



Standards of Practice

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The Alberta College of Medical Diagnostic and Therapeutic Technologists exists so that the public is assured of receiving safe, competent and ethical diagnostic and therapeutic care by a regulated and continually advancing profession.



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Introduction

Background

The Alberta College of Medical Diagnostic and Therapeutic Technologists (the College) is the regulatory body in Alberta for five distinct specialties within two distinct professional groups called medical radiation technologists and electroneurophysiology technologists. The five specialties consist of radiological technologists, nuclear medicine technologists, magnetic resonance technologists, radiation therapists and electroneurophysiology technologists. These professional groups are legislated by the *Health Professions Act* (HPA) and, in accordance with Section 133 of the HPA, the College developed Standards of Practice (Standards) to guide professional practice.

The **Standards**¹ represent the expected minimum level of performance for regulated members and reflect delivery of high quality, effective, safe and ethical care to patients. These Standards are mandatory for all regulated members of the College across all contexts of professional practice. The process used to develop the Standards is described in Appendix A.

Purpose of the Standards of Practice

The Standards serve a variety of purposes for stakeholders both internal and external to the professions of medical radiation technology and electroneurophysiology technology such as:

- The College uses the Standards to outline standards/expectations for evaluation of quality of professional practice and inform processes to review professional practice and conduct of regulated members
- Educators use the Standards in the design of education programs and practice assessments, in conjunction with entry-to-practice competency statements

- Managers/Employers use the Standards to guide development of job descriptions/roles and performance evaluation
- Other Health Professionals use the Standards to learn about roles of those regulated by the College and enhance collaborative practice
- Regulated Members use the Standards to provide guidance for exemplary practice and a framework for patient care, enhance the culture of professionalism and provide the basis for self-monitoring processes and facilitate continued learning initiatives
- The public use the Standards to learn about what patients can expect when receiving services

How the revised Standards of Practice are organized

The Standards of Practice are organized under four broad standard areas including

Standard Area 1: Provision of Patient Care/Services, Standard Area 2: Professional Accountability, Standard Area 3: Professional Roles, and Standard Area 4: Practice Management.

Each broad standard area includes several standards that are described using the following headings:

- **Standard statement:** describes the legal and professional expected level of performance by a regulated member.
- **Indicators:** describe the application of the standards by a regulated member, which can also be used to determine if the standards are being achieved. The indicators are not all-inclusive, nor are they listed in order of importance. Both general indicators (those that are applicable to all regulated members) and specific indicators (those that apply to one or more of the specialties) are provided with examples.
- **Expected outcomes:** describe the outcomes patients may expect when a regulated member provides services.
- **Resources:** includes a list of documents that provide additional information related to the Standards.

¹ A glossary of key terms used in the Standards is included at the end of the document. Words or terms that are included in the Glossary are identified in the document by **bold text**.

Assumptions

The Standards are based on the following assumptions:

- All regulated members are expected to be safe, competent, ethical, accountable and professional.
- The Standards are applicable to all regulated members regardless of practice area or setting.
- The Standards are part of a continuum of standards and should be used in conjunction with related College documents such as
 - Code of Ethics,²
 - Competency Profile for each specialty,³
 - Practice Standards,⁴ and
 - Position Statements.⁵

² ACMDTT. (2006). *Code of Ethics for Alberta Diagnostic and Therapeutic Professionals*. Author: Edmonton. Available at: www.acmdtt.com/Homepage.aspx.

³ ACMDTT. (2011). *Career Information*. (Competency Profile for each specialty can be accessed from this page) Available at: www.acmdtt.com/Homepage.aspx.

⁴ ACMDTT. *Practice Standards*. Available at: www.acmdtt.com/Homepage.aspx.

⁵ ACMDTT. *Position Statements*. Available at: www.acmdtt.com/Homepage.aspx.

Standard Area 1.0 Provision of Patient Care/Services

Standard 1.1 Patient-Centred Care

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists provides the patient with safe, competent and ethical services. The member manages the patient's care with integrity and compassion and adheres to the member's inherent legal responsibilities (e.g., *Health Professions Act, Medical Diagnostic and Therapeutic Technologist Profession Regulation*).

