



Pre-MRI Patient Questionnaire: Clinical Audit

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DISCLOSURE

- None


OUTLINE

- Background
- Aim
- Audit Target
- Methods
- Results (1st Cycle)
- Intervention
- Results (2nd & 3rd Cycles)
- Conclusion

BACKGROUND

- MRI requisition forms from physicians provide variable quantity and quality of clinical information
- Pre-MRI patient questionnaires are used for routine joint MSK MRI exams
 - Provide clinical information that help in the interpretation of the MRI
- Inconsistently completed and/or scanned into PACS with the patient's images

PATIENT QUESTIONNAIRE



Patient Questionnaire for Knee MRI

Name _____ Date _____

Which knee are you having imaged today?
 Right Left Both (please fill out a separate form for each knee)

What is the main complaint?
 Pain Swelling or lump Stiff or 'Locked/Catching'

Where is the pain or swelling localized?
 All over knee Specific spot(s) as marked on back of page

Do you participate in sports?
 No
 Yes - Please describe which sports and how often you play: _____

How long has this been bothering you?
 Less than 2 weeks 2 weeks to 3 months 4 months to 1 year Years

Did you have a specific injury that you can recall?
 No, chronic problem with no specific injury
 Yes, chronic problem made worse by a specific injury
 Yes, acute injury with no prior troubles.
 If history of injury, please describe _____


Have you had a joint injection on this knee?
 Yes No
 If yes - when was most recent injection? _____

Have you ever had surgery or arthroscopy on this knee?
 No
 Arthroscopy only
 Arthroscopy with arthroscopic surgery
 Surgery

If you have had arthroscopic surgery or surgery, what was operated on?
 Please check all that apply

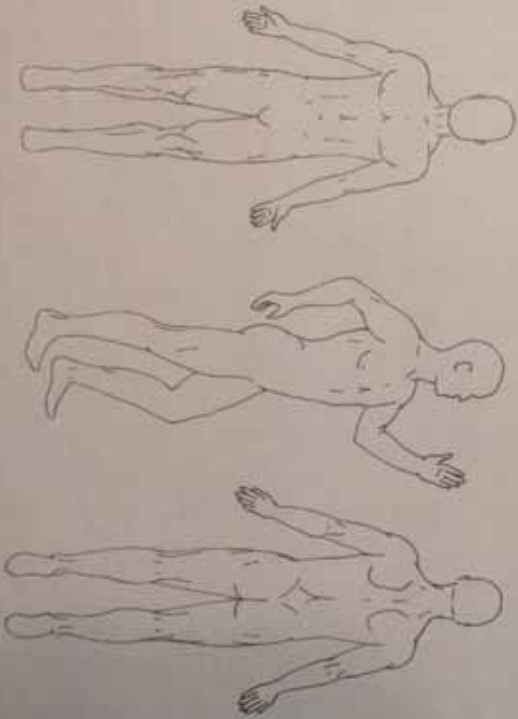
Unsure	Fracture/broken bone
Meniscus	ACL or other ligaments
Cartilage	Joint replacement
Other (please describe)	

Thank you for your time completing this form. This information will be used to help our radiologists match the MRI findings to your specific concerns.



Patient Questionnaire for Knee MRI

Please mark the location of the greatest shoulder pain, swelling or other symptom on picture below



LITERATURE REVIEW

- No national or international standards or guidelines
- Pre-MRI patient questionnaire is not standard across Canada or Saskatoon
- Background literature review revealed no similar type of project has been carried out to date

AIM

- To assess the compliance of the pre-MRI patient questionnaire

AUDIT TARGET

- The questionnaire should be completed and scanned into PACS for 99% of cases

METHODS

PRE-INTERVENTION

Design	<ul style="list-style-type: none">• Retrospective review of pre-MRI patient questionnaires
Patients	<p>Inclusion Criteria:</p> <ul style="list-style-type: none">• All routine joint MRI exams at an university-based practice from October 1, 2015 to December 31, 2015 (shoulder, elbow, wrist, hip, knee and ankle MRIs)• Arthrograms were included <p>Exclusion Criteria:</p> <ul style="list-style-type: none">• Studies with non-routine MRI protocols or selective sequences, such as tumor/infection
Outcome	<ul style="list-style-type: none">• Pre-MRI patient questionnaire compliance

RESULTS

FIRST AUDIT					
Month	Questionnaire Included	Front Page	Completed	Back Page	Completed

RESULTS

FIRST AUDIT					
Month	Questionnaire Included	Front Page	Completed	Back Page	Completed
October	170/182	170/170	170/170	148/170	109/148
November	160/172	160/160	158/160	145/160	111/145
December	70/79	70/70	68/70	66/70	43/66
Total	400/430 93%	400/400 100%	396/400 99%	359/400 90%	263/359 73%

RESULTS

- Did **NOT** meet target of 99% compliance

INTERVENTION

- WHY?
 - Front staff not distributing questionnaire
 - Patients are non-compliant with completing the questionnaire or do not realize there is a second page
 - MRI technicians not scanning questionnaire into PACS
 - Waste of time or cumbersome scanning blank pages
 - Misplaced

