

Diagnostic Imaging Utilization

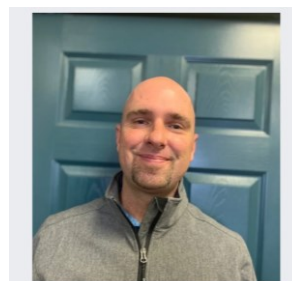


Imaging in Nova Scotia Introduction Unit



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- MPT in 2008 from The University of Western Ontario
- Recently worked at NSH at Halifax Infirmery and Dartmouth General Hospital
- Owner of Physio at Home Halifax
- NSPA Board of Directors
- Chair of NSPA Member Services Committee



Caption

Imaging in Nova Scotia

- Guiding Principles
- Application to the College
- Do no Harm
- NS Health/IWK Health radiology requisition
- How does a patient schedule an appointment
- How radiology reports are made available
- MRHCP (most responsible health care provider, e.g., family doctor, nurse practitioner) and alternatives
- Responsibilities
 - Within Scope
 - Outside of Scope
- Critical Results Contact Number
- Responsibilities of the NSCPT and Physiotherapists



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Guiding Principles

- The ability for Physiotherapists to order imaging allows for
 - Increased efficiency in the delivery of primary health care to Nova Scotians
 - Effective and efficient referral or clinical management of neuromusculoskeletal care with minimal delays to necessary patient care
 - The ability of regulated health care providers to function within their scope of practice in Nova Scotia as part of health care teams to relieve pressure on existing resources



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Personal Health Information Act

What **you**
need to know

The Personal Health Information Act (PHIA) governs the collection, use, disclosure, retention, disposal and destruction of personal health information.

PHIA was proclaimed on December 4, 2012 and came into force on June 1, 2013.



Guiding Principles

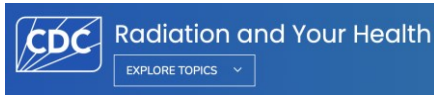
- The Physiotherapist must adhere to all standards, guidelines and legislation related to personal health information, such as the Personal Health Information Act (PHIA)
 - For more information regarding PHIA visit: <https://novascotia.ca/dhw/phia/>
 - Ensure that all records including radiology requests and fax results for all patients are received and stored in a private manner that meets all privacy requirements and are part of the patient record
- Prescribing Physiotherapists must ensure they have the theoretical and practical knowledge to safely and effectively prescribe plain view radiographs
 - This is the purpose of the following units of this course



Nova Scotia Requirements to Order Imaging

- Complete online application for authorization:
 - Application on NSCP Member's portal
 - Click on "Authorized Prescriber" under the Applications tab on left side
 - Complete all required fields with necessary information including;
 - Attestation of competence (Physiotherapist to maintain records and provide on request)
 - Office Fax number which is required for receiving reports. Must be compliant with all health information standards, guidelines and legislation
 - Critical Results contact number: Discussed later
- Upon approving the application NSCP will send any changes to NSH/IWK to update their system with the relevant details

Safety- ALARA



- Following the principle of “as low as reasonably attainable” (ALARA) radiation exposure for each patient through assessment and following evidenced based principles
 - This is discussed in detail in the rest of this course
 - As well, resources are available to help with guidance regarding the current recommendations:
 - <https://choosingwiselycanada.org/recommendation/radiology/>
 - <https://www.acr.org/Clinical-Resources/ACR-Appropriateness-Criteria>
- ALARA principles include avoiding unnecessary duplication of studies in the past year
 - Review available patient records if within the NS Health /IWK Health system through PACS or XERO
 - OR asking the patient if previous studies have been done

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Patient Safety and Communication

- The Physiotherapist is responsible for:
 - Consider the benefits, limitations, contraindications and risks in determining whether the radiograph is required to reach an appropriate diagnosis, clinical impression and/or plan of care
 - Communicate effectively to the patient the reason and process for requesting the radiograph to allow the patient to make an informed and voluntary decision regarding the radiographic studies requested



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Patient Safety and Communication

- The Physiotherapist shall recognize and accept responsibility for the impact of conducting and requesting radiographic studies on the overall costs and sustainability of the health care system, including
 - ensuring clinical necessity for all studies requested
 - that the results cannot be obtained from another source



