



BOTSWANA NATIONAL HEALTH QUALITY STANDARDS FOR CLINICS

10. Diagnostic Imaging Service

These forms are designed to be used by both hospital personnel and external surveyors. The following information must be provided after each survey, before submitting the completed survey forms.

1. NAME OF HOSPITAL/CLINIC/FACILITY: _____

2. BASELINE/INTERNAL SURVEY INFORMATION:

Title and name of person who completed this document: _____

Post and position held: _____

Date of survey: _____

3. EXTERNAL SURVEY INFORMATION:

Name of external surveyor: _____

Date of external survey: _____

GUIDE TO COMPLETION OF FORM

N.B. Hospital staff are please to use BLACK ink at all times. The external surveyors are requested to use RED ink at all times.

Please circle the rated compliance with the criterion, e.g. NA (Not applicable), NC (Non-compliant), PC (Partially compliant), C (Compliant).

The default category affected is designated on the form for each criterion as follows:

1. patient and staff safety
2. legality
3. patient care
4. efficiency
5. structure
6. basic management
7. basic process
8. evaluation

The seriousness of the default is designated on the form for each criterion as follows:

1. mild
2. moderate
3. serious
4. very serious

Documents Checked

Surveyor:

Surveyor:



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10.1 Management of the Service

10.1.1 Standard

A diagnostic imaging service is provided by the organisation.

Standard Intent: The organisation has a system for providing the diagnostic imaging services required by its patient population, the clinical services offered and healthcare provider needs.

Diagnostic imaging services, including those required for emergencies, may be provided within the organisation, by agreement with another organisation, or both. The diagnostic imaging service is available after normal hours for emergencies.

Outside sources are convenient for the patients and reports are received in a timely manner, which supports continuity of care. These sources are selected by the organisation on the recommendation of the director or another individual responsible for radiology and diagnostic imaging services. Outside sources of diagnostic imaging meet applicable laws and regulations and have acceptable records of accurate, timely service. Patients are informed when the referring physician owns the outside source of diagnostic imaging.

	Criterion	Comments
		Recommendations
Criterion 10.1.1.1 Critical: .. Catg: Basic Management + Patient Care Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	An adequate, convenient and regular diagnostic imaging service is available.	
Criterion 10.1.1.2 Critical: .. Catg: Basic Management + Patient Care Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	An emergency diagnostic imaging service is available after normal hours.	
Criterion 10.1.1.3 Critical: .. Catg: Basic Management + Legality Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	The selection of an outside source is based on an acceptable record and compliance with applicable laws and regulations.	



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10.1.2 Standard

The diagnostic imaging service meets applicable local and national standards, laws and regulations.

Standard Intent: The organisation ensures that the personnel are knowledgeable about the relevant legal requirements relating to diagnostic imaging. This is ensured by having available copies of the most recent radiation safety report and the local rules relating to the current Ionising Radiation regulations, together with other applicable documents that provide guidance relating to legality.

The organisation satisfies the statutory requirements of the Ionising Radiation regulations, according to the most recent radiation safety report. There are organisational arrangements for obtaining advice on radiation protection and how to deal with a suspected case of overexposure.

	Criterion	Comments
		Recommendations
Criterion 10.1.2.1 Critical: .. Catg: Basic Management + Legality Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	Written policies and procedures address compliance with applicable standards, laws and regulations.	
Criterion 10.1.2.2 Critical: 0 Catg: Basic Process + Legality Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	A copy of the local rules relating to the current Ionising Radiation regulations is available and the requirements are met.	
Criterion 10.1.2.3 Critical: .. Catg: Basic Management + Legality Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	A copy of the most recent radiation safety report is held.	
Criterion 10.1.2.4 Critical: .. Catg: Basic Management + Legality Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	The organisation satisfies the statutory requirements of the Ionising Radiation regulations.	



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Criterion 10.1.2.5 Critical: .. Catg: Basic Management + Pat & Staff Safety Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	A radiation protection supervisor is identified and available to assist a radiation protection inspector in complying with the Ionising Radiation regulations.	
Criterion 10.1.2.6 Critical: .. Catg: Basic Process + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	A patient register is held in the diagnostic imaging department.	

10.1.3 Standard

A radiation safety programme is in place, followed and documented.

