Integrated Patient-Reported Outcomes Measures

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Faculty/Presenter Disclosure

- Faculty: Nathan Urquhart, MD

- Relationships with commercial interests:

  - None

Disclosure of Commercial Support

- No Commercial Support

- Potential for conflict(s) of interest:

  - None

My practice

- Orthopaedic surgeon

- Arthroscopy and Sports Medicine

  - Knee, shoulder, and hip

  - Fellowships

    - McMaster University

    - COA French-Swiss-Belgium travelling fellowship
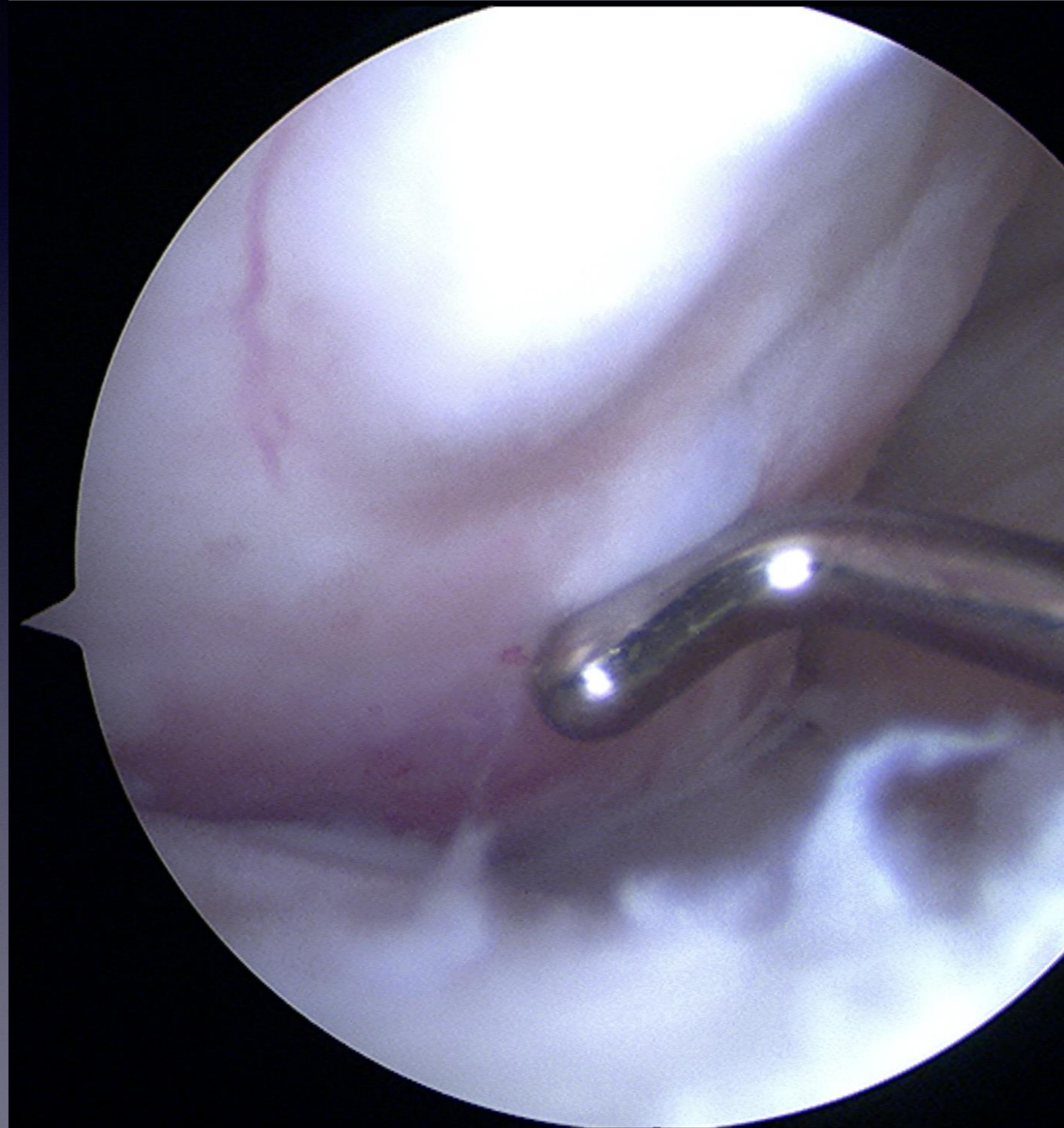
- 4 years practice
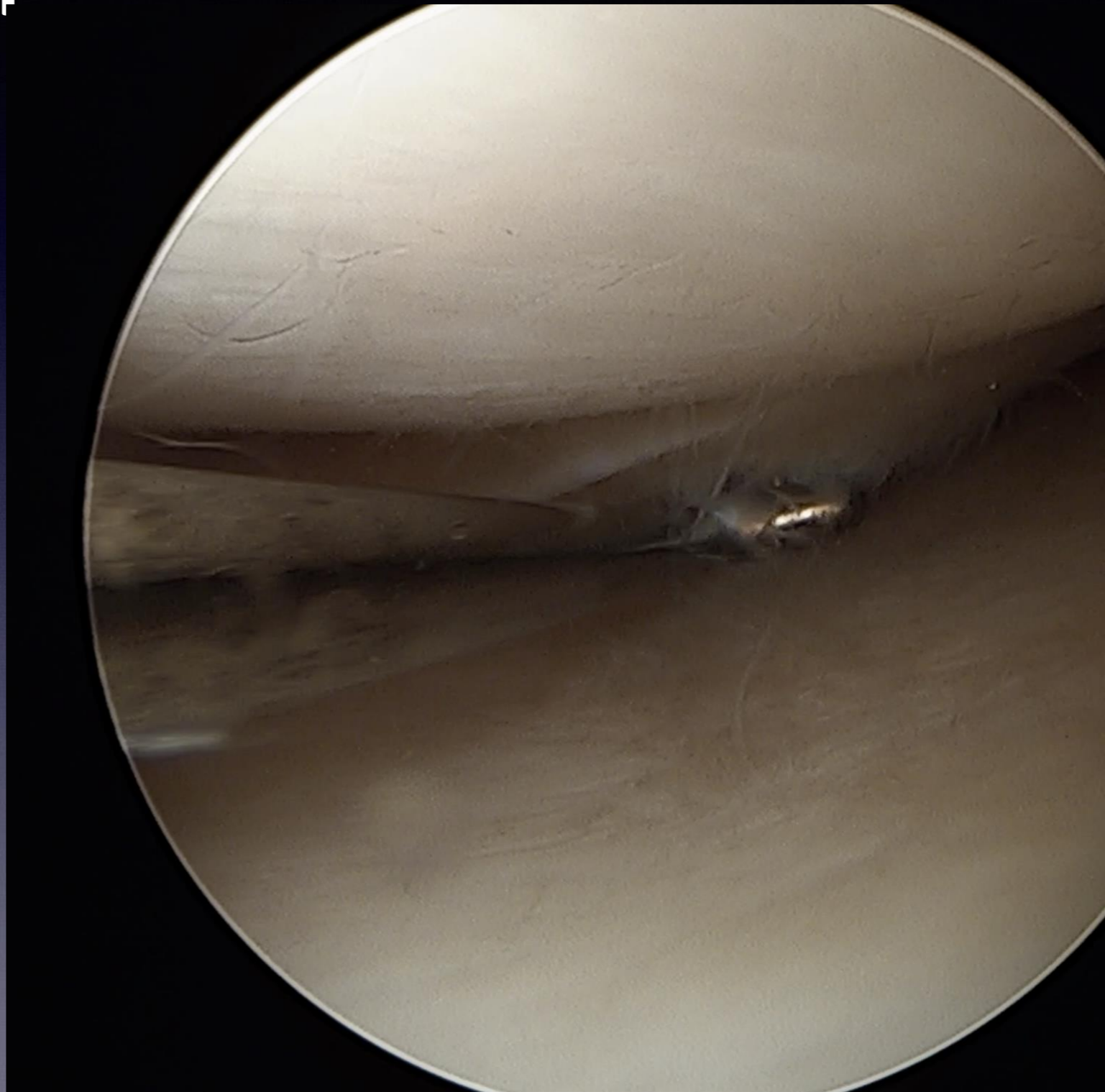
Bias

