competencies	Ref	Competency Indicators	Notes
1.2	Provide each patient with an appropriate level of dignity and care in a range of settings in partnership with patients, families/whanau, and communities	1.2.a	Apply knowledge of the influence of socio-cultural factors on patient attitudes and responses to medical laboratory services	Must include socio-cultural factors related to cultural and linguistic diversity, age, gender, disability, socio-economic, geographic locations Must include application of the Treaty of Waitangi with an understanding of its principles within the context of Aotearoa New Zealand and medical laboratory science practice and its practical application within the profession Must uphold tikanga best practice guidelines when working with Maori patients and their whanau
		1.2.b	Apply knowledge of appropriate professional behaviour in patient interactions	Must include behaviour that is non-discriminatory, empathetic and respectful of socio-cultural differences
		1.2.c	Apply knowledge of appropriate boundaries between patients and health professionals	Must include understanding of the boundaries involved with the use of social media, and an understanding of appropriate and inappropriate relationships between health practitioners and patients
1.3	Assume responsibility and accept accountability for professional decisions	1.3.a	Apply knowledge of appropriate responses to unsafe or unprofessional practice within their scope of practice	Must include understanding of appropriate collegial behaviour to manage the professional practice of a peer
		1.3.b	Apply knowledge of organisational policies and guidelines with professional standards within their scope of practice	Must include understanding of organisational policies and procedures in respect of workplace behaviour and disciplinary processes
		1.3.c	Apply knowledge of relevant quality systems appropriate to their scope of practice	Must include organisational standard operating procedures
1.4	Advocate on behalf of the patient when appropriate within the context of the practitioner's scope of practice	1.4.a	Apply knowledge of the principles of patient advocacy and their application to medical laboratory science services	May include supporting and promoting the rights and interests of individuals, assisting individuals to achieve or maintain their rights and representing their needs. Advocacy strategies include representing the patient, supporting the patient to represent their own interests and ensuring people are empowered to voice their perspectives
		1.4.b	Apply knowledge of when it may be appropriate to intervene on the patient's behalf	May include patient advocacy service, reference to senior practitioners
		1.4.c	Apply knowledge of responsibilities to consult with other members of the health care team about the suitability and application of the proposed medical laboratory science procedure when appropriate	Must include an understanding of the relative risks and benefits to patients of the range of testing and procedures used within medical laboratory science practice

Competency Indicators		Notes	
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Domain 2: Communication and Collaboration

Ref	Key Competencies	Ref	Competency Indicators	Notes
2.1	Communicate clearly, sensitively and effectively with the patient and their family/whanau or carers, as appropriate for the relevant scope of practice	2.1.a	Apply knowledge of ways to establish rapport with the patient to gain understanding of their issues and perspectives	Must include understanding of professional boundaries May be influenced by English language skills, health literacy, age, health status, culture
		2.1.b	Apply knowledge of ways to communicate with the patient and/or carers to collect and convey information and reach agreement about the purpose of the examination, techniques and procedures	May include communication with family/whanau, significant others, carers, interpreters, legal guardians and medical advocates
		2.1.c	Apply knowledge of communication strategies to engender trust and confidence and respect patient confidentiality, privacy and dignity	May include non-verbal communication techniques and action such as body language
		2.1.d	Respond to patient queries or issues	Must include awareness of boundaries of scope of practice
		2.1.e	Apply knowledge of likely communication barriers specific to individual patients and/or carers	Must include the practitioner demonstrating an awareness of the ways their own culture and experience affect their interpersonal style and having an awareness of strategies to ensure this does not present an impediment
		2.1.f	Apply knowledge of appropriate adjustments to communication style to suit the particular needs of the patient including those from culturally and linguistically diverse backgrounds	Must include active listening, use of appropriate language and detail, use of appropriate verbal and non-verbal cues and language, and confirming that the other person understood
		2.1.g	Apply knowledge of informed consent	Must include understanding that informed consent is a person's voluntary decision about healthcare that is made with knowledge and understanding of the benefits and risks involved

Competency Indicators		Notes	
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Ref	Key Competencies	Ref	Competency Indicators	Notes
2.2	Collaborate with other health practitioners	2.2.a	Apply knowledge of effective and respectful working relationships with health practitioners	Must include understanding of workplace values and teamwork
		2.2.b	Apply knowledge of professional roles and responsibilities of healthcare team members and other service providers	May include registered health practitioners, accredited health professionals, licensed health professionals, and unregistered healthcare workers
		2.2.c	Apply knowledge of accepted protocols and procedures to provide relevant and timely verbal and written communication	Must consider the information needs of the audience and use of the appropriate medical terminology and apply knowledge of organisational protocols