Indicators

To demonstrate this Standard, a regulated member will:

- a. Assess the patient's level of understanding of the procedure and adapt communication and assessment accordingly.
- b. Be aware of the individual needs of patients and adapt approach if appropriate within the limitations of the procedure (e.g., consider the patient's cultural, physical, emotional and cognitive needs).
- c. Ensure appropriate consent for the procedure has been obtained (e.g., explain procedure and possible implications, recognize the patient's right to accept or refuse medical services, recognize a legally authorized representative/guardian, as appropriate).
- d. Perform procedure in a manner that maintains the patient's dignity.
- e. Advise the patient of any post-procedural care (e.g., transfer of care, release of the patient, follow-up), when applicable.

Expected Outcomes

Patients can expect the regulated member to consider patients' individual needs during delivery of care and provide sufficient information to ensure appropriate consent is obtained.

Resources

- Alberta Health Services. (2011). *Consent to Treatment/Procedure Policy*. Alberta. Author. Available at: <http://www.albertahealthservices.ca/ClinicalPolicy/wf-clp-pol-consent-to-treatment-prr-01.pdf>.
- Government of Alberta. (2000). *Health Professions Act*. Alberta, Author. Available at: www.gp.alberta.ca/documents/Acts/h07.pdf.
- Government of Alberta. (2000). *Health Information Act*. Alberta, Author. Available at: www.gp.alberta.ca/documents/Acts/H05.pdf.
- Government of Alberta. (2010). *A Guide to Understanding the Protection for Persons in Care Act*. Alberta. Author. Available at: www.health.alberta.ca/documents/PPC-Understand-PPCA.pdf.

Standard 1.2 Clinical Procedures

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists competently employs clinical procedures inherent to the member's practice specialty and performs only activities for which appropriate education and training has been received. The member determines whether contraindications exist before proceeding with an examination or treatment; and evaluates the need for modifications to clinical practice and adapts as appropriate. The regulated member also monitors the patient during the procedure and takes appropriate action, when required.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Ensure readiness for the procedure (e.g., verify patient identity, confirm type and appropriateness of procedure ordered, ensure procedure requisition/prescription contains required patient information, verify the correct anatomical location).

- b. Obtain relevant patient history.
- c. Ensure the patient has been assessed for contraindications to the procedure.
- d. Possess the necessary **competence** to perform the procedure safely, effectively and ethically.
- e. Ensure patient safety (e.g., transfers, physical environment).
- f. Support patient comfort, as appropriate, while performing procedures (e.g., position the patient, utilize positioning aids and immobilization devices).
- g. Monitor the patient during the procedure and take appropriate action, when required (e.g., adverse reactions, sudden changes in patient condition, seizures).
- h. Select appropriate equipment and parameters (e.g., imaging, data acquisition, treatment).
- i. Appropriately identify anatomical orientation on imaging/recordings (e.g., utilize radio-opaque markers, differentiate patient positioning such as left/right).
- j. Optimize, capture and archive information (e.g., images, recordings).
- k. Identify and communicate with the appropriate health care provider any procedural concerns (e.g., appropriateness of or modifications to the procedure).
- l. Assess results (e.g., images, data sets, recordings) for acceptability and completeness.

In addition, a regulated member in the specialty of *nuclear medicine technology* will:

- m. Ensure that radioactive materials utilized meet appropriate manufacturing and safety standards (e.g., acceptable radiopharmaceutical quality control, appropriate shielding).
- n. Prepare radiopharmaceuticals according to manufacturers' specifications.
- o. Dispense and administer radiopharmaceutical preparations as per employer policies and guidelines and physician orders (e.g., procedural requisition and facility protocol).
- p. Ensure appropriate measures are in place and followed to safely prepare blood products as radiopharmaceuticals.