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The Process

- Physiotherapists will complete and sign an approved NS Health/IWK Health radiology requisition:
 - https://nsphysio.com/images/NSCPGuidelines/Diagnostic_Imaging_Consultation_Request.pdf
- This will include the following information:
 - The General Radiology studies required (within the list of approved images)
 - Relevant clinical Background
 - Requesting Physiotherapists name, phone/fax
 - Name, phone/fax of MRHCP- if applicable

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The Process

- Give the Patient the requisition with information to book the imaging appointment
 - <https://booking.nshealth.ca>
 - Call 902-473-7771 or toll-free at 1-833-952-2782
 - Monday to Friday, between 7:30 a.m. and 4 p.m.

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Nova Scotia Health Diagnostic Imaging Consultation Request

Requisition will be returned if the following information is not provided



EXAM REQUESTED: <input type="checkbox"/> General Imaging <input type="checkbox"/> CT Scan <input type="checkbox"/> Echo <input type="checkbox"/> Ultrasound		<input type="checkbox"/> Nuclear Medicine <input type="checkbox"/> GI Studies <input type="checkbox"/> Ultrasound	Time out: For internal use only	For Internal use only: Date booked: _____ Booking location: _____ Appointment time: _____
PATIENT INFORMATION Health Card # _____ DOB: YYYY/MM/DD _____ Surname _____ First name _____ Middle Initial _____ Tel # _____ Address _____ City _____ Postal code _____ WCB # (where applicable) _____ MRSA/VRE Positive? <input type="checkbox"/> Y <input type="checkbox"/> N Mode of transport: <input type="checkbox"/> Ambulatory <input type="checkbox"/> Chair <input type="checkbox"/> Stretcher <input type="checkbox"/> Portable If exam is for research purposes, provide Account #: _____		PATIENT IDENTIFICATION (For internal use only)		
EXAMINATION REQUESTED				
HISTORY AND PROVISIONAL DIAGNOSIS				
BACKGROUND INFORMATION Relevant surgeries and tests: _____ LMP: _____ Allergies: _____ When 19 weeks gestation: _____ Height: _____ in/cm Weight: _____ lb/kg B-HCG results: _____				
FOR CONTRAST ENHANCED EXAMS Previous allergic reaction to x-ray dye? <input type="checkbox"/> Y <input type="checkbox"/> N		FOR INVASIVE PROCEDURES INR (within 24-48 hours of exam) _____ Platelets (within 24-48 hours of exam) _____ Patient diabetic? <input type="checkbox"/> Y <input type="checkbox"/> N		
If there is a history of renal impairment or metformin use, a recent creatinine level must be provided. If it is not provided, the study will be done without the benefit of intravenous contrast which may limit interpretation of the study. Creatinine level: _____				
REQUESTING PHYSICIAN INFORMATION Requesting Physician's name: _____ Signature: _____ Telephone: _____ Pager No. _____ Fax: _____ Date (YYYY/MM/DD): _____				
RADIOLOGY INSTRUCTIONS (For internal use only) Urgency: <input type="checkbox"/> Emergent <input type="checkbox"/> Urgent <input type="checkbox"/> Semi-urgent <input type="checkbox"/> Non-urgent <input type="checkbox"/> Elective Does patient require B-HCG? <input type="checkbox"/> Y <input type="checkbox"/> N Procedure code: _____				
		TECHNOLOGIST INFORMATION (For internal use only) Room #: _____ Fluoro time: _____ Number of images: _____ Contrast Radiopharmaceutical given: <input type="checkbox"/> Y <input type="checkbox"/> N Amount: _____ Type: _____ Initials: _____		

Requisition Forms CDO013MR_01_2018

Your Health Matters

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List of Approved Images That Can Be Ordered

