ACCREDITATION AGRÉMENT CANADA
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STANDARDS

Diagnostic Imaging Services

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DIAGNOSTIC IMAGING SERVICES

Diagnostic imaging services assist medical professionals in diagnosing, monitoring and treating their clients' health conditions. Referring medical professionals work with diagnostic imaging providers to select the most appropriate and least invasive diagnostic imaging examination that can achieve the desired results. Diagnostic examinations may include radiology, magnetic resonance imaging, computed tomography, interventional radiology, bone densitometry, ultrasound, mammography, and nuclear medicine (including positive emission tomography).

Accreditation Canada's *Diagnostic Imaging Services Standards* are for organizations providing diagnostic imaging services in a hospital or as an independent centre. These standards promote an integrated approach to diagnostic imaging services where diagnostic imaging providers work with referring medical professionals to deliver safe and quality diagnostic imaging services to clients.

Accreditation Canada's *Diagnostic Imaging Services Standards* contain the following sections:

- Meeting the needs of clients and referring medical professionals
- Having the right people
- Providing a suitable environment
- Selecting, operating and maintaining diagnostic imaging equipment
- Providing safe and appropriate diagnostic imaging services
- Keeping records accurate, up-to-date and secure
- Monitoring the safety and quality of diagnostic imaging services

Legend

Dimensions

Population Focus: Work with my community to anticipate and meet our needs

Accessibility: Give me timely and equitable services

Safety: Keep me safe

Worklife: Take care of those who take care of me

Client-centred Services: Partner with me and my family in our care

Continuity: Coordinate my care across the continuum

Appropriateness: Do the right thing to achieve the best results

Efficiency: Make the best use of resources

Criterion Types

! **High Priority** High priority criteria are criteria related to safety, ethics, risk management, and quality improvement. They are identified in the standards.

ROP **Required Organizational Practices** Required Organizational Practices (ROPs) are essential practices that an organization must have in place to enhance client safety and minimize risk.

Tests for Compliance

Minor Minor tests for compliance support safety culture and quality improvement, yet require more time to be implemented.

Major Major tests for compliance have an immediate impact on safety.

Performance Measures Performance measures are evidence-based instruments and indicators that are used to measure and evaluate the degree to which an organization has achieved its goals, objectives, and program activities.

MEETING THE NEEDS OF CLIENTS AND REFERRING MEDICAL PROFESSIONALS

1.0   **The team plans and designs its diagnostic imaging services to meet the needs of current and future clients and referring medical professionals.**

Appropriateness

1.1   The team collects information at least annually about service volumes, wait times, client perspectives on services, and trends in service needs across different groups such as age or condition-specific populations.

Guidelines

Collecting this information helps the team evaluate the demand for services, identify patterns in service needs, and determine the resources needed.

Appropriateness

1.2   The team collects information at least annually from referring medical professionals about their needs for diagnostic imaging services.

Guidelines

Referring medical professionals may include physicians, nurse practitioners, dentists, chiropractors, podiatrists, and registered midwives. The team may collect this information by administering questionnaires or conducting interviews with referring medical professionals. Results are shared with referring medical professionals.

Client-centred
Services

1.3   The team meets at least annually to review information collected from clients and medical professionals to identify strengths and areas for improvement in service needs, and make changes accordingly.

Continuity

1.4   The team establishes partnerships to provide coordinated diagnostic imaging services.

Guidelines

Partners may include referring medical professionals and other organizations providing diagnostic imaging services. For independent diagnostic imaging centres, partners may also include hospitals.

Appropriateness

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1.5   The organization sets clear lines of accountability for diagnostic imaging services delivered across the organization.

Guidelines

In hospitals, diagnostic imaging services may be provided in other service areas than the imaging department. For example, cardiologists may perform cardiac ultrasound examinations within the cardiology department. In these cases, the organization defines who is responsible to ensure that policies and procedures for diagnostic imaging services are consistently applied across the organization (e.g. staff qualifications, radiation protection, and operation and maintenance of equipment).

2.0   The team provides timely access to diagnostic imaging services.

Appropriateness

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2.1   The team tracks wait times and average response times for elective, urgent and emergent requests for diagnostic imaging services.

Accessibility

2.2   The team identifies, and removes where possible, physical and systemic barriers that prevent clients or referring medical professionals from accessing diagnostic imaging services.

Guidelines

Access may be compromised by barriers that are under the team's control (e.g. hours of operation, physical or language barriers) or by barriers that are not (e.g. transportation, long wait times).

Appropriateness

2.3   The team regularly seeks input from referring medical professionals about how to improve access to diagnostic imaging services and address delays in reporting diagnostic imaging results.

Guidelines

The organization defines what "regularly" means and adheres to that schedule. Input from referring medical professionals is reviewed as needed, and particularly in the event of excessive delays in service.

Efficiency

2.4   The team identifies the resources needed to deliver efficient and timely diagnostic imaging services.

Guidelines

Resources may be financial, informational, structural or related to equipment. The availability of resources may depend on the continuity of funding as well as opportunities to share resources with other organizations.

Team leaders advocate on the team's behalf for the resources needed to achieve the team's goals and objectives.

HAVING THE RIGHT PEOPLE

3.0   **The diagnostic imaging providers are trained, qualified and competent.**

Worklife

!   3.1   The team has position profiles that define qualifications, roles and responsibilities.

Guidelines

Position profiles include a position summary, specify qualifications and minimum requirements for the position, state the nature and responsibilities of the position, and clarify reporting relationships.