In addition, a regulated member in the specialty of *radiological technology* will:

- q. Utilize shielding in accordance with radiation protection principles without compromising the exam

In addition, a regulated member in the specialties of *nuclear medicine technology* and *radiological technology* will:

- r. Collimate and direct the x-ray beam to the area of interest to produce images that demonstrate only the required anatomy and/or pathologies that is/are of diagnostic interest.
- s. Expose the patient to the lowest practicable amount of radiation, consistent with clinical objectives and without loss of essential diagnostic information.⁶

In addition, a regulated member in the specialty of *magnetic resonance technology* will:

- t. Modify procedure based on evidence from previous data, images and reports.

In addition, a regulated member in the specialty of *radiation therapy* will:

- u. Modify treatment, as required, based on image guidance.

In addition, a regulated member in the specialty of *electroneurophysiology technology* will:

- v. Modify/adapt recording and/or procedure based on physical, clinical or electrographic observations.

Expected Outcomes

Patients can expect the regulated member to have the necessary competence to perform the clinical procedures safely, effectively and ethically.

Resources

- ACMDTT. (2011). *Competency Profiles*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
- ACMDTT. (2006). *Code of Ethics*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.

⁶ Health Canada. (2008) *Safety Code 35: Radiation Protection in Radiology – Large Facilities*. Ottawa, Author. Available at: <http://www.dap.org/CmsFiles/File/Safety%20Code%20HC35/Health%20Canada%20Safety%20Code%2035.pdf>.

- ACMDDT. *Position Statements*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
- ACMDDT. *Practice Standards*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
- American Society of Radiologic Technologists. (2012). *Best Practices in Digital Radiography*. Author. Available at: http://www.asrt.org/docs/whitepapers/asrt12_bstpracdigradwhp_final.pdf.
- Government of Alberta. (2005). *Health Professions Act – Medical Diagnostic and Therapeutic Technologists Profession Regulation*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Regs/2005_061.pdf.
- Government of Alberta. (2000). *Health Information Act*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Acts/H05.pdf.
- Canada. Health Canada. (2008). *Safety Code 35: Radiation Protection in Radiology – Large Facilities*. Ottawa, Author. Available at: <http://www.dap.org/CmsFiles/File/Safety%20Code%20HC35/Health%20Canada%20Safety%20Code%2035.pdf>.

Standard Area 2.0 Professional Accountability

Standard 2.1 Legislation, Standards and Ethics

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists adheres to the legislative requirements governing the practice of the member's specialty, the College's Code of Ethics, Standards of Practice, **Position Statements** and **Practice Standards**.

Indicators

To demonstrate this Standard, a regulated member will:

- Assume personal responsibility for the quality and effectiveness of the regulated member's practice.
- Maintain and apply the knowledge, skills, judgments and behaviours necessary for competent practice.
- Perform restricted activities only as authorized according to the regulations of the College (see Standard 2.3).
- Protect patient confidentiality within policy and legislated parameters (see Standard 2.5).
- Recognize and avoid actual and/or perceived conflict of interest situations.
- Report abuse, incapacity or unprofessional activity in the work environment.
- Adhere to legal obligations required by the College (e.g., protected titles, mandatory registration requirements).
- Engage in conduct that does not harm the integrity of the regulated member's regulated profession.

Expected Outcomes

Patients can expect the regulated member to provide services in compliance with applicable legislation, regulations and professional requirements.

Resources

- ACMDDT. (2006). *Code of Ethics*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
- ACMDDT. *Position Statements*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
- ACMDDT. *Practice Standards*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- Government of Alberta. (2000). *Health Professions Act*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Acts/h07.pdf.
- Government of Alberta. (2005). *Health Professions Act – Medical Diagnostic and Therapeutic Technologists Profession Regulation*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Regs/2005_061.pdf.
- Government of Alberta. (2000). *Health Information Act*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Acts/H05.pdf.

Standard 2.2 Professional Competence

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists limits the member's professional practice to those techniques and procedures that the member is competent to perform and is consistent with the College's Standards. The member is responsible for life-long learning to maintain competence in his or her practice.