- Finger - AP/PA, Lateral
- Hand - AP/PA, Oblique, Lateral
- Wrist - AP/PA, Oblique, Lateral
- Forearm - AP and Lateral
- Elbow - AP and Lateral
- Humerus - AP and Lateral
- Shoulder - AP, Y view and axial
- Acromioclavicular joint - AP with and without weights
- Clavicle - AP and Axial
- Scapula - AP and Y View
- Toes - AP/PA, Oblique, Lateral
- Foot - AP/PA, Oblique, Lateral
- Calcaneus - Axial and lateral
- Heel - Harris Heel
- Ankle - AP/PA, Oblique, Lateral
- Tibia/Fibula - AP and Lateral
- Knee -
 - AP (both knees) and Lateral affected
 - Skyline must be specifically requested as clinically relevant)
 - For suspected knee OA, weight-bearing required
- Femur - AP and Lateral
- Hip - AP (both hips) and Lateral affected
- Hips - Frog leg
- Pelvis - AP
- Cervical spine - AP, Odontoid, Lateral, both obliques if part of standard routine
- Thoracic spine - AP, Lateral and Swimmer's view
- Lumbar spine - AP, Lateral, L5S1
- Spine - EOS, scoliosis series
- Sacrum - AP and Lateral
- Coccyx - Lateral
- Sacroiliac joint - AP and both obliques
- Chest for rib views - PA and Oblique

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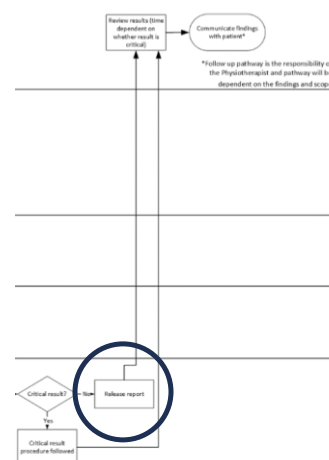
Imaging Reports

- Imaging reports will be made available in NS Health/IWK Health via PACS or XERO after sign off by the Radiologist
- Reports will also be sent by the Diagnostic Imaging department directly to
 - Physiotherapist (faxed to the Private clinic)
 - The client's primary care provider
 - Any specialist identified on the requisition as appropriate
- After completion, the Physiotherapists is encouraged to discuss findings with the Physician/Nurse Practitioner

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Imaging Results are outside the Scope of PT

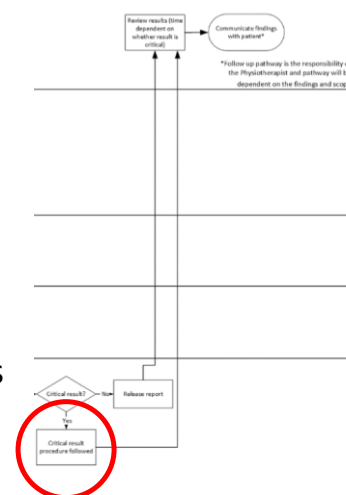
- Sometimes results of imaging require care beyond the scope of the Physiotherapists
- This requires the Physiotherapist to
 - Contact by telephone the patient's MRHCP (Physician/Nurse Practitioner) to ensure the report was received and confirm that the patient will be f/u
- Physiotherapists are not able to comment on results outside of scope



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Imaging Results are outside the Scope of PT

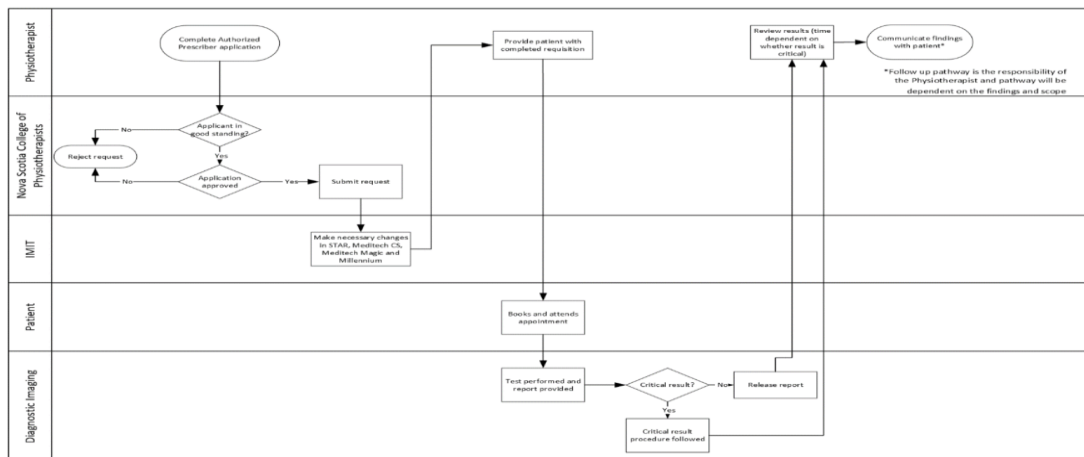
- If the client does not have a primary physician MRHCP, the Physiotherapist will
 - Direct the client to an appropriate outpatient facility, or local emergency department
 - Provide a note indicating the concerns and referencing the x-ray report
- Options for care are available via: <https://www.yourhealthns.ca>
- Physiotherapists are not able to comment on results outside of scope