- We all have them

- New to practice able to design from scratch

- I hate paper

- I like computers

- I have tech savvy admin

  - Pam Shears

Why

- Just because we did something in the past does not mean we should do the same in the future

- We must constantly re-evaluate our past and test the future introduction of new procedures

- Be critical

Practice » Rapid Recommendations

Arthroscopic surgery for degenerative knee arthritis and meniscal tears: a clinical practice guideline

Population

People with degenerative knee disease

Including people with or without:

- Radiographic evidence of osteoarthritis ⓘ
- Mild to severe osteoarthritis
- Mechanical symptoms ⓘ
- Acute onset knee pain ⓘ
- Meniscal tears ⓘ

Choice of intervention

Arthroscopic surgery
Arthroscopic surgery with or without partial meniscectomy or debridement

or

Conservative management
Any conservative management strategy (exercise therapy, injections, drugs)

Recommendations

Favours arthroscopic surgery   Favours conservative management

Applies to 👤 All

Strong | Weak | Weak ⓘ | Strong ⓘ

We recommend against arthroscopic knee surgery in patients with degenerative knee disease

Click for details ⌄

Why

- Evidence based medicine

  - What does the literature say?

- Limited resource environment

- Are we getting the outcomes we think we are?

  - Career stage

  - Proficiency/competency

  - Changes in technique

  - Device failures?

- Banff Sports Medicine, Banff AB

  - Dr. Laurie Hiemstra

  - Dr. Mark Heard

  - ACL and patella instability database

  - Paper based

  - 6 years data

- Dr. Ivan Wong

  - Dalhousie University, Halifax NS

  - Shoulder and hip arthroscopy

- Dr. Nick Mohtadi

  - University of Calgary

How?

- Traditionally paper based

- Labour intensive

- Research staff collects the data essentially
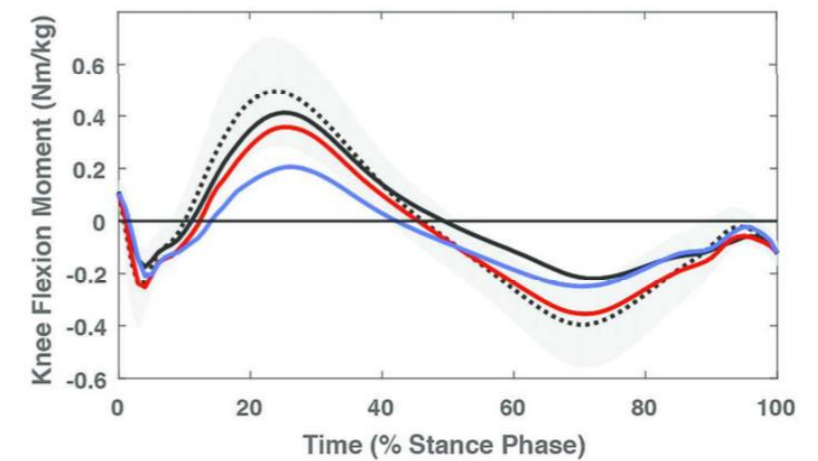
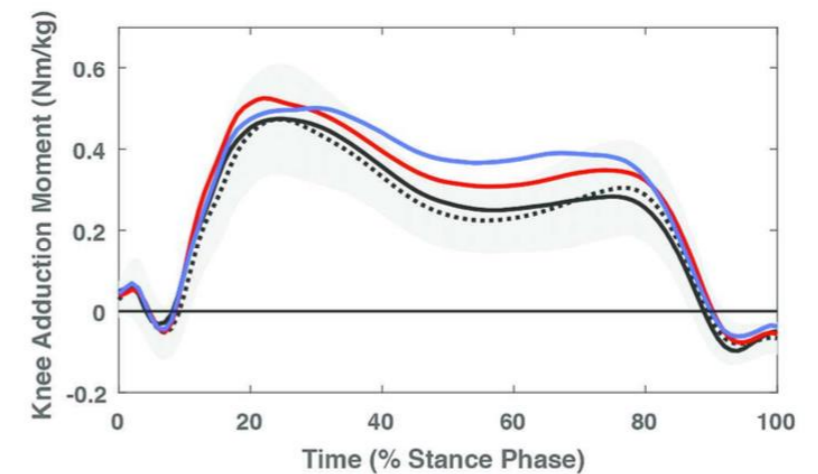- What cost