Indicators

To demonstrate this Standard, a regulated member will:

- Possess the competencies set out in the College's Competency Profile that are applicable to the regulated member's area of practice.
- Practice within the limits of the regulated member's competence.
- Maintain knowledge of current and evolving technologies and integrate new learning into clinical practice as appropriate.
- Self-reflect and develop performance goals to enhance professional effectiveness.
- Undertake continuing professional development.
- Participate in the College's Continuing Competence Program.

Expected Outcomes

Patients can expect the regulated member to possess the necessary competence for quality service delivery.

Resources

- ACMDTT. (2011). *Competency Profiles*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
- ACMDTT. (2013). *Continuing Competence Program*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.

Standard 2.3 Restricted Activities/Enhanced Practice

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists limits the practice of **restricted activities**⁷ to those that are appropriate for the member's area of practice and for which competence and authorization have been determined, as outlined in the College regulations. To seek **enhanced practice**⁸ authorization, a regulated member is required to complete College-approved advanced training and obtain authorization from the College.

Indicators

To demonstrate this Standard, a regulated member will:

- Perform only those restricted activities for which he or she has the required competence and current authorization.
- Assess the benefits and risks associated with performing the restricted activity.

⁷ A restricted activity is a high-risk activity performed by a regulated member, when providing a health service, which requires the member to have specific competencies, skills and authorization, by the regulations under the *Health Professions Act*, to perform the activity safely and competently [Alberta Health. (2013). *Regulated Health Professions*. Available at: <http://www.health.alberta.ca/professionals/regulated-professions.html>].

⁸ Enhanced practice refers to practice that requires the practitioner to perform restricted activities not authorized for the area of practice in which the regulated member is registered. Regulated members seeking this type of authorization are required to complete advanced training approved by the College [ACMDTT. (2008). Position Statement: *Enhanced Practice in Cross Disciplinary Roles*. Author: Edmonton. Available at: http://www.acmdtt.com/Libraries/About_Us/Position_Statement_-_Enhanced_Practice_in_Cross_Disciplinary_Roles.sflb.ashx].

- c. Be responsible and accountable for safely performing the restricted activity.
- d. Understand the risks associated with performing the restricted activity and ensure that measures are in place to manage any critical or unexpected events associated with performing it.

Expected Outcomes

Patients can expect the regulated member to perform those restricted activities, for which they are authorized, safely and competently.

Resources

- ACMDTT. *Position Statements*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
- ACMDTT. *Practice Standards*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
- Government of Alberta. (2000). *Health Professions Act*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Acts/h07.pdf.
- Government of Alberta. (2005). *Health Professions Act – Medical Diagnostic and Therapeutic Technologists Profession Regulation*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Regs/2005_061.pdf.
- Government of Alberta. (2000). *Government Organization Act*. Alberta, Author. Available at: <http://www.qp.alberta.ca/documents/Acts/g10.pdf>

Standard 2.4 Professional Boundaries

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists maintains clear professional boundaries in relationships with patients, families and colleagues.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Adhere to the Code of Ethics of the College.
- b. Explain to the patient the need for removing any clothing and other items that will interfere with diagnostic or therapeutic procedures.
- c. Ensure consent is obtained prior to touching the patient.
- d. Ensure that patients, families or colleagues do not infringe upon the regulated member's personal boundaries.
- e. Utilize the regulated member's professional position to establish only appropriate professional relationships with a patient, his or her family or a colleague.
- f. Avoid expression of views or information to the patient, which are not related to the professional relationship (e.g., includes interactions through social media).

Expected Outcomes

Patients can expect the regulated member to maintain appropriate professional boundaries.

Resources

- ACMDTT. (2006). *Code of Ethics*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.

Standard 2.5 Privacy/Confidentiality

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists respects patients' rights to privacy and maintains confidentiality of patients' personal information within the boundaries of the law.⁹

⁹ For example, *Alberta Health Information Act, Personal Information Protection Act (PIPA)*.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Comply with applicable privacy legislation and employer policies and guidelines regarding the collection, use and disclosure of patient information.
- b. Respond to the questions and concerns of a patient's family/representatives within the parameters of patient confidentiality.
- c. Ensure privacy and confidentiality during discussions and provision of services.
- d. Utilize information and archival systems as authorized, and only as required, for the provision of services specific to the regulated member's patients (e.g., electronic health record systems).