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Responsibilities

Process Diagram



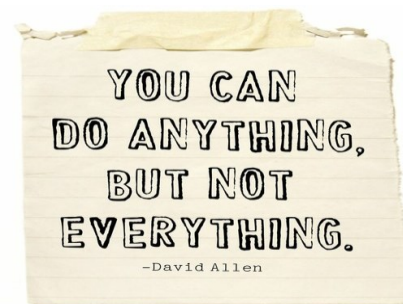
Responsibilities

- Diagnostic Imaging Staff is responsible to send imaging reports by fax/electronic transfer to the

- Ordering Physiotherapist
- MRHCP

Physiotherapist's responsibilities:

- For results within the scope of Practice, the Physiotherapist is responsible for
 - Communicate general radiological findings to the Patient



Responsibilities

- For results outside of the scope of practice the Physiotherapists is responsible for
 - Ensuring appropriate f/u with the MRHCP
- If the patient doesn't have a MRHCP then, the Physiotherapists is responsible for providing a note indicating the reason for concern and referencing the radiological study and directing the patient to
 - A walk-in clinic for non-critical results
 - Emergency department for critical/urgent or emergent imaging results



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Critical Results Contact Number

- Pathway of care
 - In the event of a critical result requiring emergency care the referring physiotherapist is responsible for following up and ensuring the patient is informed and directed to the appropriate care
 - While this is not a frequent occurrence the referring Physiotherapist is responsible for ensuring they can be contacted outside of clinic hours if needed
 - There should be someone available to take calls at this number 24 hours a day
- This is the emergency action plan needed to ensure patients can get the care they need regardless of the imaging results

***Critical results
Urgent/Emero***

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The NSCPT

Responsibility of the NSCPT

1. Provide and maintain a current list of registered Physiotherapists and submit to IMIT (Information Management and Information Technology – NSH) as the register changes.
2. Ensure all registered Physiotherapists have required Professional Liability and Comprehensive General Liability Insurance as per The Physiotherapy Act and Regulations.
3. Provide members any updated legislation, regulations, standards and policies applicable to the referral of patients for general radiography studies in Nova Scotia.
4. House the DI authorized physiotherapists prescriber roster and ensure the list of registrants is available and updated and ensure IMIT has a current list of all registered Physiotherapists using the prescribed form.

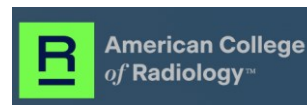
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Practical Knowledge Provided in this course

- Physiotherapists should only request radiography studies when they are able to demonstrate the following kinds of theoretical knowledge to the NSCPT when requested
 - Approved imaging (listed above)
 - Formal rules that govern the use of radiation on patients
 - Risks associated with subjecting patients to radiation for investigations
 - indications and contraindications that should influence whether radiography studies should be requested
 - appropriate study to request in the context of the patient's condition and body part that needs assessment
 - normal anatomy of the relevant body part that will be investigated.
 - The appropriate roles of the various health professionals involved in the process of requesting the investigation
 - the physiotherapist, whose role is to request the study
 - the radiographer, whose role is to perform the radiological procedure
 - the radiologist, whose role is to interpret the investigation and provide a report to the individual who requested it)