Worklife

!   3.2   The team recruits and selects team members based on their qualifications, experience, and fit within the team.

Safety

!   3.3   The team has a management structure in place with clear reporting relationships and lines of accountability.

Safety

!   3.4   The team has an administrative leader responsible for the administration and management of diagnostic imaging services including supervising and directing diagnostic imaging providers.

Safety

! 3.5   The team has a medical director responsible for supervising and directing physicians.

Safety

! 3.6   The team's medical director and physicians are imaging specialists credentialed by the appropriate professional college or association.

Guidelines

Certification requirements vary by jurisdiction. Medical directors are normally certified by the Royal College of Physicians and Surgeons of Canada and their respective provincial college of physicians and surgeons, or by the Collège des médecins du Québec.

Appropriateness

! 3.7   The team's diagnostic imaging providers delivering specialized modalities have specific credentials or training and are approved by their respective college or association to practice each specialized modality.

Guidelines

Specialized modalities may include echocardiography, magnetic resonance imaging, nuclear medicine, position emission tomography, radiography, computed tomography, mammography and ultrasound.

Safety

! 3.8   Team members who administer sedation or monitor clients under sedation maintain a current certificate of proficiency in basic cardiopulmonary resuscitation (CPR).

Safety

3.9   The team supports diagnostic imaging providers to participate in professional development activities on a regular basis.

Guidelines

The organization defines what "regular" means and adheres to that schedule. Professional development activities are related to the team's clinical activities (e.g. equipment training). Support may include access to e-learning programs, time off for coursework or conferences, and tuition reimbursement.

Worklife

3.10   The team evaluates and documents each team member's performance in an objective, interactive, and constructive way.

Guidelines

The team follows the established process to evaluate each team member's performance.

When evaluating performance, the team reviews the individual's ability to carry out responsibilities and consider the individual's strengths, areas for improvement, and contributions regarding patient safety and other areas described in the position profile. They may also seek client or peer input.

A performance evaluation is usually done before the probationary program is completed, and annually thereafter or as defined by the organization. An evaluation may also be completed following periods of retraining, e.g. when new equipment, or skills are introduced.

Worklife

3.11   Each team member has an up-to-date, comprehensive personnel file or employment record.

Guidelines

Personnel files may include the employment contract, record of credentials, training information and performance review documentation.

PROVIDING A SUITABLE ENVIRONMENT

4.0   **The team works in a safe, clean, and private physical environment.**

Efficiency

4.1   The physical environment has clear signage in place to direct clients to the imaging service.

Client-centred Services

4.2   The team has a separate service area that includes space for clients to wait and space for conducting diagnostic imaging procedures.

Safety

!   4.3   For nuclear medicine, the team designates separate waiting areas to segregate clients who have been injected with radioactive substances from other clients.

Client-centred Services

!   4.4   The client service area includes a space for screening clients which respects confidentiality issues prior to their diagnostic imaging examination.

Client-centred Services

! 4.5   The client service area is equipped with a private and secure space for clients to change.

Guidelines

The team protects the client's belongings from theft or loss by offering a secure area for their storage and restricting access to the unit or service area.

Client-centred Services

4.6   The client service area includes client washrooms.

Appropriateness

! 4.7   The client service area includes a space with appropriate equipment and staff for clients to recover following the examination.

Guidelines

This space is used to ensure clients receiving medications such as sedatives are stable and can be released.

Appropriateness

! 4.8   The client service area is accessible to clients using mobility equipment such as wheelchairs, walkers and crutches.

Guidelines

An accessible environment includes washrooms accessible to clients with limited mobility, doorways sufficiently wide to allow access for clients in wheelchairs, and at least one changing area large enough to accommodate a caregiver to help the client.

Safety

! 4.9 The team knows how to identify and report any environmental issues with the temperature, humidity, and ventilation.

Guidelines

Maintaining proper temperature, humidity, and ventilation ensures client and staff safety, as well as optimum equipment function.

Safety

! 4.10 The team posts safety warnings at the entrance of the imaging room and restricts access when it is in use.

Guidelines

Safety warnings may include warning labels about radiation and hazards such as the presence of magnetic fields for magnetic resonance imaging procedures.

Safety

! 4.11 The team has a back-up electrical power system that's regularly tested and meets applicable regulations.

Guidelines

The organization defines what "regularly" means and adheres to that schedule.

Client-centred Services

4.12 Access to spiritual space and care is provided to meet clients' needs.

Guidelines

Spiritual care is available to meet the needs of clients, as required. It includes access to a spiritual leader appropriate to the client's beliefs (e.g., a chaplain, imam, rabbi, or non-denominational counsellor). Clients and families have access to a designated space to observe spiritual practice.

The client's spiritual needs and preferences are seen as integral to the care and healing process, and are discussed when making care decisions that may involve an ethical or spiritual component.

5.0   **The team follows policies and procedures for the safe storage, handling, and disposal of materials and supplies.**

Safety   !   5.1   The team is oriented and updated on the Workplace Hazardous Materials Information System (WHMIS) regulations.

Safety   !   5.2   The team labels and stores chemicals and solutions in compliance with WHMIS regulations.

Safety   !   5.3   The team stores, handles, and disposes of radioactive material in compliance with the Canadian Nuclear Safety Commission.

Guidelines

For information on the laws and regulations set by the Canadian Nuclear Safety Commission, refer to http://nuclearsafety.gc.ca/eng/lawsregs/index.cfm.

Safety

! 5.4   The team cleans up and disposes of contaminated materials from spills, blood, and bodily fluids in compliance with WHMIS regulations.