Competency Indicators		Notes	
Demonstrate Understanding	Understanding underpinning knowledge relating to practice. Does not necessarily undertake the procedures	Must	All in the list are mandatory to be assessed against
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Domain 3: Evidence-Based Practice and Professional Learning

Ref	Key Competencies	Ref	Competency Indicators	Notes
3.1	Apply critical and reflective thinking to resolve clinical questions, as appropriate for the relevant scope of practice	3.1.a	Understand and describe the clinical question	Must include understanding of the parameters of the relevant scope of practice
		3.1.b	Identify information required to respond to the clinical question	Must include understanding of different information sources (patient; colleagues; referral forms; organisational protocols)
		3.1.c	Apply knowledge of appropriate methods to collect and assess evidence	Must include an understanding of commonly used quantitative and qualitative research methods
		3.1.d	Apply knowledge of the identification, access or collection of information from credible sources	Must include understanding of different information sources (patient; colleagues; referral forms; organisational protocols)
		3.1.e	Apply knowledge of how to assess the adequacy of information to answer the issue under inquiry	Must include understanding of organisational protocols in respect of internet-based information sources
		3.1.f	Apply knowledge of the assessment of medical laboratory science results, applying clinical reasoning and reflective processes to identify implications for practice, including limitations of practice and recognition of need to consult	<p>May include skills in questioning, analysing, integrating, assessing, and cognitive reasoning, and the critical appraisal of literature and evidence.</p> <p>May include self-reflection during and after a clinical challenge or experience. It may involve structured and informal reflection to review and integrate knowledge and findings into practice</p>

Competency Indicators		Notes	
Demonstrate Understanding	Understanding underpinning knowledge relating to practice. Does not necessarily undertake the procedures	Must	All in the list are mandatory to be assessed against
Apply Knowledge	Needs detailed knowledge that is applied within practice	May	Any in list can be included to be assessed against but not all are mandatory

Ref	Key Competencies	Ref	Competency Indicators	Notes
3.2	Identify ongoing professional learning needs and opportunities	3.2.a	Apply knowledge of legal and professional responsibilities to undertake continuing professional development (CPD)	Must include understanding of registered health practitioner's obligations under the Health Practitioners Competence Assurance Act
		3.2.b	Apply knowledge of personal strengths and limitations to identify learning required to improve and adapt professional practice	
		3.2.c	Apply knowledge of planning and implementation strategies to address professional and development needs	Must include reflective practice techniques May include formal and informal collegial assessment
3.3	Facilitate understanding and learning in a clinical environment	3.3.a	Apply knowledge of communication strategies to facilitate understanding and learning both within an individual and group context	May include a range of teaching methods
		3.3.b	Apply knowledge of assessment, evaluation and feedback	May include a registered medical laboratory science practitioner providing clinical supervision to other medical laboratory science practitioners

Competency Indicators		Notes	
Demonstrate Understanding	Understanding underpinning knowledge relating to practice. Does not necessarily undertake the procedures	Must	All in the list are mandatory to be assessed against
Apply Knowledge	Needs detailed knowledge that is applied within practice	May	Any in list can be included to be assessed against but not all are mandatory

Domain 4: Safety of Practice and Risk Management

Ref	Key Competencies	Ref	Competency Indicators	Notes
4.1	Practise safely, appropriate to the scope of practice	4.1.a	Apply knowledge of New Zealand legislation and/or guidelines of international best practice in the safe use of medical laboratory science technologies	Must include understanding of the Health and Safety at Work Act 2015
		4.1.b	Apply knowledge of the principles of risk management relevant to medical laboratory science practice	Must include understanding of areas of practice that present high risk
		4.1.c	Apply knowledge of risk control systems and procedures	Must include an understanding of principles of relevant quality control systems and application to risk management
		4.1.d	Apply knowledge of safe medical laboratory science practice	Must include understanding of safety systems that are applied within the relevant scope of practice
4.2	Protect and enhance patient safety	4.2.a	Apply knowledge of patient identification procedures to confirm the correct match of patient with intended procedure	Must include understanding of boundaries where safe testing cannot occur due to patient identification risk
		4.2.b	Apply knowledge of maintaining and communicating patient information to ensure accuracy and confidentiality	Must include organisational protocols and legislative requirements for maintaining patient records
		4.2.c	Apply knowledge of laboratory hygiene and laboratory infection control practices	Must demonstrate understanding of transmission modes of infection (host, agent and environment), established practices for preventing the transmission including effective hand hygiene, aseptic techniques, and ability to implement NZ Ministry of Health infection prevention and control guidelines

Competency Indicators		Notes	
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Apply Knowledge	Needs detailed knowledge that is applied within practice	May	Any in list can be included to be assessed against but not all are mandatory

