



## Physical Medicine & Rehabilitation Conference

**Accreditation:** This program has been accredited by the College of Family Physicians of Canada and the Quebec Chapter for up to 5.00 Mainpro-M1 hours.

This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada for 5.00 hours. This program has been reviewed and approved by the Canadian Association of Physical Medicine and Rehabilitation, Continuing Professional Development Committee.

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**Purpose:** To bring together superb experts to give high impact interactive lectures and to disseminate cutting-edge information on topics pertinent to the field of PM&R. This yearly University of Toronto PM&R Division conference will address different topics each year.

**At the end of this conference, participants will be able to update physiatrists on rehabilitation after trauma including:**

1. Examine how rehabilitation fits in the trauma system in Ontario
2. Review acute care updates in traumatic brain and spinal cord injury
3. Appraise and criticize rehabilitation of mild traumatic brain injury
4. Describe updates in burn rehabilitation
5. Discuss the latest methods in musculoskeletal trauma rehabilitation

November 3, 2017

8:00- 8:25	Breakfast & Registration
8:25- 8:30	Welcome Remarks <i>Dr. Larry Robinson &amp; Dr. Hossein Amani (Co-Chairs)</i>
8:30-9:30	<i>Acute Spinal Cord Injury Care</i> Speaker: <i>Dr. Michael Fehlings</i>
9:30-10:30	<i>Acute Trauma Care: From EMS to End of Life</i> Speaker: <i>Dr. Avery Nathens</i>
10:30-11:00	Break
11:00-12:00	Concussion & Traumatic Brain Injury Debate Speakers: <i>Dr. Mark Bayley &amp; Dr. Shawn Marshall</i>
12:00-12:20	Break & Get Lunch (Return to plenary for working lunch)
12:20-12:30	<i>Why Medical Cannabis?</i> Speaker: <i>Bryan Hendin &amp; Gena Loheswaran</i>
12:30-12:55	<i>Unique Therapeutic Qualities of Botulinum Toxin A Products – A review of the 3 current toxins in Canada and their similarities and differences</i> Speaker: <i>Nancy Simonot</i>
12:55-13:20	<i>An Update on Cervical Dystonia</i> Speaker: <i>Dr. Alfonso Fasano</i>
13:20-13:30	Trianta Longo Personal Injury Lawyers Speaker: <i>Fabio Longo</i>
13:30-13:40	Canopy Growth Title TBD Speaker: Grant Koehler
13:40-13:55	Short Break
13:55-14:50	<i>Musculoskeletal Trauma Rehabilitation: An Overview</i> Speaker: <i>Dr. Ed Hanada</i>
14:50-15:55	<i>Burn Rehab</i> Speaker: <i>Dr. Matthew Godleski</i>
15:55	Closing Remarks

## Session Descriptions

**Advances in the Management of Acute Spinal Cord Injury: What is new? What is hot?**

*Dr. Michael Fehlings*, Staff Physiatrist, St. John's Rehabilitation Hospital - Sunnybrook

At the end of the session, the participants will be able to:

- Describe the role and timing of surgical intervention for acute spinal cord injury and the concept of "Time is Spine"
  - Describe the revised guidelines on the role of methylprednisolone in the management of acute spinal cord injury
  - List current trials of neuroprotective agents with a particular emphasis on the sodium-glutamate blocker riluzole
  - Explain current and planned trials of regenerative therapeutics including neural stem cells, bioengineered scaffolds and the Rho Inhibitor VX-210
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**Musculoskeletal Trauma Rehabilitation: An Overview**

*Dr. Ed Hanada*, Staff Physiatrist, St. John's Rehabilitation Hospital - Sunnybrook

This session will give a general overview of rehabilitation after major musculoskeletal trauma. The topics covered will include the characteristics and injuries of typical musculoskeletal trauma patients, common barriers to progress during their inpatient rehabilitation, and the elements of a physiatry consult on the trauma ward. The session will be of value to: Physiatrists, Medical Students, and Residents.