Expected Outcomes

Patients can expect the regulated member to maintain privacy and confidentiality of the patients' personal and health information in accordance with ethical and legal requirements.

Resources

- ACMDTT. (2006). *Code of Ethics*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- Government of Alberta. (2000). *Health Professions Act*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Acts/h07.pdf.
- Government of Alberta. (2000). *Health Information Act*. Alberta, Author. Available at: <http://www.qp.alberta.ca/documents/Acts/H05.pdf>.

Standard 2.6 Communication

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists communicates effectively to ensure quality service delivery.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Utilize appropriate strategies to communicate with intended audiences (e.g., use oral and written communication, plain language, an interpreter when available).
- b. Provide the patient and/or family/representatives with information and an opportunity to ask questions responding within the parameters of patient confidentiality (e.g., privacy legislation, employer policies).
- c. Adhere to principles of professionalism regardless of the type of communication (e.g., use of electronic/social media).

Expected Outcomes

Patients and/or family/representatives can expect the regulated member to communicate with them clearly, effectively and professionally.

Resources

- ACMDTT. (2006). *Code of Ethics*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- Canadian Public Health Association. (1998). *Easy does it! Plain language and clear verbal communication training manual*. Ottawa, Author. Available at: http://www.cpha.ca/uploads/portals/h/easy_does_it_e.pdf.
- Canadian Medical Association. *Social media and Canadian physicians – issues and rules of engagement*. Ottawa, Author. Available at: <http://www.cma.ca/advocacy/social-media-canadian-physicians>.

Standard Area 3.0 Professional Roles

Standard 3.1 Collaboration/Professional Relationships

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists works effectively as a member of an **interprofessional** team to facilitate quality service delivery and contribute to a positive work environment.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Respect a diversity of opinions and values.
- b. Consult with other professionals, as required, to facilitate timely, appropriate and effective practice.
- c. Refer questions and patient care outside of scope of practice to appropriate health care provider(s).

Expected Outcomes

Patients can expect the regulated member to interact effectively and collaboratively with other health care providers, as required, to ensure quality service delivery.

Resources

- ACMDTT. (2006). *Code of Ethics*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- Canadian Interprofessional Health Collaborative. (2010). *A National Interprofessional Competency Framework*. Vancouver, Author. Available at: http://www.cihc.ca/files/CIHC_IPCompetencies_Feb1210.pdf.

Standard 3.2 Leadership

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists demonstrates leadership through the sharing of knowledge and by supporting professional activities.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Support and promote the profession through mentoring and team contribution.
- b. Facilitate the sharing of knowledge with students, peers, other health care providers, patients and the public (e.g., preceptorships, presentations, journal club).

Expected Outcomes

Patients can expect the regulated member to engage in leadership activities that contribute to overall quality service delivery.

Resources

- ACMDTT. (2006). *Code of Ethics*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- ACMDTT. (2011). *Competency Profiles*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.

Standard 3.3 Evidence-Based Practice

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists uses **evidence-based practice** to ensure quality service delivery. The regulated member also supports the development of new knowledge, when possible.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Strive to use appropriate, current and evolving/emerging knowledge and skills to ensure quality service delivery.
- b. Reflect on clinical practice to ensure quality service delivery.
- c. Support the development of new knowledge when possible (e.g., by participating in/contributing to research activities).

Expected Outcomes

Patients can expect the regulated member to base the services patients receive on knowledge and skills that are current and appropriate.

Resources

- ACMDTT. (2006). *Code of Ethics*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- ACMDTT. (2011). *Competency Profiles*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.

Standard Area 4.0 Practice Management

Standard 4.1 Record Keeping and Information Management

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists is responsible for contributing to accurate, complete and confidential health records and other documentation relevant to the provision of quality patient care.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Maintain comprehensive records (e.g., pertinent aspects of patient care and procedures performed, including adverse reactions, relevant identifiers and demographic information) according to employer policies and procedures.
- b. Ensure records comply with applicable legislation intended to protect the privacy and confidentiality of personal and health information (see also Standard 2.5).
- c. Utilize information and archival systems according to employer policies and guidelines (e.g., paper and electronic health record systems).
- d. Forward patients' records, images and pertinent data to appropriate recipients in accordance with applicable legislation and the employer policies and guidelines.

