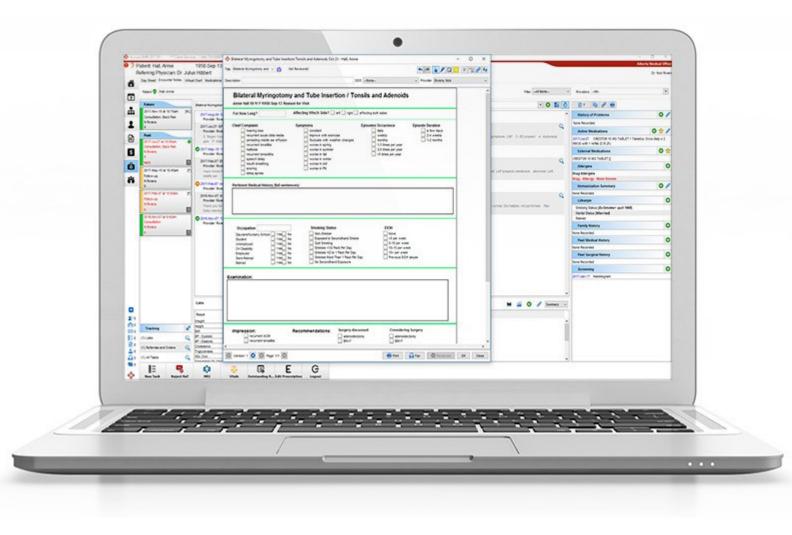
# DIGITIZING THE DIAGNOSTIC IMAGING REQUISITION PROCESS AT HUMBER RIVER HEALTH

Dr. Stephen Halman BASc, MDCM, MSc, FRCSC; Ida Grisoni; Derek Hutchinson RN, BScN, MN; Jennifer Yoon BScN, MSc (QI/PS), PhD Student



#### DESCRIPTION

Humber River Health (HRH) is one of Canada's largest regional acute care hospitals, which serves a catchment of over 850,000 residents. Traditionally, physicians referring their patients for diagnostic imaging procedures would print a requisition and manually transcribe the appropriate patient demographics and necessary procedure requirements. To promote efficiency and accuracy of information communicated for diagnostic testing, HRH prioritized the digitizing of the diagnostic requisition process. This would support surrounding



#### **LESSONS LEARNED**

Digitizing the diagnostic imaging requisition process improves accuracy and efficiency, enabling physicians to focus on providing direct patient care.

primary care and referring physicians in eliminating manual transcription and in creating interoperability by introducing automated fields for those using Accuro Electronic Medical Records (EMRs).

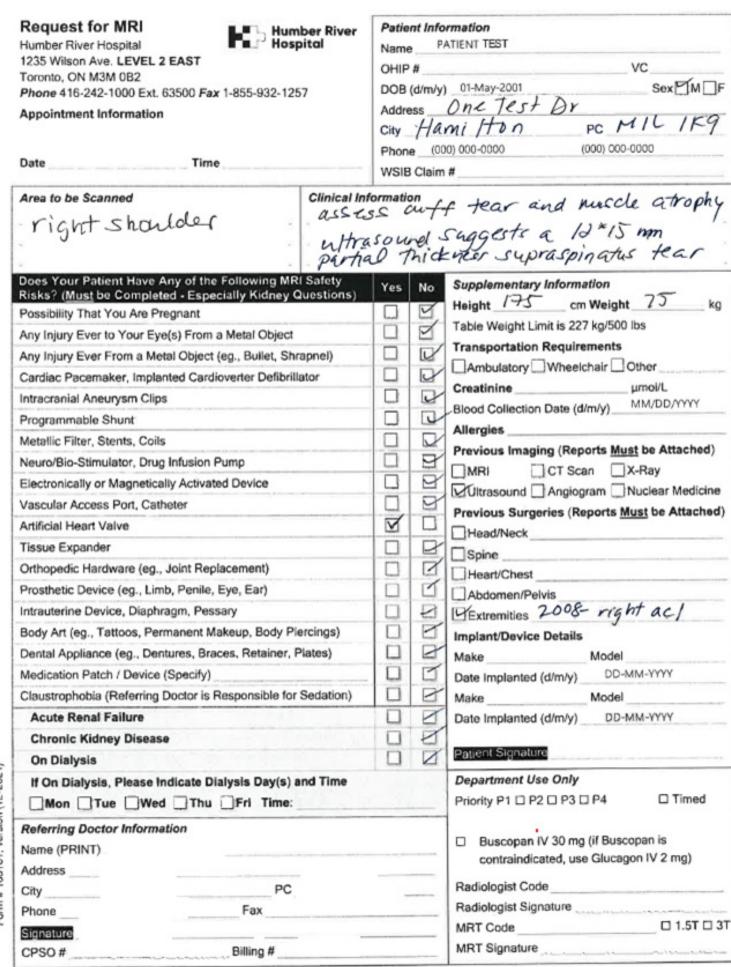
### OBJECTIVE

Promoting accuracy and efficiency in the diagnostic requisition process by reducing manual transcription for physicians.