Guidelines

For materials not included in WHMIS, the team follows the organization's policy for managing hazardous materials.

Safety

! 5.5   The team discards glassware, sharps, and needles in puncture-resistant containers prior to disposal.

SELECTING, OPERATING, AND MAINTAINING DIAGNOSTIC IMAGING EQUIPMENT

6.0 **The team follows policies and procedures for selecting and operating diagnostic imaging equipment.**

Appropriateness

6.1 Diagnostic imaging providers participate in the organization's process for selecting and prioritizing diagnostic imaging equipment and devices.

Guidelines

Other stakeholders involved in the equipment selection process may include biomedical engineers, infection control practitioners and information technologists.

Safety

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6.2 The team follows provincial and federal regulations to register, install, and calibrate diagnostic imaging equipment.

Guidelines

For more information, refer to Health Canada Safety Code 20A (1999): X-Ray Equipment in Medical Diagnosis Part A: Recommended Safety Procedures for Installation and Use and Safety Code 35: Safety Procedures for the Installation, Use and Control of X-ray Equipment in Large Medical Radiological Facilities (2008). Appendix V includes a list of Federal/Provincial/Territorial Radiation Safety Agencies.

Appropriateness

6.3 Diagnostic imaging providers have an up-to-date manual for operating diagnostic imaging equipment that includes manufacturer's instructions and applicable safety regulations.

Guidelines

The manual includes information from the manufacturer regarding any special safety precautions.

Safety

! 6.4 Diagnostic imaging providers are trained on the diagnostic imaging equipment used by the team prior to use.

Guidelines

Training is provided by appropriate personnel (e.g. equipment manufacturer) on new equipment and following upgrades and/or updates to existing equipment.

Appropriateness

6.5 Diagnostic imaging providers have a Policy and Procedure Manual that includes detailed procedures for positioning the client for diagnostic imaging examinations that is signed by the medical director or designate.

Guidelines

The manual includes instructions on how to prepare clients for the procedure, perform each step of the procedure, type and dose of medication required (if applicable), and care for the client after the procedure. Designate refers to the physician in charge of the service.

Appropriateness

6.6 The team orients new diagnostic imaging providers to the Policy and Procedure Manual.

Appropriateness

6.7 The team annually reviews and updates the Policy and Procedure Manual.

Appropriateness

6.8   The team informs the diagnostic imaging providers of updates to the Policy and Procedure Manual, and when new procedures are developed.

Appropriateness

6.9   The team retains previous versions of the Policy and Procedure Manual according to the organization's policy on record retention.

Guidelines

The organization's policy on record retention should be in line with applicable regulations.

7.0   The team follows policies and procedures for maintaining all diagnostic equipment used by the organization.

Safety

7.1   The team has an annual program for preventive maintenance of equipment consistent with manufacturers' recommendations.

Safety

7.2   The team has an equipment log in which to record maintenance and downtime, and to identify and address problems.

Safety

7.3   The team retains preventive maintenance records for at least two years.

8.0   **The team follows a schedule for cleaning and reprocessing all diagnostic devices and equipment.**

Safety

8.1   The individual responsible for the overall coordination of reprocessing and sterilization activities within the organization reviews and approves the team's set up and policies and procedures for cleaning and reprocessing.

Safety

8.2   If the team does not have access to the resources needed to safely clean and reprocess diagnostic devices or equipment at the point of use, the team sends them to the medical device reprocessing department or an external provider.

Guidelines

Examples of diagnostic devices include ultrasound probes (e.g. transesophageal and transrectal).

External providers include organizations with a centralized reprocessing area or private organizations specializing in reprocessing and sterilization services. Additional information can be found in CSA Standards Z314.2-09 and Z314.3-09, Clause 4.2.

Safety

8.3   If cleaning and reprocessing are contracted to external providers, the organization establishes and maintains a contract with each provider and monitors the quality of services provided.

Guidelines

The organization establishes and monitors minimum requirements for its contracted services and verifies that each external provider follows accepted standards of practice, e.g. CSA Standards.

External providers engage in quality monitoring activities, e.g. daily monitoring of printouts and data, maintain reporting systems and data collection, and provide mechanisms to report deficiencies such as defective wraps or items that arrive soiled. The organization reviews copies of reports and printouts and any other documentation demonstrating the quality monitoring performed by the external provider.

Appropriateness

8.4   The team follows the organization's policies and procedures and manufacturers' instructions to contain and transport contaminated devices and equipment to the medical device reprocessing department or external provider.

Worklife

8.5   The team ensures the staff involved in cleaning and reprocessing diagnostic devices and equipment are qualified and competent.

Guidelines

Contaminated probes are a potential source of infection for clients, staff, and service providers. The organization has written requirements for qualification and competency; verifying the qualifications and competency of staff involved in the reprocessing of diagnostic devices is important in preventing the mishandling or improper reprocessing of these devices.

Safety

! 8.6   All diagnostic imaging reprocessing areas are physically separate from client service areas.

Guidelines

Work areas are cleaned daily.

Safety ! 8.7   All diagnostic imaging reprocessing areas are equipped with separate clean and decontamination work areas as well as separate clean storage, dedicated plumbing and drains, and proper air ventilation and humidity levels.

Guidelines

Ventilation helps to remove toxic chemical vapors from the work areas and may include special equipment such as fume hoods. The organization regularly monitors air quality according to its policies and procedures, and Occupational Health & Safety (OHS) legislation.

Storage areas are also well-ventilated and cleaned and disinfected at least weekly.