Standard Intent: The organisation has an active radiation safety programme that includes all components of the organisation's radiology and diagnostic imaging services. The radiation safety programme reflects the risks and hazards encountered. The programme addresses safety practices and prevention measures for radiology and diagnostic imaging personnel, other personnel and patients. The programme is coordinated with the organisation's safety management programme.

	Criterion	Comments
		Recommendations
Criterion 10.1.3.1 Critical: .. Catg: Basic Process + Pat & Staff Safety Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	There is an established radiation safety programme that addresses potential safety risks and hazards encountered within or outside of the department.	
Criterion 10.1.3.2 Critical: .. Catg: Basic Management + Pat & Staff Safety Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	The safety programme is part of the organisation's safety management programme.	



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Criterion 10.1.3.3 Critical: .. Catg: Basic Management + Pat & Staff Safety Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	Written policies and procedures address the handling and disposal of hazardous materials.	
Criterion 10.1.3.4 Critical: .. Catg: Basic Process + Legality Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	Identified radiation safety risks are addressed by specific processes or devices that reduce those risks, e.g. lead aprons, radiation badges, etc.	

10.2 Facilities and Equipment

10.2.1 Standard

Equipment and machines used to conduct diagnostic imaging studies are adequate and appropriate for the service provided.

Standard Intent: Diagnostic imaging personnel work to ensure that all equipment functions at acceptable levels and in a manner that is safe for the operator(s). Radiology and diagnostic imaging equipment management programme provides for:

- selecting and acquiring equipment
- identifying and inventorying equipment
- assessing equipment use through inspection, testing, calibration and maintenance
- monitoring and acting on equipment hazard notices, recalls, reportable incidents, problems and failures, and
- documenting the management programme.

Testing, maintenance and calibration frequency are related to the use of equipment and its documented history of service.

	Criterion	Comments
		Recommendations
Criterion 10.2.1.1 Critical: .. Catg: Basic Management + Physical Struct Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	The organisation identifies the equipment required for the projected activities.	



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Criterion 10.2.1.2 Critical: '' Catg: Basic Process + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	A diagnostic imaging equipment management programme is implemented.	
Criterion 10.2.1.3 Critical: '' Catg: Basic Process + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	There is an inventory of equipment.	
Criterion 10.2.1.4 Critical: '' Catg: Evaluation + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	There is documented evidence that equipment is tested and calibrated in accordance with organisational policy/SOP (standard operating procedure).	
Criterion 10.2.1.5 Critical: '' Catg: Evaluation + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	There is documented evidence that equipment is maintained in accordance with organisational policy/SOP.	



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10.2.2 Standard

X-ray film and other supplies are regularly available.

Standard Intent: The organisation has identified the quantities of film, reagents and supplies necessary to provide a radiology and diagnostic imaging service to its patients. There is an effective process for ordering or securing essential film, reagents and other supplies. All supplies are stored and dispensed in accordance with defined procedures. The periodic evaluation of reagents ensures accuracy and precise results. Written guidelines ensure the complete and accurate labelling of film, reagents and solutions.

	Criterion	Comments
		Recommendations
Criterion 10.2.2.1 Critical: '' Catg: Basic Management + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Essential quantities of film, reagents and supplies are available.	
Criterion 10.2.2.2 Critical: '' Catg: Basic Process + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	All reagents and solutions are completely and accurately labelled.	
Criterion 10.2.2.3 Critical: '' Catg: Evaluation + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Film and reagents are periodically evaluated for accuracy and results.	



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10.3 Diagnostic Imaging Procedures

10.3.1 Standard

Individuals with adequate training, skills and experience perform X-ray procedures and interpret the results.

Standard Intent: The organisation identifies those staff members who may perform procedures and those who may interpret X-ray films and report the findings. These staff members have appropriate and adequate training, experience and skills and are oriented to their work. Radiographers are given assignments consistent with their training and experience. There are enough staff members to provide the necessary staffing during all hours of operation and for emergencies.