# **ACTIONS TAKEN**

- Physician stakeholders connected with the Professional Practice Team to update existing diagnostic requisition forms.
- Pre-populated fields for patient demographic and referring physician information were created in HRH's existing diagnostic requisition form through the Accuro EMR system.
- Electronic checkboxes and free text fields were placed on diagnostic requisition forms to allow for electronic entry of procedure information.

Sample screen of Accuro EMR system.



INCOMPLETE, ILLEGIBLE AND/OR UNSIGNED REQUISITION FORMS WILL BE RETURNED

Request for MRI   Humber River River     Humber River Hospital   Humber River Hospital     1235 Wilson Ave. LEVEL 2 EAST   Humber River Hospital     Toronto, ON M3M 0B2   Phone 416-242-1000 Ext. 63500 Fax 1-855-932-1257     Appointment Information   Time		Patient Information       Name     One Test							
					OHIP		VC		
		DOB (d/m/y)     01-Jan-1990     Sex     M     F       Address     One Test Dr							
					Provenue de la construction de l				
					right shoulder	e 1			mm partial thickness supraspinatus tear
					Does Your Patient Have Any of the Following MRI Safety Risks? ( <u>Must</u> be Completed - Especially Kidney Questions)		Yes	No	Supplementary Information
					Possibility That You Are Pregnant				Height <sup>175</sup> cm Weight <sup>75</sup> kg
					Any Injury Ever to Your Eye(s) From a Metal Object				Table Weight Limit is 227 kg/500 lbs
Any Injury Ever From a Metal Object (eg., Bullet, SI				Transportation Requirements					
Cardiac Pacemaker, Implanted Cardioverter Defibrillator			~	Ambulatory Wheelchair Other					
Intracranial Aneurysm Clips			~	Creatinineµmol/L					
Programmable Shunt			•	Blood Collection Date (d/m/y) MM/DD/YYYY					
Metallic Filter, Stents, Coils			•	Allergies					
Neuro/Bio-Stimulator, Drug Infusion Pump			•	Previous Imaging (Reports Must be Attached)					
Electronically or Magnetically Activated Device			•	MRI CT Scan X-Ray					
Vascular Access Port, Catheter		Oltrasound Angiogram Nuclear Medicine							
Artificial Heart Valve			~	Previous Surgeries (Reports <u>Must</u> be Attached					
Tissue Expander			•	Head/Neck Spine					
Orthopedic Hardware (eg., Joint Replacement)			~	Heart/Chest					
Prosthetic Device (eg., Limb, Penile, Eye, Ear)			•	Abdomen/Pelvis					
Intrauterine Device, Diaphragm, Pessary				Extremities 2008 - right acl					
Body Art (eg., Tattoos, Permanent Makeup, Body Piercings)				Implant/Device Details					
Dental Appliance (eg., Dentures, Braces, Retainer, Plates)			~	Make Model					
Medication Patch / Device (Specify)			~	Date Implanted (d/m/y) DD-MM-YYYY					
Claustrophobia (Referring Doctor is Responsible for Sedation)			~	Make Model					
Acute Renal Failure			~	Date Implanted (d/m/y) DD-MM-YYYY					
Chronic Kidney Disease			~						
On Dialysis				Patient Signature					
If On Dialysis, Please Indicate Dialysis Day(s) and Time Mon Tue Wed Thu Fri Time:				Department Use Only       Priority P1 □ P2 □ P3 □ P4     □ Timed					
Referring Doctor Information									
Name (PRINT)			Buscopan IV 30 mg (if Buscopan is contraindicated use Clucaden IV 2 mg)						
Address				contraindicated, use Glucagon IV 2 mg)					
				Radiologist Code					
CityPC									
City PC       Phone Fax				Radiologist Signature					

INCOMPLETE, ILLEGIBLE AND/OR UNSIGNED REQUISITION FORMS WILL BE RETURNED

Physician stakeholders trialed the updated electronic requisition process, which will be incorporated into the Accuro EMR system.

Figure 2.

Diagnostic imaging requisition manually transcribed.

Figure 3.

Electronically completed diagnostic imaging requisition.

## SUMMARY OF RESULTS

By digitizing HRH's diagnostic imaging requisitions, the electronic entry of information reduced manual actions required by physicians. The following action minimized potential errors:

- Patient demographics are auto-populated into the electronic requisition form, reducing errors associated with manual transcription
- Procedure information was transferred transparently as miscommunication from illegible handwriting was reduced

Promoting real-time completion of requisition forms electronically at the time of patient contact not only promotes accuracy, but also facilitates an efficient process. By aligning with HRH's strategic plan, this process was evolved to improve provider experience and positively impact patient care.

Humber River Health 1235 Wilson Avenue Toronto, Ontario M3M 0B2