At the end of the session, the participants will be able to:

- Discuss the rehabilitation principles of musculoskeletal trauma
  - Explain the major barriers to progress after musculoskeletal trauma
  - Summarize the main elements that comprise a trauma rehabilitation consult
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## Burn Rehab

*Dr. Matthew Godleski*, Assistant Professor, University of Toronto/Sunnybrook HSC

The session will be of value to: physiatrists, medical students, residents, therapists.

At the end of the session, the participants will be able to:

- Describe the implications of burn injury for functional recovery.
  - Describe rehabilitation interventions following burn injury.
  - Recognize specific complications of burn injury that can impact rehabilitation.
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## Acute Trauma Care: From EMS to End of Life

*Avery Nathens*, Surgeon-in-Chief and Medical Director of Trauma, Sunnybrook Health Sciences Centre

This presentation will highlight the evolving changes in trauma care from the origin of trauma centres to higher level trauma systems. Their effectiveness in reducing mortality will be highlighted but then session will transition to the long term outcomes of patients with severe injury: what is known and how little is known about the relationship between acute care to quality of life. This session will be of value to practitioners across the spectrum of trauma care including physicians, allied health, residents and students.

At the end of the session, the participants will be able to:

- Summarize the impact of trauma systems and trauma centres on survival
  - Summarize the evidence pertaining to long term outcomes after injury
  - Explain the gaps in knowledge as to how acute trauma care impacts quality of life and functional outcome
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## Unique Therapeutic Qualities of Botulinum Toxin A Products – A review of the 3 current toxins in Canada and their similarities and differences



**Nancy Simonot**, Nancy (& NKS Health) are a nominated Finalist in the prestigious EY Entrepreneur of the Year 2017 Ontario Awards program for the Health category.

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### An Update on Cervical Dystonia

**Alfonso Fasano**, Staff Neurologist, Associate Prof, Clinician Investigator, Toronto Western Hospital - UHN, University of Toronto, Krembil Research Institute



Cervical dystonia is the most common form of dystonia in adult age. It is characterized by involuntary muscle contractions that cause abnormal movements and positioning of the head and neck. Symptoms of it are often associated with pain. This distinguishes this form from other dystonia. The drug of choice is botulinum toxin. It effectively reduces both pain and abnormal excessive muscle activity. In some cases, particularly where there is not obtained the full recovery after treatment botulinum toxin we used drugs for systemic effect. To increase the effectiveness and reduce the side effects of botulinum toxin more commonly we used administration of toxin under the EMG and ultrasound control. In refractory cases, deep brain stimulation targeting the globus pallidus pars interna is used.

The session will be of value to: Neurologists, Orthopaedics, Psychiatrists, Medical Students, Residents

At the end of the session, the participants will be able to:

- Identify the signs and symptoms of cervical dystonia;
- Identify the basics of deep brain stimulation and botulinum toxins treatment for cervical dystonia
- Identify the best therapeutic strategy for patients with cervical dystonia.

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### Why Medical Cannabis?



**Bryan Hendin**, President & Founder of Apollo Applied Research  
**Gena Loheswaran**, PhD – Director of Clinical Research, Apollo Applied Research

At the end of the session, the participants will be able to:

- Describe the basics of medical cannabis use
- Understand the medical cannabis legal framework in Canada
- Summarize Apollo's research & preliminary findings

## Speaker Profiles

### Hossein Amani



Dr. Hossein Amani has been a faculty member at the University of Toronto PM&R Division since 2003 and involved in mentoring and teaching PM&R residents since then. He has served on the University of Toronto PM&R Residency Selection Committee on multiple occasions. Dr. Amani has PM&R specialty certifications in Canada (FRCPC) and the United States (FABPMR). He also has subspecialty certifications in Pain Medicine, Sports Medicine, Neuromuscular Medicine, and Brain Injury Medicine. He is certified by and has served as an EMG oral board examiner for the American Board of Electrodiagnostic Medicine. He is past Vice-Chair of the Ontario Medical Association PM&R Section Executive Committee and was Chair of the OMA PM&R Section Annual Scientific Meetings from 2012 until 2017. In early 2016,

Dr. Amani approached Dr. Robinson to co-chair and create an annual University of Toronto PM&R conference, now known as the Toronto PM&R Conference or "TPMRC." The guiding principle behind this conference is the famous quote by Carl Friedrich Gauss, "**pauca sed matura**," meaning "**few but ripe**." The goal of this conference is to bring together superb experts to give high impact interactive lectures and to disseminate cutting-edge information on topics pertinent to the field of PM&R.