How?

- EMR - Accuro

- Ocean by CognisantMD

What outcomes are we talking about?

- Patient reported outcome measure scores (PROMS)
  - Condition specific outcome scores
    - Preferably validated
  - Pain
  - Function
  - Psychological impact
  - Satisfaction
- Gait analysis
  - Gait lab
- Imaging modality based
  - Healing
    - Xray for bone
    - MRI soft tissue
  - Progression
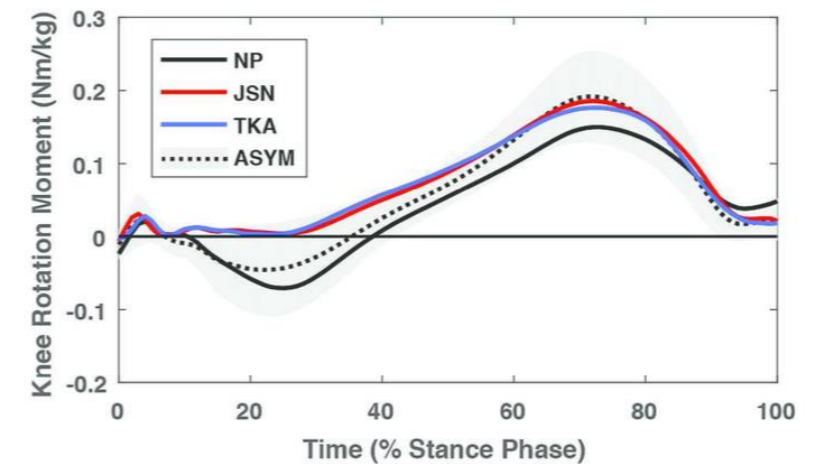
Other data

- Intra operative info

  - Cartilage scores

  - Meniscus pathology - knee

  - Ligament injury - knee

  - Labrum tears - shoulder and hip

  - Bone loss - shoulder

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Consent

PATIENT INFORMED CONSENT FORM

Please consider the following statements and provide consent where you wish. You do not have to consent to all options.

❖ Please Print Full Name: _____

1. **Consent to allow collection of patient reported outcome measures (PROMs) for education and research purposes:**
· To allow the office of Dr. Nathan Urquhart to use a web based program to contact you via email for clinic appointments, information around surgery, and to collect information on how you are feeling before and after surgery. The information on how you are feeling is called patient reported outcome measures (PROMs). This information is usually in the form of surveys to help us understand how you are feeling and how your orthopaedic issue affects your quality of life.
· This information is used to improve patient care. This improvement will occur through education and possibly research.
· If any research is performed, the researcher will gain a separate approval from a Research Ethics Board and abide by any conditions the Research Ethics Board requires.