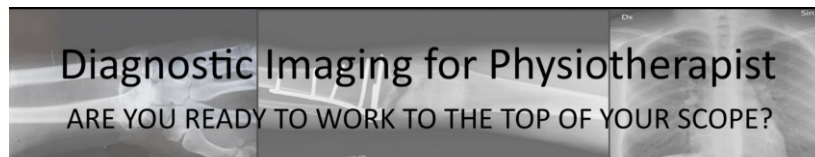
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Theoretical Knowledge Provided in this Course

- Physiotherapists should only request radiography studies when they are able to demonstrate the following forms of practical knowledge to the College upon request:
 - How the study they intend to request falls within their personal scope of practice and competence
 - ability to identify patient specific indications or contraindications
 - ability to assess the radiation load that their patients may have been exposed to and to determine that patients are not irradiated more than necessary
 - Practical knowledge relating to how radiography studies are requisitioned and what kind of information needs to be provided.



Wrap Up

- Meet the criteria for being able to order imaging (taking this course is a big part!)
- Principles of ALARA
- Communication with patients
 - During assessment
 - Directing for imaging
 - F/u after imaging
- Ensure your pathway of care
 - MRHCP
 - Critical Contact information
- Resources for Physiotherapists to help them work to top of scope



Resources

- Nova Scotia College of Physiotherapists
 - [Diagnostic Imaging Authorized Prescriber Guideline- 2024](#)
- Resources for Patients
 - [Having an X-ray \(nshealth.ca\): https://www.ncbi.nlm.nih.gov/books/NBK565865/](#)
 - [Managing Low Back Pain \(nshealth.ca\): https://www.nshealth.ca/sites/default/files/documents/pamphlets/1967.pdf](#)
- Relevant NSH/IWK Policies
 - https://policy.nshealth.ca/Site_Published/NSHA/document_render.aspx?documentRender.IdType=6&documentRender.GenericField=&documentRender.Id=106580
 - https://policy.nshealth.ca/Site_Published/NSHA/document_render.aspx?documentRender.IdType=6&documentRender.GenericField=&documentRender.Id=104964
 - https://policy.nshealth.ca/Site_Published/IWK/document_render.aspx?documentRender.IdType=6&documentRender.GenericField=&documentRender.Id=98343

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Diagnostic Imaging for Physiotherapists

Work to the top of your scope

- Learn the Theoretical and Practical Knowledge needed to meet the NSCPT requirements for ordering imaging
- Self-paced, 4 course series
- Distance learning
- 44 hrs. dictated Powerpoint
- 15 hrs. resource readings/case studies
- 17 links to external resources
- 900 page downloadable handouts

50% discount for NSPTA members
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Diagnostic Imaging- Foundations



Unit 1: X-rays 1

Unit 2: X-rays 2

Unit 3: Imaging ABCs 1

Unit 4: Imaging ABCs 2

Unit 5: Advanced imaging

Unit 7: Fractures 1

Unit 8: Fractures 2

Unit 9: Practice integration 1

Unit 10: Practice integration 2



Diagnostic Imaging- Spine



Unit 1: Cervical spine 1

Unit 2: Cervical spine 2

Unit 3: Thoracic spine

Unit 4: Cranium

Unit 5: Lumbar spine 1

Unit 6: Lumbar spine 2

Unit 8: Pelvis

Unit 9: Practice integration 1

Unit 10: Practice integration 2



Diagnostic Imaging- Extremities



- Unit 1: Hip region
- Unit 2: Thigh and knee regions
- Unit 3: Ankle & foot regions
- Unit 4: Shoulder region 1
- Unit 5: Shoulder region 2
- Unit 6: Elbow & forearm region
- Unit 7: Wrist region
- Unit 8: Hand region
- Unit 9: Practice integration 1
- Unit 10: Practice integration 2



Diagnostic Imaging- Practice Integration



- Unit 1: Legalities
- Unit 2: Ordering imaging
- Unit 3: Errors in imaging
- Unit 4: CAR utilization 1
- Unit 5: CAR utilization 2
- Unit 6: ACR upper limb utilization
- Unit 7: ACR lower limb utilization
- Unit 8: ACR Trauma & spine utilization
- Unit 9: Clinical indicators
- Unit 10: Case studies & resources