### Mark Bayley, MD, FRCPC

Mark Bayley is currently Medical Director and Senior Scientist at the Brain and Spinal Cord Rehabilitation Program at Toronto Rehab. He is Professor and Saunderson Family Chair in Brain Injury Research at the University of Toronto in the Division of Physical Medicine and Rehabilitation, Faculty of Medicine. Mark's research focuses on understanding how to speed brain recovery through exercise, virtual reality, telerehabilitation and functional electrical stimulation. Importantly, he has explored novel implementation strategies to bridge the knowledge-practice gap by making best evidence available to clinicians through smartphone apps and Best Practices guidelines in stroke,

concussion and Brain injury. His work has redesigned the stroke and brain injury rehabilitation systems in Canada.

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### Alfonso Fasano

Dr. Alfonso Fasano graduated from the Catholic University of Rome, Italy, in 2002 and became a neurologist in 2007. After a 2-year fellowship at the University of Kiel, Germany, he completed a PhD in neuroscience at the Catholic University of Rome. In 2013 he joined the Movement Disorder Centre at Toronto Western Hospital, where he is the co-director of the surgical program for movement disorders. He is also an associate professor of medicine in the Division of Neurology at the University of Toronto and clinician investigator at the Krembil Research Institute. Dr. Fasano's

main areas of interest are the treatment of movement disorders with advanced technology (infusion pumps and neuromodulation), pathophysiology and treatment of tremor and gait disorders. He is author of more than 170 papers and book chapters. He is principal investigator of several clinical trials.

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## Michael G. Fehlings MD PhD FRCS FACS FRSC FCAHS



Dr. Fehlings is the Vice Chair Research for the Department of Surgery at the University of Toronto and Head of the Spinal Program at Toronto Western Hospital, University Health Network. Dr. Fehlings is a Professor of Neurosurgery at the University of Toronto, holds the Gerry and Tootsie Halbert Chair in Neural Repair and Regeneration, is a Scientist at the McEwen Centre for Regenerative Medicine and a McLaughlin Scholar in Molecular Medicine. In the fall of 2008, Dr. Fehlings was appointed the inaugural Director of the University of Toronto Neuroscience Program (which he held until June 2012) and Co-Director of the newly formed University of Toronto Spine Program.

Dr. Fehlings is an internationally recognized researcher in the field of spinal cord injury (SCI). He combines an active clinical practice in complex spinal surgery with a translationally oriented research program focused on discovering novel treatments for the injured brain and spinal cord. Dr. Fehlings' pioneering research has been critical in defining the secondary injury mechanisms after SCI, the role of demyelination in post-injury neurological deficits, and the characterization of degenerative cervical myelopathy (DCM). His work examines the application of stem cells, nanotechnology and tissue engineering for central nervous system repair and regeneration. Dr. Fehlings recently led the development of clinical practice guidelines for DCM and traumatic SCI, and is a principal investigator in the Christopher and Dana Reeve Foundation North American Clinical Trials Network, chair of the internationally renowned AOSpine North America network and leads several international clinical research trials. He has published over 790 peer-reviewed articles (h-index 79) chiefly in the area of central nervous system injury and complex spinal surgery. Dr. Fehlings has received numerous prestigious awards including the Gold Medal in Surgery from the Royal College of Physicians and Surgeons (1996), nomination to the Who's Who list of the 1000 most influential scientists of the 21st century (2001), and the Lister Award in Surgical Research (2006). In 2013, Dr. Fehlings was honoured with the Queen Elizabeth II Diamond Jubilee Medal presented to him by the Honourable Stephen Harper, the H. Richard Winn Prize from the Society of Neurological Surgeons, and the Jonas Salk Award for Scientific Achievements from the March of Dimes Canada. In 2014 he was elected to the Fellowship of the Royal Society of Canada and to the Canadian Academy of Health Sciences.