Signature	Name (Printed)	Date (YY-MM-DD)

2. **Consent for surgical and diagnostic video, images, and/or spoken words to be recorded for education and research purposes:**
· To allow the recording of your image and voice (eg. Photographs, audio, or video)
· To distribute your de-identified images or recordings in any medium, be it print or electronic form, which may include online publications or presentations.
· To grant permission to other entities to reproduce the images or recording for educational purposes.
· That there is no reimbursement for the right to take, or to use your photograph, video or recording.

Signature	Name (Printed)	Date (YY-MM-DD)

3. **Consent to access health information for research screening and contact and/or publication:**
· To allow Researchers in the office of Dr. Nathan Urquhart to have access to my health records in order to determine my eligibility to participate in a research study.
· If I meet the criteria in approved research that I may be contacted about participating.
· To allow your personal health information to possibly be used for the purposes of improving the care and treatment of orthopaedic patients through review and research.

Signature	Name (Printed)	Date (YY-MM-DD)

Surveys and/or Reminders are generated and sent through email.
Please provide your email address that you would like information to be forwarded to:
❖ Email Address: _____

Thank you for your time and patience!
If you have any questions about your rights as a patient, you can contact Patient Relations at (902) 473-2133

Consent process

- Explain it to the patients and how it helps them
  - Take 30 seconds of your time and explain why you do this
    - It is like a report card
    - Objectively shows you how you are doing
    - Better define who and when patients benefit from surgery
    - 95% consenting to process
      - There is some loss from this number but with current system it is possible to identify who does/does not.
  - Respect
    - Elderly
    - Literacy
    - Lack of computer access

Accuro plus Ocean

Application of algorithms

Template Details

Email Subject

Scope ACL

Message from Dr. Urquhart

Email Salutation

Dear @ptPreferredOrFirstName,

Email Body

You are schedule for your ACL surgery in the coming days. We want to provide you some important information before your surgery and collect some information to ensure you have a good experience your day of surgery and post operatively.

[weblink]

If you have any questions or anything should change with your availability, please call our office at (902) 477-6002 or email nathan.urquhart@nshealth.ca

eForms Added:
ACL outcomes
☑ Notify me when complete
Link expiry: 100 days
* Please use the individual patient email dialog to edit your templa

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Template Details

Email Subject

New consult Queen Square

Message from Dr. Urquhart

Email Salutation

Dear @ptPreferredOrFirstName,

Email Body

You have been booked to see Dr Nathan Urquhart at the Queen Square office. The civic address is 45 Alderney Drive, Suite 1802, Dartmouth. We are located on the 18th floor, Suite 1802. Please note, there is parking at Alderney Landing and various street parking options (coin operated meters).

@apptDate @apptTime

The following form is a checklist to prepare you for your upcoming appointment.

eForms Added:
Consent
☑ Notify me when complete
Link expiry: 100 days
* Please use the individual patient email dialog to edit your templates.

✖ Cancel   ✔ Save

Ocean

Welcome to our ACL outcomes survey! Thank you for taking the time to fill out these forms. These forms are important to track how your knee is working both before surgery and after surgery.

Please select the injured or surgical side: [Right Knee] [Left Knee]

From the list below, please check the assessment you will do TODAY. Please check ONE box only.

☑ Pre op

☐ 6 months after surgery

☐ 9 months after surgery

☐ 1 year after surgery

☐ 2 years after surgery

☐ 5 years after surgery

EMR ID (do not edit):

[⌄]

[Finish]

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by CognisantMD

With your finger or pointer please mark on the sliding scale the extent of your level of pain. A mark on the far left means no pain. A mark on the far right means the worst pain possible. A mark may be place anywhere on the line which equals the level of pain you experience.

Please indicate the severity of your pain during activity:

No pain   Worst possible pain

Please indicate the severity of your pain at rest:

No pain   Worst possible pain

ACL-QOL

- Nick Mohtadi - University of Calgary

Symptoms and Functional Limitations

The following questions are related to SYMPTOMS and physical COMPLAINTS regarding your knee injury.