Ref	Key Competencies	Ref	Competency Indicators	Notes
4.3	Operate equipment safely and appropriately, as relevant to the scope of practice	4.3.a	Apply knowledge of equipment to confirm that it is in good order and operating within acceptable parameters	Must include understanding of established equipment performance validation procedures as relevant to the scope of practice
		4.3.b	Apply knowledge of the identification and appropriate action to correct unacceptable condition or operation of equipment	
		4.3.c	Apply knowledge of protocols to record and report conformance and non-conformance of equipment	
4.4	Maintain safety of self and others in the work environment	4.4.a	Apply knowledge of legal responsibilities for health and safety of self and others	Must include the Health and Safety at Work Act 2015
		4.4.b	Apply knowledge of safety hazards in the workplace	Must include identification and implementation of safety management procedures and responsibilities for notification Must include storage, handling, transportation and disposal of biological and other hazardous material in accordance with legislation and organisational protocols
		4.4.c	Apply knowledge of reporting incidents in accordance with protocols, procedures and legal requirements	

Competency Indicators		Notes	
Demonstrate Understanding	Understanding underpinning knowledge relating to practice. Does not necessarily undertake the procedures	Must	All in the list are mandatory to be assessed against
Apply Knowledge	Needs detailed knowledge that is applied within practice	May	Any in list can be included to be assessed against but not all are mandatory

Domain 5: Medical Laboratory Science Practice

Ref	Key Competencies	Ref	Competency Indicators	Notes
5.1	Apply understanding of anatomy, physiology and pathology appropriate to the scope of practice	5.1.a	Apply knowledge of the anatomy and physiology of the human body relevant to the scope of practice	
		5.1.b	Apply knowledge of the pathophysiology underpinning disease and injuries affecting the human body	
5.2	Apply principles of medical laboratory technology and techniques appropriate to the scope of practice	5.2.a	Apply knowledge of principles of medical laboratory technology and techniques	
		5.2.b	Apply knowledge of the use of laboratory equipment and procedures appropriate to the scope of practice	
5.3	Use information systems appropriately	5.3.a	Apply knowledge of the management of laboratory information systems and other practice documentation	Must include knowledge of legislative responsibilities relating to ownership, storage, retention and destruction of laboratory records. May include electronic and paper records
		5.3.b	Apply knowledge of patient information management systems	Must include knowledge of legislative responsibilities relating to ownership, storage, retention and destruction of patient information May include electronic and paper records
5.4	Applies knowledge to ensure appropriate specimens are collected and handled according to established protocols	5.4.a	Apply knowledge of gathering appropriate information	
		5.5.b	Apply knowledge to select suitable specimens and procedures relevant to patients' clinical needs including collection and preparation of specimens as and when appropriate	

Competency Indicators		Notes	
Demonstrate Understanding	Understanding underpinning knowledge relating to practice. Does not necessarily undertake the procedures	Must	All in the list are mandatory to be assessed against
Apply Knowledge	Needs detailed knowledge that is applied within practice	May	Any in list can be included to be assessed against but not all are mandatory

Domain 5A: Medical Laboratory Scientist

Ref	Key Competencies	Ref	Competency Indicators	Notes
5A.1	Demonstrate knowledge of the key concepts of the knowledge base relevant to the medical laboratory scientist scope of practice	5A.1.a	Demonstrate awareness of the principles and applications of scientific enquiry including the evaluation of treatment efficacy and the research process	
		5A.1.b	Demonstrate understanding of a range of specialisms in the diagnosis treatment and management of disease	Must include cellular science, blood science, infection science, molecular and genetic science, and reproductive science
		5A.1.c	Apply knowledge of qualitative and quantitative analysis methods to aid the diagnosis, screening and monitoring of health and disease	
5A.2	Apply appropriate knowledge and skills to inform practice as a medical laboratory scientist	5A.2.a	Apply knowledge to validate scientific and technical data and observations	Must be in accordance with organisational protocol
		5A.2.b	Demonstrate proficiency in practical skills in the discipline of medical laboratory science in which the practitioner practises	Must include specimen identification and suitability including the effect of storage on specimens, accurate and consistent preparation of reagents, performance of calibration and quality control checks, and effective operation of laboratory equipment
		5A.2.c		
5A.3	Apply knowledge to select and use appropriate assessment techniques	5A.3.a	Apply knowledge to assess and evaluate new procedures prior to routine use	Must include analysis and critical analysis of information collected
		5A.3.b	Apply knowledge to perform and record detailed assessments using appropriate techniques and equipment	
5A.4	Apply knowledge of the use of research, reasoning and problem solving skills to determine appropriate actions	5A.4.a	Apply knowledge to make reasoned decisions to initiate, continue or modify the use of techniques or procedures and record the decisions and reasoning appropriately	May include use of statistical packages and presentation of data in an appropriate format
		5A.4.b	Apply knowledge of a logical and systematic approach to problem solving	Must include initiation of resolution of problem and exercising personal initiative
		5A.4.c	Apply knowledge of the value of research to inform practice	Must include a range of research methodologies
5A.5	Apply knowledge of the principles and practices of quality management	5A.5.a	Apply knowledge to assure quality of practice as a medical laboratory scientist	Must include gathering of information (both qualitative and quantitative),
		5A.5.b	Manage, audit and review quality management systems	Must include quality control, quality assurance, recording and reporting requirements, and the implementation of corrective actions