Follow me on Twitter @DrFehlings

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## Matthew S. Godleski



Matthew S. Godleski, MD practices Physical Medicine & Rehabilitation in Aurora, CO. Dr. Godleski graduated from University of Rochester School of Medicine and Dentistry in 2003 and has been in practice for 10 years. He currently practices at University of Colorado School of Medicine and is affiliated with Boulder Community Hospital, Denver Health Medical Center and Denver VA Medical Center. Dr. Godleski accepts multiple insurance plans including Aetna, Rocky Mountain Health Plans and Anthem. Dr. Godleski also practices at UCHSC Spine Service & Rehabilitation Clinic in Aurora, CO. In addition to English, Dr. Godleski's practice supports these languages: Polish, Arabic, Korean, Russian, Spanish, Italian, German, Tagalog, Vietnamese and French.

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## Ed Hanada

Dr. Hanada completed medical training at the University of British Columbia and PM&R residency at Dalhousie. He completed a Fellowship in Sports, Spine and Musculoskeletal Rehabilitation at the Rehabilitation Institute of Chicago/Northwestern University, a Masters of Science degree from the University of Toronto, and an executive MBA from St. Mary's University in Halifax. Dr. Hanada's clinical focus has been trauma rehabilitation at Sunnybrook Bayview Campus and St. John's Rehabilitation Hospital. Dr. Hanada previously was the medical director in Musculoskeletal Rehabilitation at the Nova Scotia Health Authority - Rehabilitation Site in Halifax. [Go to top](#)

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## Shawn Marshall



Dr. Shawn Marshall is a physician specializing in Physical Medicine and Rehabilitation (Physiatrist). He is the Medical Director for Acquired Brain Injury Rehabilitation at the Ottawa Hospital Rehabilitation Centre where he manages both in-patients and out-patient clinics. Dr. Marshall has a Master's degree in Clinical Epidemiology and is an Associate Professor at the University of Ottawa in the Department of Medicine. Dr. Marshall's other main focus of research relates to his clinical interest in Acquired Brain Injury Rehabilitation. He has been proactive in the promotion and development of ABI clinical guidelines for several years, working on reviews for the Evidence Based Reviews in Acquired Brain Injury Team ([www.abiebr.com](http://www.abiebr.com)) where he is a co-investigator for the project. This has led to the development of Practice Guidelines for rehabilitation of moderate and severe acquired brain injury through the Acquired Brain Injury Knowledge Uptake Strategy Group (ABIKUS). Dr. Marshall has led the development of Clinical Guidelines for the Care of Persisting Symptoms after Mild Traumatic Brain Injury which involved national and international experts in mild TBI.

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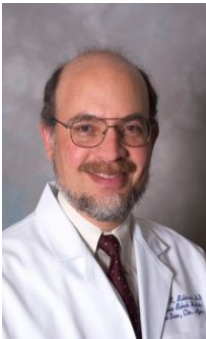
## Avery Nathens



Dr. Nathens is a trauma surgeon and the Surgeon in Chief of Sunnybrook Health Sciences Centre, Canada's largest Level 1 trauma centre. He is also an epidemiologist with a focus on trauma system design. He is Medical Director of Trauma Quality Programs of the American College of Surgeons and thus provides oversight over the Trauma Quality Improvement Program and the Verification Program. He holds the DeSouza Chair in Trauma Research has published many landmark peer-reviewed papers in the Lancet, NEJM and JAMA focusing on trauma system design and implementation. Dr. Nathens has had extensive experience evaluating quality of care and trauma system effectiveness. He has published over 350 papers and has been awarded several million dollars to study trauma care.