1a. With respect to your overall knee function, how troubled are you by the severity of "giving way" episodes?

0 Major giving-way   100 Never gives-way

1b. With respect to your overall knee function, how troubled are you by the frequency of "giving way" episodes?

0 Constantly   100 Never

2. With any kind of prolonged activity (i.e. greater than half an hour) how much pain or discomfort do you get in your knee?

0 Severe pain   100 No pain

3. With respect to your overall knee function, how much are you troubled by stiffness, or loss of motion, in your knee?

0 Severely troubled   100 No trouble

4. Consider the overall function of your knee and how it relates to the strength of your muscles. How weak is your knee?

0 Extremely weak   100 No weakness

Symptoms - These questions should be answered thinking of your knee symptoms during the last week.

1. What is the highest level of activity that you can perform without significant knee pain?

[dropdown ▲▼]

This field cannot be left empty.

2. During the past 4 weeks, or since your injury, how often have you had pain?

0	1	2	3	4	5	6	7	8	9	10
Never										Constant

3. If you have pain, how severe is it?

0 No	1	2	3	4	5	6	7	8	9	10
Pain										Worst Pain

4. During the past 4 weeks, or since your injury, how stiff or swollen was your knee?

Not at all   Mildly   Moderately   Very   Extremely

5. What is the highest level of activity you can perform without significant swelling in your knee?

[dropdown ▲▼]

6. During the past 4 weeks, or since your injury, did your knee lock or catch?   No   Yes

7. What is the highest level of activity you can perform without significant giving way in your knee?

[dropdown ▲▼]

Previous   Next

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by CognisantMD

Clinical decision making

- Results flow directly into EMR

  - Can see it on follow up

  - Frequently use it pre op in deciding if a patient is bad enough for surgery

  - Long term can then subdivide and classify patients

Notes

2017-Sep-22: Ocean: Knee injury and Osteoarthritis Outcome Score (KOOS)

Knee injury and Osteoarthritis Outcome Score (KOOS)   Symptoms: Knee swelling: Sometimes Knee ginding/clicking: Sometimes Knee catching: Rarely Able to straighten knee: Always Able to bend knee: Sometimes   Stiffness Knee stiffness severity in morning: Mild Knee stiffness severity later in ...

2017-Sep-22: Ocean: IKDC Subjective Knee Evaluation Form

IKDC Subjective Knee Evaluation Form   Symptoms 1. Highest level of activity without knee pain: Light activities like walking, housework or yard work 2. Frequency of pain in the past 4 weeks or since injury score: 7/10 3. Pain severity score: 5/10 4. Severity of knee stiffness or swelling in th...

2017-Sep-22: Ocean: Tegner

Tegner activity level scale @tegnerbefore: Level 9 Competitive sports – soccer, football, rugby (lower divisions), ice hockey, wrestling, gymnastics, basketball @tegnercurrent: Level 2 Work – light labor walking on uneven ground possible, but impossible to pack or hike

2017-Sep-22: Ocean: Marx Activity Rating Scale v2

Marx Activity Rating Scale Please indicate how often you performed each activity in your healthiest and most active state, IN THE PAST YEAR. 1. Running: Running while playing a sport or jogging One time in a week 2. Cutting: changing directions while running 4 or more times in a week 3. Deceler...

2017-Sep-22: Ocean: PCSv2

When I am in pain ... 1. I worry all the time about whether the pain will end. 2 To a moderate degree 2. I feel I can't go on. 1 – To a slight degree 3.

Royal College

- Part of the current medical eduction portfolio is self evaluation

  - Forces you to look at your outcomes

  - Down the road groups and surgeons will likely publish outcomes as bench marks

  - If we can standardize we can better define learning curves

    - More controversial end of career tail off?