Safety   8.8   The team follows the organization's policies and procedures and manufacturer's instructions to select appropriate cleaning, disinfecting, and reprocessing methods.

Guidelines

The team refers to the organization's infection prevention and control policies and procedures regarding the selection and testing of disinfectants. These policies and procedures should be in line with a recognized classification system (e.g. Spaulding's)to identify critical, semi-critical, and non-critical items based on the risk of infection. Each classification has requirements for reprocessing that reduce the risk of infection.

Safety ! 8.9   The team follows the organization's policies and procedures and manufacturer's instructions for cleaning and reprocessing diagnostic devices and equipment.

Guidelines

The team refers to the organization's overall policies and procedures for disinfection that cover sorting, soaking, washing, rinsing and drying the items, as well as inspecting each item after drying to ensure proper functioning and to identify any chips, inappropriate sharp edges, wear, and other defects. Any damaged medical device is removed from service and documented.

For more information, refer to CSA Standards Z314.2-09, Z314.3-09 and Z314.8-08.

Appropriateness

8.10   The team stores clean diagnostic devices and equipment according to manufacturer's instructions and separate from soiled equipment and waste.

Guidelines

To minimize damage to diagnostic imaging probes, the team avoids storing them coiled or in their cases. Probes with channels are stored vertically, with channel valves outside the probe.

Safety

8.11   The team has a process to track all reprocessed diagnostic devices and equipment so they can be identified in the event of a breakdown or failure in the reprocessing system.

Guidelines

Tracking of diagnostic imaging devices and equipment is carried out whether or not the organization has a medical device reprocessing department. The information must be readily available and shared with the medical device reprocessing department where applicable.

Safety

8.12   The individual responsible for the overall coordination of reprocessing and sterilization activities within the organization oversees the team's compliance with the organization's policies and procedures on cleaning and reprocessing.

PROVIDING SAFE AND APPROPRIATE DIAGNOSTIC IMAGING SERVICES

9.0   **The team manages and responds to requests for diagnostic imaging services.**

Appropriateness

9.1   The team has a process for providing referring medical professionals with resources for selecting appropriate diagnostic imaging examinations.

Guidelines

For example, the Canadian Association of Radiologists (CAR) developed the CAR Diagnostic Imaging Referral Guidelines to guide referring medical professionals in their selection of diagnostic imaging examinations.

Accessibility

9.2   For diagnostic imaging services, the team receives a written or electronic request that identifies the client and appropriate medical professionals, date of request, level of urgency, relevant clinical information, type of procedure, and special instructions.

Guidelines

Basic client identifiers include the client's name, identification number, age or date of birth, gender and contact information.

Appropriate medical professionals include referring medical professionals and any other medical professionals who are to receive a copy of the report. Contact information for these medical professionals is also included in the request.

Clinical information includes indications, history (e.g. known allergies), provisional diagnosis, and whether a stat report is required.

Appropriateness

9.3   If an urgent or emergent request for diagnostic imaging services is made by telephone, a qualified team member collects and records information and ensures a written or electronic request is received prior to interpreting the results of the diagnostic imaging examination.

Guidelines

The team records information such as the procedure(s) requested, working diagnosis, name of referring medical professional, and date and time of request.

Appropriateness

9.4   If information on a diagnostic imaging services request is incomplete, the team collects additional information prior to conducting the procedure.

Guidelines

The team may contact the referring medical professional or interview the client to obtain the necessary information.

Appropriateness

9.5   The team maintains a written or electronic record of requests for diagnostic imaging services received from referring medical professionals.

Appropriateness

9.6   The written or electronic record shows the daily requests for examinations and includes each client's name, examination type, and the image file number.

Appropriateness

9.7   The team responds to stat orders within a timely manner.

Guidelines

The organization defines what "timely" means and adheres to that schedule.

10.0 **The team prepares clients and their families for diagnostic imaging examinations.**

Client-centred
Services

10.1 The team respects the client's diversity including gender, culture, language, religion, and disability when providing diagnostic imaging services.

Guidelines

For example, the team respects the client's choice to have a diagnostic imaging provider from the same gender complete the examination.

Client-centred
Services

10.2 The team provides clients and their families with information on diagnostic imaging examinations.

Guidelines

Information includes how to prepare for the procedure and addresses concerns such as radiation exposure, appropriate imaging studies, and clinical efficacy.

Client-centred
Services

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10.3 The team reviews information about the diagnostic imaging examination with clients and their families and obtains informed consent either verbally or in writing before conducting the procedure.

Guidelines

This information includes why the examination was chosen, what are the benefits, risks and alternatives (if applicable), and what diagnostic information can be expected from it. This information can be provided to clients by the referring medical professional. However, the team reviews this information with the client as part of the process for obtaining informed consent.

Client-centred Services

10.4 The team understands their roles and responsibilities when clients are unable to make informed decisions, and involves a substitute decision maker when appropriate.

Guidelines

A substitute decision maker may be specified in legislation and may be an advocate, family member, legal guardian, or caregiver. If consent is given by a substitute decision maker, the name of the substitute decision maker, the relationship to the client, and the decision made is recorded in the client record.

Safety

10.5 The team screens clients for allergies and medical conditions prior to the administration of contrast media.

Guidelines

For example, the team screens client for history of renal disease. The referring medical professional can complete this screening. However, the team reviews any pertinent clinical information that may have an impact on the diagnostic examination.

Safety

10.6 For procedures involving radiation to the abdomen or pelvis on women, the team asks female clients of childbearing age whether they are or may be pregnant and documents the response.