INTERVENTION

- First audit results presented at a provincially broadcast PQI presentation in January 2016
- Input obtained from relevant stakeholders, including radiologists who read MSK MRI exams and the MRI technicians/front staff
- Changes made based on feedback

SECOND AUDIT CYCLE

- From March 1, 2016 to May 31, 2016
- Two months between cycles
- A total of 383 MRI exams met the inclusion criteria in the second audit cycle

THIRD AUDIT CYCLE

- From October 1, 2016 to December 31, 2016
- A full year since the first audit cycle
- A total of 371 MRI exams met the inclusion criteria in the third audit cycle

RESULTS

SECOND AUDIT					
Month	Questionnaire Included	Front Page	Completed	Back Page	Completed
March	94/104	94/94	94/94	88/94	88/88
April	112/117	112/112	112/112	107/112	103/107
May	157/162	157/157	156/157	150/157	143/150
Total	363/383 95%	363/363 100%	362/363 ~ 100%	345/363 95%	334/345 96%

RESULTS

THIRD AUDIT					
Month	Questionnaire Included	Front Page	Completed	Back Page	Completed
October	115/116	115/115	114/115	111/115	105/111
November	141/145	141/141	141/141	136/141	131/136
December	108/110	108/108	107/108	107/108	99/107
Total	364/371 98%	364/364 100%	362/364 99%	354/364 97%	335/354 95%

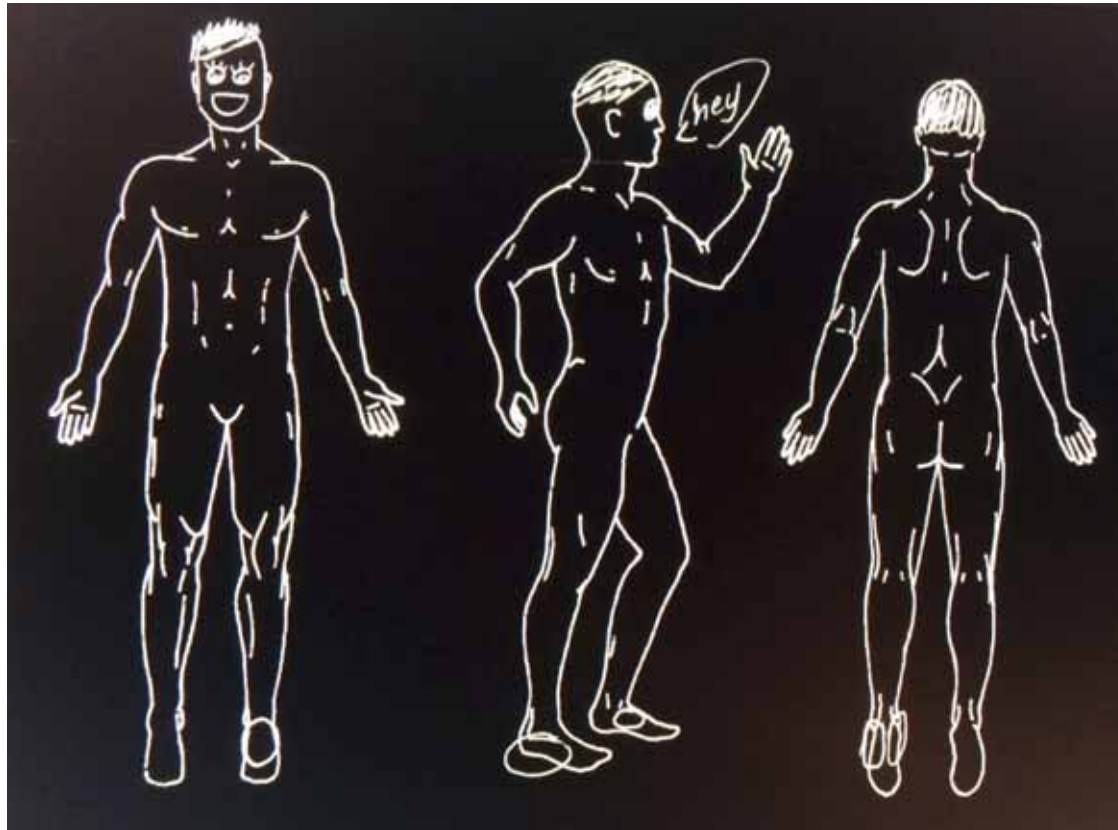
RESULTS

COMPARISON					
Month	Questionnaire Included	Front Page	Completed	Back Page	Completed
First Audit	400/430 93%	400/400 100%	396/400 99%	359/400 90%	263/359 73%
Second Audit	363/383 95%	363/363 100%	362/363 ~ 100%	345/363 95%	334/345 96%
Third Audit	364/371 98%	364/364 100%	362/364 99%	354/364 97%	335/354 95%

CONCLUSION

- First audit cycle showed room for improvement
- Intervention → new questionnaire
- Second audit cycle showed significant improvement
- Third audit cycle performed a full year later showed lasting changes and further incremental improvement

THANK YOU!



REFERENCES

- None