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## Larry Robinson



Dr. Larry Robinson is Professor and Division Director for Physical Medicine and Rehabilitation at the University of Toronto and holds the John and Sally Eaton Chair in Rehabilitation Sciences. He comes to us from the University of Washington where he served as Chair of the Department of Rehabilitation Medicine and later as Vice Dean for Clinical Affairs and Post Graduate Medical Education. Dr. Robinson has published extensively on electrodiagnosis with 120 publications in the peer-reviewed literature, and has published a number of articles on traumatic neuropathy and using EMG for prognosis

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## Nancy Simonot & NKS Health



**NKS HEALTH** 

LONDON HAMILTON TORONTO OTTAWA Nancy has spent the past 25 years in the practice and management of pharmacy and enjoys being a guest lecturer for the University of Toronto. In 2014 she was honoured by the Ontario Pharmacists Association as Pharmacist of the Year for Specialized Practice, an award she is very proud of. She has a wealth of experience in clinical trials and a reputation

for being patient focused. Nancy is the co-owner of NKS Health which is the largest toxin pharmacy in Canada working with hundreds of physicians in clinics and hospitals across Ontario. This year, Nancy is a nominated Finalist in the prestigious EY Entrepreneur of the Year 2017 Ontario Awards program for the Health category.

## Planning Committee

Hossein Amani



Dr. Hossein Amani has been a faculty member at the University of Toronto PM&R Division since 2003 and involved in mentoring and teaching PM&R residents since then. He has served on the University of Toronto PM&R Residency Selection Committee on multiple occasions. Dr. Amani has PM&R specialty certifications in Canada (FRCPC) and the United States (FABPMR). He also has subspecialty certifications in Pain Medicine, Sports Medicine, Neuromuscular Medicine, and Brain Injury Medicine. He is certified by and has served as an EMG oral board examiner for the American Board of Electrodiagnostic Medicine. He is past Vice-

Chair of the Ontario Medical Association PM&R Section Executive Committee and was Chair of the OMA PM&R Section Annual Scientific Meetings from 2012 until 2017. In early 2016, Dr. Amani approached Dr. Robinson to co-chair and create an annual University of Toronto PM&R conference, now known as the Toronto PM&R Conference or "TPMRC." The guiding principle behind this conference is the famous quote by Carl Friedrich Gauss, "**pauca sed matura,**" meaning "**few but ripe.**" The goal of this conference is to bring together superb experts to give high impact interactive lectures and to disseminate cutting-edge information on topics pertinent to the field of PM&R.

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David Berbrayer



Dr. David Berbrayer is a specialist in Physical Medicine and Rehabilitation certified by the Royal College of Physicians and Surgeons of Canada and the American Board of Medical Specialties. Dr. Berbrayer is a member of the educational committee of AAP (Association Academic Physiatrists), Member of the Transitional committee & Educational committee of ACPDM (American Academy of Cerebral Palsy and Developmental Medicine) and Evidence based committee – performance metrics of AAPM&R. Dr. David Berbrayer is past Education Chair and past CPD chair of CAPM&R (Canadian Association of Physical Medicine and Rehabilitation) and current Pediatric Section Chair of the CAPM&R. Dr. Berbrayer is the Medical Director, Physical Medicine and Rehabilitation, Sunnybrook Health Sciences Centre University of Toronto. Dr. Berbrayer is past Vice President and Chief of Staff Lyndhurst Hospital. He is a founding member of Toronto Rehabilitation Institute. Dr. Berbrayer is a consultant at Holland Bloorview Kids Rehab the largest pediatric facility in Toronto and consultant at Hospital for Sick Children. Dr. Berbrayer is Associate Professor, Department of Medicine, University of Toronto.