Guidelines

There is a protocol for managing clients who are or maybe pregnant.

Safety

10.7 The team screens clients for implants, devices, and materials inside the body.

Guidelines

The team obtains information and documentation about the risks associated with implants, devices, and materials that may hinder the safety of the client and staff as well as the quality of the diagnostic image.

11.0   The team conducts diagnostic imaging examinations.

Client-centred Services

11.1   The team, in consultation with the referring medical professional, chooses the least invasive diagnostic imaging technique necessary to achieve the desired results.

Safety

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11.2   The team shields clients and diagnostic imaging providers during diagnostic imaging examinations in line with Health Canada regulations and, if applicable, the Canadian Nuclear Safety Commission.

Guidelines

For more information, refer to Health Canada Safety Code 35, Sections 2 and 3 on Procedures for Minimizing Radiation Exposure to Personnel and Patients (2008), and to the Radiation Protection Regulations issued by the Canadian Safety Nuclear Safety Commission (2000) for nuclear medicine studies.

Procedures include providing clients with gonadal shields as appropriate. Diagnostic imaging providers are also required to wear individual thermoluminescent radiation devices that are monitored and reviewed by a qualified individual. Dosimeters are used to measure and monitor levels of radiation received by clients and diagnostic imaging providers.

Magnet-safe headphones or earplugs are readily available to protect against temporary or permanent hearing loss as a result of vibrations produced during magnetic resonance imaging examinations.

Appropriateness

11.3   The team follows a specific procedure for people who assist in diagnostic imaging examinations.

Guidelines

For example, the team may need to provide the individual assisting the client with personal protective equipment. Clients with limited mobility may be assisted by a caregiver.

Safety

ROP

11.4   REQUIRED ORGANIZATIONAL PRACTICE: Working in partnership with clients and families, at least two person-specific identifiers are used to confirm that clients receive the service or procedure intended for them.

Guidelines

Using person-specific identifiers to confirm that clients receive the service or procedure intended for them can avoid harmful incidents such as privacy breaches, allergic reactions, discharge of clients to the wrong families, medication errors, and wrong-person procedures.

The person-specific identifiers used depends on the population served and client preferences. Examples of person-specific identifiers include the client's full name, home address (when confirmed by the client or family), date of birth, personal identification number, or an accurate photograph. In settings where there is long-term or continuing care and the team member is familiar with the client, one person-specific identifier can be facial recognition. The client's room or bed number, or using a home address without confirming it with the client or family, is not person-specific and should not be used as an identifier.

Client identification is done in partnership with clients and families by explaining the reason for this important safety practice and asking them for the identifiers (e.g., "What is your name?"). When clients and families are not able to provide this information, other sources of identifiers can include wristbands, health records, or government-issued identification. Two identifiers may be taken from the same source.

Test(s) for Compliance

Major　　11.4.1　　At least two person-specific identifiers are used to confirm that clients receive the service or procedure intended for them, in partnership with clients and families.

Safety !

11.5　　The team confirms the client's identity, nature, and site of the procedure immediately before the interventional procedure.

Appropriateness

11.6　　The team follows the organization's policies and procedures for administering medications such as contrast media, sedatives and radiopharmaceuticals.

Guidelines

The organization's policies and procedures include identifying who is responsible for prescribing, storing, handling, and disposing of medications; preparing medications as per manufacturer's instructions; selecting type and dose for each procedure; using dose protocols for pediatric clients; ensuring that the correct agent is selected prior to administration; verifying the color, clarity and expiration date of the agent; and treating adverse reactions or complications.

Safety !

11.7　　The team monitors clients receiving medications such as contrast media, sedatives and radiopharmaceuticals during and after the examination for adverse reactions or complications.

Safety !

11.8　　When sedatives or anesthesia is administered, the client is monitored by qualified team members during and after the examination.

Guidelines

Qualified team members include physicians, anesthetists, or nurses.

Safety

! **11.9** The team follows the organization's policy and procedure for treating, documenting, and reporting adverse reactions.

Guidelines

Adverse reactions are documented in the client record. Organizations are encouraged to report adverse reactions to Health Canada. Information on reporting adverse reactions can be found online at http://www.hc-sc.gc.ca/dhp-mps/medeff/report-declaration/index-eng.php.

Safety

! **11.10** When medications such as contrast media, sedatives and radiopharmaceuticals are administered to the client, the team ensures it has immediate access to staff trained to deal with medical emergencies (e.g. CPR training), emergency cart, and oxygen equipment.

Guidelines

An emergency cart includes emergency drugs and resuscitation equipment appropriate to the client population (e.g. pediatrics).

Appropriateness

11.11 The team implements standard views of each anatomic area to optimize imaging and minimize exposure to radiation.

Guidelines

In radiology, technique charts of exposure factors and appropriate collimation are used to limit exposure to the anatomic area being examined. Listing exposure factors will reliably produce diagnostic radiographs of anatomic parts of clients of different sizes to minimize the need for repeat exposures. Repeat rates are part of the routine quality control process.

Client-centred Services

11.12   The team uses diagnostic reference levels to optimize radiation protection of adult and pediatric clients.

Guidelines

One of the challenges faced by diagnostic imaging providers is minimizing the radiation dose to the client without compromising the image quality needed to make an accurate diagnosis. Using Diagnostic Reference Levels (DRLs) protects clients from unnecessary radiation exposure by using a dose that is as low as reasonably achievable.