Expected Outcomes

The patient can expect that processes are followed to ensure the creation and maintenance of accurate, complete and confidential records, charts and other documentation relevant to the provision of quality patient care.

Resources

- ACMDTT. (2006). *Code of Ethics*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- ACMDTT. (2011). *Competency Profiles*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- Government of Alberta. (2000). *Health Professions Act*. Alberta, Author. Available at: www.qp.alberta.ca/documents/Acts/h07.pdf.
- Government of Alberta. (2000). *Health Information Act*. Alberta, Author. Available at: <http://www.qp.alberta.ca/documents/Acts/H05.pdf>.
- Government of Alberta. (2013). *Alberta Netcare Electronic Health Record Information*. Alberta, Author. Available at: <http://www.albertanetcare.ca/2.htm>.

Standard 4.2 Safe Practice

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists conducts procedures with due diligence for the safety of self, colleagues, patients and the general public. The member also maintains safe work practices and effectively manages any potential risk to safety by adhering to employer policies and guidelines relevant provincial and federal regulations and guidelines.

Indicators

To demonstrate this Standard, a regulated member will:

- Participate in quality improvement and **risk management** activities.
- Apply the applicable standards for the handling, use, storage and disposal of materials.
- Adhere to the standards defined in workplace health and safety legislation.
- Apply the appropriate infection prevention and control standards to prevent contamination of persons, equipment and environment (e.g., employ **routine practices**, perform aseptic or sterile technique).
- Recognize an emergency situation and take appropriate action (e.g., seek help, administer first aid/basic life support).
- Perform procedures in a manner that maintains the integrity of patient **ancillary devices** and equipment.
- Seek clarification of orders where a patient safety issue has been identified (e.g., radiation safety, patient suitability).
- Determine, prior to the procedure, if the patient is pregnant and take appropriate action as required.
- Take necessary measures to ensure patient safety (e.g., hearing protection, dental protection, pacemakers).

In addition, a regulated member in the specialties of *nuclear medicine technology*, *radiological technology* and *radiation therapy* will:

- Apply the principles of as low as reasonably achievable (ALARA) in work practices.
- Implement safety practices that adhere to the standard of applicable radiation protection and nuclear safety legislation.
- Utilize personal radiation monitoring devices according to applicable legislation and employer policies and guidelines.
- Inform patient and others of radiation exposure risk, as appropriate to the procedure.

In addition, a regulated member in the specialty of *nuclear medicine technology*, will:

- Determine if the patient is breast-feeding and take appropriate action.

In addition, a regulated member in the specialties of *nuclear medicine technology* and *radiation therapy* will:

- Ensure radiation safety/protection for sealed and unsealed sources (e.g., post warning signs as appropriate, receive, store, handle and dispose of radioactive material according to regulations).
- Contain and restrict access to areas of radioactivity.

In addition, a regulated member in the specialty of *magnetic resonance technology* will:

- Ensure magnet/magnetic field safety of patients and personnel (e.g., emergency response in the case of a

quench, magnetic resonance (MR) safe/MR compatible equipment, ensure appropriate warning signage is in place).

- r. Adhere to appropriate magnetic resonance legislation.

In addition, a regulated member in the specialty of *electroneurophysiology technology* will:

- s. Ensure electrical safety for patients (e.g., indwelling catheters, proper grounding of patients).

Expected Outcomes

Patients can expect the regulated member to deliver services safely and to manage adverse events effectively to minimize the impact on the patient, the member, colleagues and the general public.