	Criterion	Comments
		Recommendations
Criterion 10.3.1.1 Critical: '' Catg: Basic Management + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	A qualified individual manages the diagnostic imaging service.	
Criterion 10.3.1.2 Critical: '' Catg: Basic Management + Pat & Staff Safety Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Those individuals who may perform X-ray procedures and those who may interpret and report the results are identified.	
Criterion 10.3.1.3 Critical: '' Catg: Basic Management + Legality Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	There is a mechanism that ensures that procedures are performed only by radiographers, radiologists or specially trained doctors and other persons who are authorised to do so by a radiation protection advisor.	
Criterion 10.3.1.4 Critical: '' Catg: Basic Management + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	X-rays are done only upon a signed request from a qualified medical practitioner.	



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Criterion 10.3.1.5 Critical: '' Catg: Basic Management + Patient Care Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	X-rays are interpreted and reported on by appropriately trained and experienced personnel.	
Criterion 10.3.1.6 Critical: '' Catg: Basic Management + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Experts in specialised diagnostic areas are contacted, when needed.	
Criterion 10.3.1.7 Critical: '' Catg: Basic Management + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	A roster of experts for specialised diagnostic areas is maintained.	
Criterion 10.3.1.8 Critical: '' Catg: Evaluation + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Quality control procedures are implemented.	



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10.3.2 Standard

Reporting and recording policies and procedures within the diagnostic imaging service ensure safety and legality.

Standard Intent: X-ray request forms and the ensuing reports must identify the correct patient and the correct site of X-ray. The organisation defines the time period for reporting diagnostic imaging test results. Results are reported within a time frame based on patients' needs, the services offered and the needs of the clinical personnel. Mechanisms are in place to ensure that X-ray results are reported on immediately in an emergency.

The X-ray films are the property of the patient and may be taken away by the patient. Where this is done, the patient must be asked to bring the films for future visits. Where the organisation stores films they are kept according to national regulations.

	Criterion	Comments
		Recommendations
Criterion 10.3.2.1 Critical: '' Catg: Basic Process + Pat & Staff Safety Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Imaging request forms contain the patient's name, examination requested, relevant previous examinations, name of the requesting officer and clinical information to explain the request.	
Criterion 10.3.2.2 Critical: '' Catg: Basic Process + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Diagnostic imaging results are reported on by a qualified person within a time frame that meets clinical needs.	
Criterion 10.3.2.3 Critical: '' Catg: Basic Process + Patient Care Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	X-ray reports by a qualified person contain a clear conclusion (including recommendations for future treatment if appropriate).	



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Criterion 10.3.2.4 Critical: '' Catg: Basic Process + Patient Care Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	A copy of the report is filed in the patient's record.	
Criterion 10.3.2.5 Critical: '' Catg: Basic Process + Patient Care Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Films are available at each visit of the patient.	
Criterion 10.3.2.6 Critical: '' Catg: Basic Process + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Policy defines the length and method of storage of X-ray films.	

10.3.3 Standard

Where ultrasound services are provided, individuals with adequate training, skills and experience perform the procedures and interpret the results.

Standard Intent: The organisation identifies those staff members who may perform ultrasound procedures and those who may interpret and report the findings. These staff members have appropriate and adequate training, experience and skills and are oriented to their work.

	Criterion	Comments
		Recommendations
Criterion 10.3.3.1 Critical: '' Catg: Basic Management + Pat & Staff Safety Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	A qualified individual manages the ultrasound service.	



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Criterion 10.3.3.2 Critical: '' Catg: Basic Management + Pat & Staff Safety Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Those individuals who may perform ultrasound procedures and those who may interpret and report the results are identified.	
Criterion 10.3.3.3 Critical: '' Catg: Basic Management + Legality Compliance NA NC PC C Default Severity for NC or PC = 4 Very Serious	Ultrasound procedures are performed only by individuals with specific training.	
Criterion 10.3.3.4 Critical: '' Catg: Basic Management + Patient Care Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Ultrasound images are interpreted and reported on by appropriately trained and experienced staff members.	
Criterion 10.3.3.5 Critical: '' Catg: Basic Management + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	Experts in specialised diagnostic areas are contacted, when needed.	
Criterion 10.3.3.6 Critical: '' Catg: Basic Management + Efficiency Compliance NA NC PC C Default Severity for NC or PC = 3 Serious	A roster of experts for specialised diagnostic areas is maintained.	



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Criterion 10.3.3.7	Quality control procedures are implemented.				
Critical: ..					
Catg: Evaluation + Efficiency					
Compliance					
NA NC PC C					
Default Severity for NC or PC = 3 Serious					