Health Canada has a list of recommended DRL values for a number of radiographic procedures performed on adults and children. The team may set DRLs for other procedures not presented in the list but which are being performed at the organization. DRL measurements can either be performed with a phantom specifically designed for the procedure or with clients. The recommended minimum sample size is 10 clients. For more information, refer to Health Canada Safety Code 35: Section 3.5 on Diagnostic Reference Levels (2008).

Appropriateness

11.13   The team follows appropriate policy and procedures for each diagnostic imaging technique.

Appropriateness

!   11.14   For interventional procedures, the team labels, handles, transports, tracks and stores samples safely and appropriately.

Appropriateness

11.15   The team reviews diagnostic images for positioning and diagnostic quality before the client is released.

Guidelines

The team has a process to review the quality of images and assess the necessity for repeat imaging. The team repeats diagnostic imaging examinations only when diagnostic quality is sub-optimal.

Appropriateness

11.16   The team follows policies and procedures for determining whether a client is fit for release.

Guidelines

Policies and procedures specify when a review by a radiologist is required before the client is released.

Appropriateness   !   11.17   The team provides clients with post-procedure instructions in the event that complications arise after their release.

12.0   The team interprets diagnostic imaging information.

Efficiency   !   12.1   The team interprets elective, urgent and emergent diagnostic imaging results in a timely manner.

Guidelines

The organization defines what "timely" means based on the urgency of the request and adheres to that schedule.

Appropriateness

12.2   The team evaluates whether it is meeting the timeframes set for interpreting diagnostic imaging results and makes improvements if needed.

Safety !

12.3   The team informs the referring medical professionals immediately following unusual, unexpected, or urgent findings.

Guidelines

Unusual, unexpected, or urgent findings are those that require immediate case management decisions. In addition, the team notifies the referring medical professionals if discrepancies are found between the emergency or preliminary report and the final written report.

Appropriateness

12.4   The team documents the communication of results to referring medical professionals.

13.0   **The team reports diagnostic imaging results immediately following interpretation of the images to the appropriate medical professionals.**

Appropriateness

13.1   The report identifies the client, the diagnostic imaging provider, the name of the referring medical professional, and includes relevant information about the procedure.

Guidelines

Basic client identifiers include the client's name, identification number, age or date of birth, gender, contact information and history (e.g. known allergies) where applicable.

Where appropriate, the report also includes the date of last menstrual period; type of contrast media used; amount of contrast or materials used; radiopharmaceutical administered; a description of other medications received; catheters and devices used; fluoro time; issues with the request for the diagnostic imaging examination; reasons for additional views or examinations; whether a preliminary verbal or written interpretation has been given; and comparative information with previous diagnostic imaging examinations if any.

Appropriateness

13.2   The report describes the procedure using anatomical and precise diagnostic terminology.

Appropriateness

13.3   The report is reviewed for accuracy, authorized by written or electronic signature, and includes the name of the radiologist who dictated the report.

Guidelines

If applicable, the report also includes the name of the resident physician or fellow.

Appropriateness

13.4   The team stores diagnostic images and reports together in a clearly labeled master envelope, electronically, or a combination of both.

Guidelines

Whether the diagnostic images and reports are stored in master envelopes or electronically, this information is labeled with the client name, client identification number, and a second client identifier such as health care number or date of birth, and the organization name or site identifier. The master envelope or electronic copy is retrievable.

KEEPING RECORDS ACCURATE, UP-TO-DATE, AND SECURE

14.0 **The team maintains accurate and specific medical records and diagnostic images.**

Appropriateness

14.1 The medical record includes a written or electronic requisition form for the diagnostic imaging service conducted.

Appropriateness

14.2 The requisition form identifies the client, diagnostic imaging provider, the name of the referring medical professional, and information about the procedure.

Guidelines

Basic client identifiers include the client's name, identification number, age or date of birth, gender, contact information and history (e.g. known allergies) where applicable.

Information about the procedure includes the date of request; date received; date of examination; number of images taken; and medications administered including type of contrast used, amount of contrast and/or materials used, fluoro time, and radiopharmaceuticals.

Appropriateness

14.3 The team's diagnostic imaging provider records their initials, name or code (written or electronic) to signify their involvement with the diagnostic imaging procedure.

Appropriateness

14.4   The diagnostic image includes the client's first and last name, a second client identifier, the organization's name, and the time and date of the examination.

Appropriateness

14.5   The team stores securely a copy of the diagnostic image as the permanent record.

Appropriateness

14.6   The permanent record can be retrieved for updates if required.

Guidelines

This ensures that pertinent findings may be recorded, used for comparison with further examinations, and third party diagnostic imaging teams are able to confirm the diagnosis from a review of the image.

Efficiency

14.7   The team uses computer or paper file systems to transmit and store medical records and diagnostic images.

Efficiency

!   14.8   Diagnostic images and reports can be retrieved using client identification information.

Guidelines

The secure storage of images, reports, or medical records ensures client privacy.

Efficiency

! 14.9 The team follows the minimum requirements for retention of medical records consistent with provincial guidelines.

MONITORING THE SAFETY AND QUALITY OF DIAGNOSTIC IMAGING SERVICES

15.0   **The team promotes safety in the diagnostic imaging service environment.**

Safety

! 15.1   The team has a safety program led by a safety officer, a safety committee, or both.

Guidelines

The safety officer or committee is responsible for stopping activities that are deemed unsafe; reviewing all incidents; and making recommendations to prevent a recurrence of an incident.

The safety officer or committee may also be responsible for reviewing the content of the organization's safety manuals and their availability; reviewing orientation, training and education programs, monitoring and evaluating the functions of the organization as they relate to safety; and reviewing and signing off on all documented incidents and recommendations.