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Gordon D. Ko

Dr. Ko is a specialist in **Physical Medicine and Rehabilitation** with subspecialty in **Pain**

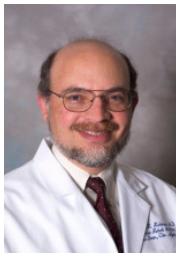


**Medicine.** He is Medical Director, Fibromyalgia Physiatry clinics and Adjunct Lecturer at Sunnybrook Health Sciences Centre, University of Toronto and the Canadian Centre for Integrative Medicine Inc. In the latter, he leads an interdisciplinary team (PT, DC, DO, TCM, RD, ND) incorporating **Functional Medicine** and EMG/ ultrasound-guided injection techniques. His research with **Platelet-rich Plasma (PRP)** for Back Pain and **Botox injections** for Knee Osteoarthritis made headline CTV national news. Available also on his website DrKoPRP.com are peer-reviewed pioneering papers include effective neuropathic pain treatment with Omega3 (case series), topical essential oils

(RCT), medical cannabis (2016 review paper), PRP for low back pain and the 2012 Canadian guidelines for Fibromyalgia management. He enjoys teaching through non-profit organizations: **Canadian Society for Neurotoxins in Pain** (founding co-director and vice-president)-training MDs on Botox for pain and the **Canadian Association for Orthopaedic Medicine** (president-elect 2017-8)-prolotherapy and regenerative medicine; and is a first year fellow with the C.S. Lewis Institute. He with his wife (family MD) are active with their local community church and have participated (more recently with their 4 teenage+ children) in medical service trips (Kolkata, India; Kenya; Belize, Honduras). Dr. Ko also enjoys regular kick-boxing and floorball-hockey with family and friends to keep in shape!

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Larry Robinson



Dr. Larry Robinson is Professor and Division Director for Physical Medicine and Rehabilitation at the University of Toronto and holds the John and Sally Eaton Chair in Rehabilitation Sciences. He comes to us from the University of Washington where he served as Chair of the Department of Rehabilitation Medicine and later as Vice Dean for Clinical Affairs and Post Graduate Medical Education. Dr. Robinson has published extensively on electrodiagnosis with 120 publications in the peer-reviewed literature, and has published a number of articles on traumatic neuropathy and using EMG for prognosis.

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Chantal Vaidyanath



Dr. Vaidyanath obtained her MD from the University of Western Ontario in 2001 and completed a residency program in Physical Medicine and Rehabilitation at Queen's University in 2006. She earned her Canadian certification in Electromyography (EMG) in 2006. Dr. Vaidyanath has an interest in acquired brain injury rehabilitation, including the diagnosis and treatment of individuals with concussion/mild traumatic brain injury. Dr. Vaidyanath sees patients with acquired brain injuries ranging from mild to severe at Toronto Rehabilitation Institute (both at the University Centre and the E.W. Bickle Centre) and at the Head Injury Clinic at St. Michael's Hospital. She also has a musculoskeletal and sports concussion practice at Synergy Sports Medicine and Rehabilitation. Dr. Vaidyanath is the Chair of the Canadian Association

of Physical Medicine and Rehabilitation Traumatic Brain Injury Special Interest Group and a collaborator on Concussions Ontario, the provincial concussion/mild traumatic brain injury strategy.

## Evaluations

- TorontoPMR 2017 - 0830 Acute Spinal - <https://www.surveymonkey.com/r/YRDFCP7>
- TorontoPMR 2017 - 0930 Acute Trauma - <https://www.surveymonkey.com/r/YR3YRYT>
- TorontoPMR 2017 - 1100 Concussion - <https://www.surveymonkey.com/r/YTFLPXT>
- TorontoPMR 2017 - 1220 Unique Therapeutic - <https://www.surveymonkey.com/r/2SRRTFG>
- TorontoPMR 2017 - 1250 An Update - <https://www.surveymonkey.com/r/2M9V9CD>
- TorontoPMR 2017 - 1330 Musculoskeletal Trauma - <https://www.surveymonkey.com/r/YMPBTBW>
- TorontoPMR 2017 - 1430 Burn Rehab - <https://www.surveymonkey.com/r/YNLH9WV>
- TorontoPMR 2017 - Overall Evaluation - <https://www.surveymonkey.com/r/SLX8QDG>

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