Domain 5B: Medical Laboratory Technician

Ref	Key Competencies	Ref	Competency Indicators	Notes
5B.1	Apply knowledge of the underlying scientific concepts and principles	5B.1.a	Apply knowledge of the principles of the underlying scientific concepts and principles of a specific medical laboratory science discipline	Must include level of knowledge of scientific understanding that is relevant to the particular discipline within which the technician practises
5B.2	Apply knowledge to review and select appropriate scientific techniques, procedures and methods to undertake tasks	5B.2.a	Apply knowledge of the underlying principles of the task, procedure, technique and associated technology	Must include knowledge of the standard techniques and equipment appropriate to the scope of practice and particular medical laboratory science discipline
5B.3	Apply knowledge to interpret and evaluate data and make sound judgements in relation to scientific concepts	5B.3.a	Apply knowledge to complete tasks and procedures within defined parameters	Must include recognition of equipment failure, abnormal results, and reporting requirements in accordance with organisational protocols
5B.4	Apply knowledge to recognise problems and apply appropriate scientific methods to identify causes and achieve solutions	5B.4.a	Apply knowledge of identification and resolution of technical problems within parameters of the scope of practice	Must include knowledge of organisational protocols
5B.5	Apply knowledge of quality control and quality assurance	5B.5.a	Apply knowledge to follow quality control policies and procedures and participate in quality assurance	Must include identification of issues, reporting and recording, and initiation of corrective actions in accordance with organisational protocols

Competency Indicators		Notes	
Demonstrate Understanding	Understanding underpinning knowledge relating to practice. Does not necessarily undertake the procedures	Must	All in the list are mandatory to be assessed against
Apply Knowledge	Needs detailed knowledge that is applied within practice	May	Any in list can be included to be assessed against but not all are mandatory

Domain 5C: Medical Laboratory Pre-Analytical Technician

Ref	Key Competencies	Ref	Competency Indicators	Notes
5C.1	Apply knowledge of the underlying scientific concepts and principles	5C.1.a	Apply knowledge of the principles of the underlying scientific concepts and principles relevant to specimen collection, specimen preparation, and/or donor technology	The Pre-Analytical Technician may work in one or a combination of the disciplines of specimen collection, specimen preparation, or donor technology
5C.2	Apply knowledge to review and select appropriate techniques, procedures and methods to undertake tasks	5C.2.a	Apply knowledge to collect and/or process specimen samples and/or donations according to established protocols	Must include validation of patient identification and information
		5C.2.b	Apply knowledge of specimen and/or donation suitability	
			Apply knowledge for the safe and appropriate transport and storage of specimens and/or donations	
5C.3	Apply knowledge of safe work practices relevant to the scope and/or particular discipline	5C.3.a	Apply knowledge of the principles of standard precautions	Must include compliance with organisational protocols in relation to the correct use of personal protective equipment, appropriate hygiene and infection control practices, handling and disposal of sharps and other biohazardous waste
5C.4	Apply knowledge of quality control and quality assurance	5C.5.a	Apply knowledge to follow quality control policies and procedures and participate in quality assurance relevant to the scope and/or particular discipline	Must include identification of issues, reporting and recording, and initiation of corrective actions in accordance with organisational protocols

Competency Indicators		Notes	
Demonstrate Understanding	Understanding underpinning knowledge relating to practice. Does not necessarily undertake the procedures	Must	All in the list are mandatory to be assessed against
Apply Knowledge	Needs detailed knowledge that is applied within practice	May	Any in list can be included to be assessed against but not all are mandatory

Glossary

Quality management includes all the activities that organisations use to direct, control, and coordinate quality. These activities include formulating a quality policy and setting quality objectives. They also include quality planning, quality control, quality assurance, and quality improvement.

Quality control (QC) is a procedure or set of procedures intended to ensure that a service adheres to a defined set of quality criteria or meets the requirements of the client or customer. QC is similar to, but not identical with, quality assurance (QA). Quality control procedures are designed to verify the attainment of the intended quality of results.

Quality assurance is a process to ensure all the planned and systematic activities implemented within the quality system that can be demonstrated to provide confidence that a product or service will fulfil requirements for quality. Quality assurance is a measure of the consistency and reliability of examination results.