Safety

! 15.2   The team has a safety manual adapted for diagnostic imaging services.

Guidelines

The safety manual includes requirements specific to diagnostic imaging services such as client and staff safety; equipment safety; radiation safety; magnetic safety; fire safety; electrical safety; compressed gases; chemicals, solutions, and radioactive material; waste management and disposal; and infection control.

Safety

! 15.3   The team has policies and procedures to deal with medical emergencies.

Guidelines

Examples of medical emergencies for diagnostic imaging services include adverse reactions to contrast media.

Safety

! 15.4 The team prepares for medical emergencies by participating in simulation exercises.

Safety

! 15.5 The team has a process to receive, document and follow-up on medical alerts and safety notifications issued by Health Canada and provincial regulatory bodies.

Safety

! 15.6 Universal fall precautions, applicable to the setting, are identified and implemented to ensure a safe environment that prevents falls and reduces the risk of injuries from falling.

Guidelines

Organizations should identify and adopt precautions for all clients, regardless of risk of falling. The acronym S.A.F.E. (Safe environment; Assist with mobility; Fall-risk reduction; and Engage client and family) describes the key strategies for universal fall precautions. The following are examples of universal fall precautions: familiarize clients to new environments; if you have call buttons (e.g., in washrooms) ensure they are within reach; have sturdy handrails in bathrooms, rooms, and hallways; use appropriate lighting; provide chairs that are appropriate for clients with mobility issues; have mobility aids on hand as appropriate to your client population; keep floor surfaces clean and dry; clean up all spills promptly; keep hallways and care areas uncluttered. It is important to identify precautions that align with the clinical setting and needs of clients in that setting, including their right to live at risk.

Safety

! 15.7 The team identifies high-risk activities and implements verification processes to mitigate risk.

Guidelines

To identify high-risk activities the team may review their services and use this information to develop and implement checking systems to reduce the risk of harm to clients. Across the care continuum, systems will vary depending on services. Examples may include but are not limited to:
• Repeat back or read back processes for diagnostics or verbal orders
• Checking systems for water temperature for client bathing
• Standardized tracking sheets for clients with complex medication management needs
• Automated alert systems for communication of critical test results
• Computer-generated reminders for follow-up testing in high-risk patients
• Two person verification process for blood transfusions
• Independent double checks for the dispensing/administration of high-risk medications
• Medication bar coding systems for drug dispensing, labeling, and administration
• Decision support software for order entry and/or drug interaction checking
• Safety monitoring systems for service providers in community-based organizations, or for clients in high-risk environments
• Standardized protocols for the monitoring of fetal heart rate during medical induction/augmentation of labour, or in high-risk deliveries
• Systems for monitoring of vaccine fridge temperatures
• Standardized protocols for the use of restraints
• Standardized screening processes for allergies to contrast media.

Safety

! 15.8 Patient safety incidents are reported according to the organization's policy and documented in the client and the organization record as applicable.

Guidelines

Reporting and recording is done in a timely way. Patient safety incidents include harmful incidents, no harm incidents, and near misses, as per the World Health Organization International Classification for Patient Safety.

Safety

! 15.9 Patient safety incidents are disclosed to the affected clients and families according to the organization's policy, and support is facilitated if necessary.

16.0 **The team has a quality control program for its diagnostic imaging services.**

Appropriateness

16.1 The team maintains a schedule of quality control procedures.

Appropriateness

16.2 The team records results of quality control procedures, problems identified, and corrective action taken.

Appropriateness

! 16.3 The team conducts and reports on repeat/reject analysis monthly, as part of its quality control program.

Guidelines

Repeat/reject analysis is used to determine the cause of non-diagnostic film or digital images and to indicate required improvements.

Appropriateness

! 16.4   The team documents all repeat/reject analysis including corrective action taken.

Appropriateness

! 16.5   The team retains repeat/reject records for the period set by the organization's policy.

Guidelines

The organization's policy on record retention should be in line with applicable provincial and federal regulations.

17.0   The team collects and uses indicator data to guide its quality improvement initiatives.

Client-centred Services

17.1   The team collects information and feedback from clients, families, staff, service providers, organization leaders, and other organizations about the quality of its services to guide its quality improvement initiatives.

Guidelines

The team gathers information and feedback in a consistent manner from its key stakeholders about the quality of its services. Feedback, in the form of client and family satisfaction or experience data, complaints, indicators, outcomes, scorecards, incident analysis information and financial reports, may be gathered by a variety of methods, including surveys, focus groups, interviews, meetings, or records of complaints.

Appropriateness

17.2   The team uses the information and feedback it has gathered to identify opportunities for quality improvement initiatives.

Guidelines

The team uses feedback as well as other forms of information, and observation and experience, to identify and prioritize areas for quality improvement initiatives. This is done using a standardized process based on criteria such as client-reported outcomes, risk, volume, or cost.

Appropriateness

! 17.3   The team identifies measurable objectives for its quality improvement initiatives and specifies the timeframe in which they will be reached.

Guidelines

Quality improvement objectives define what the team is trying to achieve, and by when. Appropriate quality improvement objectives have targets that exceed current performance. Quality improvement objectives are typically short term and are aligned with longer-term strategic priorities or patient safety areas. The timeframe will vary based on the nature of the area for improvement.

The SMART acronym is a useful tool for setting meaningful objectives, in that they should be Specific, Measurable, Achievable, Realistic, and Time-bound. The United States Centers for Disease Control and Prevention offers a guide to writing SMART objectives.