Resources

- ACMDTT. (2011). *Competency Profiles*. Alberta, Author. Available at: <http://www.acmdtt.com/Homepage.aspx>.
- Canada. Department of Justice. (2000). *Nuclear Safety and Control Act*. Ottawa, Author. Available at: <http://laws-lois.justice.gc.ca/eng/acts/N-28.3/>.
- Canada. Health Canada. (1987). *Safety Code 26: Guidelines on Exposure to Electromagnetic Fields from Magnetic Resonance Clinical Systems*. Ottawa, Author. Available at: http://www.hc-sc.gc.ca/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/radiation/87ehd-dhm127/87ehd-dhm127-eng.pdf.
- Canada. Health Canada. (2008). *Safety Code 35: Radiation Protection in Radiology – Large Facilities*. Ottawa, Author. Available at: <http://www.dap.org/CmsFiles/File/Safety%20Code%20HC35/Health%20Canada%20Safety%20Code%2035.pdf>.
- Canada. Transport Canada. (1990). *Transport and Packaging of Radioactive Materials Regulations – Dangerous Goods Regulations*. Ottawa, Author. Available at: <http://www.tc.gc.ca/eng/tdg/safety-menu.htm>.
- Canadian Nuclear Safety Commission. (2000). *General Nuclear Safety and Control Regulations*. Available at: <http://nuclearsafety.gc.ca/eng/acts-and-regulations/index.cfm>.
- Canadian Nuclear Safety Commission. (2000). *Radiation Protection Regulations*. Available at: <http://nuclearsafety.gc.ca/eng/acts-and-regulations/index.cfm>.
- Canadian Patient Safety Institute. (2009). *Safety Competencies: Enhancing Patient Safety across the Health Professions*. Available at: www.patientsafetyinstitute.ca/English/toolsResources/safetyCompetencies/Documents/Safety%20Competencies.pdf.
- Government of Alberta. (2000). *Occupational Health and Safety Act*. Available at: www.qp.alberta.ca/1266.cfm?page=002.cfm&leg_type=Acts&isbncln=0779749200.
- Government of Alberta. (2000). *Radiation Protection Act*. Alberta, Author. Available at: <http://www.qp.alberta.ca/documents/Acts/R02.pdf>.
- Government of Alberta. (2000). *Workers' Compensation Act*. Alberta, Author. Available at: <http://www.qp.alberta.ca/documents/Acts/W15.pdf>.
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Standard 4.3 Equipment Quality Control

Standard

A regulated member of the Alberta College of Medical Diagnostic and Therapeutic Technologists operates equipment for which appropriate training has been completed; ensures equipment and materials meet appropriate and applicable safety and operational standards; and follows established quality control (QC) measures.

Indicators

To demonstrate this Standard, a regulated member will:

- a. Have the necessary knowledge, skills and judgment to operate the equipment and utilize materials for procedures.
- b. Operate only registered/licensed/approved equipment while performing procedures.
- c. Operate equipment in accordance with manufacturers' specifications.
- d. Ensure operational readiness of equipment for specified procedure/study.
- e. Ensure cleanliness of equipment (see also Indicator 4.2d).
- f. Regularly inspect equipment for functional and mechanical integrity.
- g. Perform basic troubleshooting and correct or report as appropriate.
- h. Perform or verify regular QC measures on equipment used for procedures, as per employer policies and guidelines and applicable legislation.

In addition, a regulated member in the specialty of *nuclear medicine technology* will:

- i. Perform or verify that appropriate QC has been completed on radiopharmaceutical preparations and their components (e.g., radionuclide purity, particle number).

In addition, a regulated member in the specialties of *nuclear medicine technology and radiation therapy* will:

- j. Perform or verify that appropriate QC has been completed on sealed sources.

In addition, a regulated member in the specialty of *electroneurophysiology technology* will:

- k. Perform or verify QC for leakage current.

Expected Outcomes

Patients can expect the regulated member to operate equipment for which appropriate training has been completed and to ensure equipment and materials meet safety and operational standards.

Resources

- ACMDTT. (2011). *Competency Profiles*. Alberta, Author. Available at: www.acmdtt.com/Homepage.aspx.
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Glossary

Ancillary devices refer to devices which provide necessary support to the primary activities or operation.¹⁰

Competence is the collection of knowledge, skills, judgments and attitudes required by the health care provider to effectively provide quality health services.¹¹

Enhanced practice refers to practice that requires the practitioner to perform restricted activities that are not authorized for the regulated member's area of practice in which they are registered. Regulated members seeking this type of authorization are required to complete advanced training approved by the Council.¹²

Evidence-based practice is 'the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient'.¹³

Expected outcomes describe what patients may expect when a regulated member provides services.