Framework of Continuing Professional Development Activities

SECTIONS	CATEGORY	EXAMPLES	CREDIT RATING
Section 1: Group learning	**Accredited group learning activities** Conferences, rounds, journal clubs or small-group activities that adhere to Royal College standards. Accredited group learning activities can occur face-to-face or online.	• *Accredited rounds, journal clubs, small groups* • *Accredited conferences*	*1 credit per hour*
	Unaccredited group learning activities Rounds, journal clubs, small-group activities or conferences that have not been submitted for accreditation and have no industry sponsorship.	• *Unaccredited rounds, journal clubs, small groups or conferences*	*0.5 credits per hour (maximum of 50 credits per cycle)*
Section 2: Self-learning	**Planned learning** Learning activities initiated by a physician (independently or in collaboration with peers or mentors) to address a need, problem, issue or goal relevant to their professional practice.	• *Fellowships* • *Formal courses* • *Personal learning projects* • *Traineeships*	*100 credits per year* *25 credits per course* *2 credits per hour* *2 credits per hour*
	Scanning Learning activities used by a physician to enhance their awareness of new evidence, perspectives or discoveries that are potentially relevant to their professional practice.	• *Reading a book* • *Reading a book chapter* • *Reading a journal volume* • *Reading a journal article* • *Bulk journal reading with transcript* • *Bulk online reading/scanning with transcript* • *Podcasts, audio, video* • *Internet searching (Medscape, UpToDate, DynaMed)* • *POEMs*	*10 credits per book* *2 credits per chapter* *2 credits per volume* *1 credit per article* *1 credit per article* *1 credit per hour* *0.5 credits per activity* *0.5 credits per activity* *0.25 credits per activity*
	Systems learning Learning stimulated by participation in activities such as setting practice standards, patient safety, continuous quality improvement; curriculum development; assessment tools and strategy development; examination board membership; or peer review.	• *Clinical practice guideline development* • *Quality care/patient safety committee* • *Curriculum development* • *Examination development* • *Peer review*	*20 credits per year* *15 credits per year* *15 credits per year* *15 credits per year* *15 credits per year*
Section 3: Assessment	**Knowledge assessment** Programs approved by Royal College accredited CPD provider organizations that provide data with feedback to individual physicians regarding their current knowledge base, enabling the identification of needs and development of future learning opportunities relevant to their practice.	• *Accredited self-assessment programs*	*All assessment activities are 3 credits per hour*
	Performance assessment Activities that provide data with feedback to individual physicians, groups or interprofessional health teams related to their personal or collective performance across a broad range of professional practice domains. Performance assessment activities can occur in a simulated or actual practice environment.	• *Accredited simulation activities* • *Chart audit and feedback* • *Multi-source feedback* • *Direct observation* • *Feedback on teaching* • *Annual performance review* • *Practice assessments*	

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MOC Program cycle requirements

The MOC Program is based on a five-year cycle, the first cycle beginning January 1 of the year following admission to the program. You must complete a minimum of

- **40 credits** per year, and
- **400 credits** over each five-year cycle.

Section 3 is 25 credits

Keys to success

- Cost
  - There generally is not renumeration for this
  - This is not easy to roll out across your practice
  - Hard cost vs reoccurring cost
    - I blew $6000 in my first 6 months because of poor system design
- Automation
- Ability to track when patient does not fill out the form
- Spend money on the people to analyze and follow up missed patients. Try and avoid paying to collect the data.

~~Keys to success~~
Keys to simply avoiding total failure

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Barriers

- Cost
  - Paper vs electronic
    - Neither are free
      - Electronic tends to have more upfront cost
      - Paper more backend cost
    - Tablets
    - Data input
    - Form design and publishing

- Output format/extraction
  - Data management Literacy
- Time requirement for patient/number of questions
- Validated outcome scores

Summary

- Cost effective outcome assessment through automation

- Enhanced decision making in selecting patients for surgery

- Practice self-review (Royal College Mandate)

- Creation of procedure database to identify patient factors that may predict patient outcomes (positive or negative)

Any questions?