Appropriateness

17.4   The team identifies the indicator(s) that will be used to monitor progress for each quality improvement objective.

Guidelines

The team uses indicators to monitor whether the activities resulted in change and if the change is an improvement. Primarily, indicators are selected based on their relevance and ability to accurately monitor progress. When there are multiple potential indicators, the team uses criteria to select indicators, such as scientific validity and feasibility. If the team has difficulty selecting indicators, it may mean the quality improvement objective needs further clarification.

Appropriateness

!   17.5   The team collects, analyzes, and interprets data on the appropriateness of examinations, the accuracy of the interpretations, and the incidence of complications and patient safety incidents.

Guidelines

For example, in teleradiology and other diagnostic tests, data is collected on the appropriateness and quality of transmitted data.

Appropriateness

17.6   The team reviews its diagnostic reference levels at least annually as part of its quality improvement program.

Guidelines

DRL values established by organizations for their client population should be reviewed regularly to assess their appropriateness (Health Canada Safety Code 35: Section 3.5 on Diagnostic Reference Levels (2008)).

Appropriateness

17.7   The team uses a utilization management or review process to monitor diagnostic imaging services.

Guidelines

The team records results of the utilization management review and may compare them to external standards or to peer organizations.

Appropriateness

17.8   The team uses results of the utilization management review to educate referring medical professionals and diagnostic imaging providers on the appropriate use of diagnostic imaging services.

Appropriateness

! 17.9   The team designs and tests quality improvement activities to meet its objectives.

Guidelines

Quality improvement activities are the actions used to initiate improvements, and are part of the larger quality improvement plan. Activities are first designed and tested on a small scale to determine their effect prior to implementing them more broadly.

The Getting Started Kit for Improvement Frameworks is a resource created by the Canadian Patient Safety Institute and is based on the Model for Improvement. The Institute for Healthcare Improvement offers a framework to guide quality improvement activities using Plan, Do, Study, Act cycles.

Appropriateness

17.10   The team collects new or uses existing data to establish a baseline for each indicator.

Guidelines

Establishing a baseline reference point makes it possible to monitor progress towards meeting quality improvement objectives by comparing pre- and post-activity data and noting changes. Establishing a baseline may require one or many data points, and occurs over a defined period of time. Once the baseline is established, the team may need to reevaluate their quality improvement objectives to ensure they remain feasible and relevant.

Appropriateness

17.11   The team follows a process to regularly collect indicator data to track its progress.

Guidelines

The team determines how the data will be collected and how often it will be collected. Regularly collecting data allows the team to track its progress over time and understand the normal variation of values.

Appropriateness

! 17.12   The team regularly analyzes and evaluates its indicator data to determine the effectiveness of its quality improvement activities.

Guidelines

The team compares the intended and actual effects of its quality improvement activities, and, if the objective has not been achieved, adjusts its actions accordingly to meet the objective.
Analyzing data identifies trends and may reveal service areas that may need to be considered for quality improvement initiatives. Indicator data collected over time can be displayed in a run chart or control chart, both of which are valid means of data analysis. Safer Healthcare Now! offers Patient Safety Metrics, a web-based tool where organizations can submit data on various interventions, analyze results over time, and generate reports.
If it is not within the team's capacity to analyze the data, it seeks qualified internal or external assistance.

Appropriateness

! 17.13   The team implements effective quality improvement activities broadly.

Guidelines

The team broadly implements the quality improvement activities that were shown to be effective in the testing phase. The way in which the team implements activities broadly will vary based on the scope and scale of the team's services and considers the timeframe, e.g., an effective activity is implemented in more than one area of care and for a longer period of time.

Population Focus

17.14   The team shares information about its quality improvement activities, results, and learnings with clients, families, staff, service providers, organization leaders, and other organizations, as appropriate.

Guidelines

The team tailors the information to the audience and considers the messaging and language level that is appropriate for each audience.

Sharing the results of evaluations and improvements helps staff, service providers, and stakeholders become familiar with the philosophy and benefits of quality improvement and engages the organization's leaders in the process. It also helps the organization to spread successful quality improvement activities within and outside the organization and demonstrate its commitment to ongoing quality improvement. Among other benefits, sharing indicator data externally allows for comparison with organizations offering similar services.

Appropriateness

17.15   The team regularly reviews and evaluates its quality improvement initiatives for feasibility, relevance and usefulness.

Guidelines

The team regularly reviews and evaluates its quality improvement initiatives, including its activities, objectives, and indicators. The team uses the information to plan its future quality improvement initiatives including how and when to sustain or spread existing initiatives within the organization. The team considers outcomes of the quality improvement initiatives as they align with the organization's overall quality improvement plan, goals and objectives, mission and values, and strategic plan. The team evaluates whether objectives were met within their timeframes and whether the timeframes remains relevant.

Based on the review of the initiatives, objectives and indicators may be added, amended, or removed as appropriate. The rationale for amending or removing them is documented.

Accreditation Canada would appreciate your feedback on these standards

Your Name: _____

Organization Name: _____

Email address or telephone number: _____

(A Product Development Specialist may contact you about your feedback.)

Feedback: Please indicate the name of the standard, as well as the criterion number in your comments. Please be as specific as possible in your comments.

For example: I would like to provide comments on the Long-Term Care Services standards, criterion 3.12. Clients should be included in this process. I suggest you change the wording to "The team engages staff, service providers, and clients in the process to plan services."

You may also submit your feedback online HERE

[YOUR COMMENTS HERE]

Thank you for your input! Please send this page to:
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