Indicators are guidelines, which illustrate how a standard can be demonstrated and can be used to determine if the standard is being achieved.¹⁴

Interprofessional team collaboration is the process of developing and maintaining effective interprofessional working relationships with learners, practitioners, patients/families and communities to enable optimal health outcomes. Elements of collaboration include respect, trust, shared decision-making and partnerships.¹⁵

Patient-centred Care is an approach in which the health care provider values and respects partnerships with those receiving their services.¹⁶

Position Statements are developed by ACMDTT to provide interpretation of how the College approaches certain circumstances to clarify ambiguities.¹⁷

Practice Standards are developed by ACMDTT to reflect the requirements for specific practice areas requiring additional authorization.¹⁸

Risk Management is the 'identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events'.¹⁹

Routine practices are a set of infection control strategies and standards designed to protect the healthcare provider from potential sources of infectious diseases. Established to prevent the transmission of microorganisms that cause infections in healthcare settings, from patient to healthcare provider, patient to patient and healthcare provider to patient, these practices include five main components: risk management, hand hygiene, personal protective equipment, environmental and administrative controls.²⁰

A **restricted activity** is a high-risk activity performed by a regulated member, when providing a health service, which requires the regulated member to have specific competencies, skills and authorization, by the regulations under the *Health Professions Act*, to perform the activity safely and competently.²¹

A **standard** is 'a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose'.²²

¹⁰ Oxford Dictionaries. (2013). Author. Available at: http://www.oxforddictionaries.com/us/definition/american_english/ancillary.

¹¹ Adapted from: Alberta College of Medical Laboratory Technologists. (2012). *Standards of Practice*. Author: Edmonton. Available at: www.cmlta.org/wp-content/uploads/2012/05/StandardsofPractice.pdf.

- ¹² ACMDTT. (2008). *Position Statement: Enhanced practice in Cross Disciplinary Roles*. Author: Edmonton. Available at: http://www.acmdtt.com/Libraries/About_Us/Position_Statement_-_Enhanced_Practice_in_Cross_Disciplinary_Roles.sflb.ashx.
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- ¹⁵ Canadian Interprofessional Health Collaborative. (2010). *A National Interprofessional Competency Framework*. Author: Vancouver. Available at: http://www.cihc.ca/files/CIHC_IPCompetencies_Feb1210.pdf.
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- ¹⁸ ACMDTT. *Practice Standards*. Available at: www.acmdtt.com/Homepage.aspx.
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- ²⁰ Canada. Canadian Centre for Occupational Health and Safety. (2013). Author: Ottawa. Available at: [Routine Practices : OSH Answers](http://www.ccohs.ca/oshanswers)
- ²¹ Alberta Health. (2013). *Regulated Health Professions*. Available at: <http://www.health.alberta.ca/professionals/regulated-professions.html>.
- ²² International Organization for Standardization. (2013). *What is a Standard?* Available at: <http://www.iso.org/iso/home/about.htm>.

Appendix A

Development of the Revised Standards of Practice

Steps used to develop the revised Standards of Practice included:

- i. Establishment of a working group to guide the development process and provide input and feedback for development of the draft and final documents;
- ii. Development of a Background Document that included a literature review of current trends in and examples of Standards of Practice and other relevant background materials, including the five competency profiles;
- iii. Consultation with key stakeholders using focus groups and interviews to obtain feedback on the current Standards;
- iv. Development of draft revised Standards using existing ACMDTT documents and other relevant background materials;
- v. A facilitated face-to-face meeting with the Advisory Group to provide input into draft revised Standards;
- vi. Revision of draft revised Standards based on Advisory Group feedback;
- vii. Stakeholder validation of draft revised Standards using an electronic survey; and
- viii. Preparation and publication of a final Standards of Practice document.



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