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**McMaster Virtual Medicine Rotation**

Postgraduate Medical Education

# April, 2020

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## VISION

The McMaster Virtual Medicine Rotation will provide residents with a foundational exposure to providing virtual care. It is our hope that exposure to virtual medicine within core training will equip residents with the tools required to uptake this practice in their future careers and allow for a cultural transformation required to promote virtual care/digital health in the next generation of physicians. This in turn will improve timely and convenient access to health care for patients.

## BACKGROUND

While the technology to deliver health care virtually has been around for decades, healthcare systems have been slow to uptake this practice.1 Benefits to the Canadian society include timely access to care, convenience, and cost-efficiency. Furthermore, virtual medicine provides the opportunity to “bridge the gap” between urban subspecialists and patients in rural and remote communities across Canada. Virtual care also allows for care of patients during pandemics, public health crises and natural disasters.2

There is a growing interest in virtual medicine within the McMaster Department of Medicine. While current interventions are geared towards increasing staff physician uptake, virtual medicine has not yet been integrated into the residency program. In 2020, the Canadian Medical Association released a Virtual Care Task Force Report3 stating that “virtual care training must be integrated into health service education so that providers and administrators are wholly prepared to function in a mature virtual care ecosystem”. Their task force is lobbying to engage the CanMEDs consortium in incorporating virtual care competencies for postgraduate learners and developing a comprehensive virtual care program evaluation framework which can be used for medical education.3 While still in its early stages, we feel that virtual medicine is rapidly gaining traction in Canada’s postgraduate curriculum and will soon be an integral part of residency education.

## OBJECTIVES

### EPA-Specific Learning Objectives:

By the end of the virtual medicine rotation, residents should be able to consistently perform the following Entrustable Professional Activities (EPAs) corresponding to their level of training. Note that a senior resident should be able to perform all EPAs listed under “Core of Discipline” *in addition to* all the EPAs listed for more junior trainees. The EPAs of highest yield for the virtual medicine rotation are highlighted in **Bold Text**.

|  |
| --- |
| FOUNDATIONS OF DISCIPLINE (PGY-1)  *\*(PGY-1 learning objectives apply during COVID-19 crisis only)* |
| Assessing, diagnosing, and initiating management for patient with common acute medical FD1 presentations in acute care settings |
| Consulting specialists and other health professionals, synthesizing recommendations, and FD3 integrating these into the care plan |

|  |  |
| --- | --- |
| Identifying personal learning needs while caring for patients and addressing those needs. FD7 | |
| CORE OF DISCIPLINE (PGY-2 / PGY-3) | |
| **Assessing, diagnosing and managing patients with complex or atypical acute medical presentations** | CD1 |
| **Assessing and managing patients with complex chronic diseases** | CD2 |
| Providing Internal Medicine Consultation to other clinical services | CD3 |
| Assessing capacity for medical decision-making | CD6 |
| Discussing serious and/or complex aspects of care with patients, families, and caregivers | CD7 |
| **Implementing health promotion strategies in patients with chronic diseases** | CD10 |
| TRANSITION TO PRACTICE (PGY-3) | |
| **Assessing and managing patients in whom there is uncertainty in diagnosis and /or treatment** | TP3 |
| **Working with other physicians and healthcare professionals to develop collaborative patient care plans** | TP6 |
| **Identifying learning needs in clinical practice and addressing them with a personal learning plan** | TP7 |

**Summary of EPAs**

\*See Appendix for detailed EPA learning plans

### Non-EPA Learning Objectives:

**Residents are expected to attend the following: [enter mandatory activities/events]**

1. [Wednesday Afternoon] Academic Half Day
2. [Date/Time] Medical Grand Rounds

## During this two-week or four-week rotation, the resident will:

1. **Develop methods and styles of communication necessary to run an efficient synchronous virtual medicine encounter (audio or video calls).**
   1. This may differ significantly from communication skills used in traditional clinical settings.
   2. Learners will need to be able to elucidate signs and symptoms without traditional use of a physical exam.
   3. Learners will need to explain concepts and instructions to patients over a virtual medium.
   4. These skills will be directly and indirectly evaluated by the supervisor.

## Develop organization and communication skills necessary to efficiently deliver asynchronous virtual medicine care (etc. bidirectional messaging, written text, leaving voicemails).

* 1. These tasks will be completed as part of the regular clinic workflow and assessed directly/indirectly by the supervisor.

## Practice patient safety by determining patient suitability for virtual care.

* 1. Learners will assist their supervisor in triaging consults for virtual care clinics.
  2. In select clinical circumstances learners will be evaluated for proficiently recognizing when a virtual patient requires an in-person ambulatory visit or emergency department care. Learners will be expected to assist in arranging safe care for the patient and following up to ensure that care was received.

## Become familiar with virtual medicine technology\* and use of the Ontario Telemedicine Network including privacy legislation and standards.

* 1. The resident will receive orientation to this technology at the beginning of their rotation including privacy settings and standards.
  2. The resident will gain skills in initiating a consultation, leading a consultation, documenting patient encounters and trouble -shooting problems through OTN.
  3. This skill will be evaluated by the supervisor during daily practice.

\*currently only OTN Hub (videoconferencing) and telephone encounters are approved for clinical purposes by HHS. Alternative platforms (Skype, Zoom.us, FaceTime, WebEx…) are under review for approval – Virtual Care working groups and IT are currently working on the Privacy and Information Security parameters to ensure patient rights are protected while mitigating risk to organization and staff. Review current policies. OTN licenses may be available for residents, but at this time, residents can only participate or run sessions established under a supervising Faculty’s billing code. This should provide opportunity for observation and assessment.

## Acquire skills that can be used to effectively to run a virtual medicine clinic in future practice.

* 1. This skill will be obtained through observation of patient flow and integration of virtual medicine into daily practice, observing different use of virtual mediums by staff physicians, and developing a familiarity with obtaining patient consent and other ethical considerations for virtual care.

## APPLICATION

## Eligibility

McMaster PGY-2 and PGY-3 Residents

*(Select PGY-1’s can partake in the rotation during the COVID-19 crisis)*

## Sample Available Blocks [programs will need to review scheduling]

During the 2020-2021 year, up to six 4-week blocks or twelve 2-week blocks will be offered.

**PGY-2**

Elective Block (four weeks)

Clinics Block (two weeks paired with Night Float)

## PGY-3

Elective Block (four weeks)

Clinics block (two weeks paired with Night Float) JA/Selective Block (four weeks)

## Application Process

*(The application process will differ during the COVID-19 crisis)*

Residents can indicate to Program Administrator a) their interest in the Virtual Medicine Rotation and b) All the blocks they would be open to scheduling this rotation.

**Note:** Only one resident can be scheduled at a time, and requests submitted after the yearly scheduling deadline will be scheduled on a first-come, first-served basis. The deadline to indicate interest is three months before the requested block(s).

## ROTATION DESIGN

### Weekly Schedule – Sample for program customization

|  |
| --- |
| **6 clinical half-days** |
| **2 half-days** a week with xxxx clinic, outpatient xxxx clinic or xxxx clinic (subject to operational schedules) |
| **1 e-module half-day**  A list of e-modules to be completed will be provided in advance. There is an opportunity for e-Modules to eventually be developed by the residency program. Example:  “ACP- Telemedicine: A Practical Guide for Incorporation into your Practice”  *ALTERNATE:*  **1 virtual medical education half-day**  Protected time for the trainee to either develop or use virtual FOAMed (free access open medical education) for learning or teaching purposes. This can include creation of podcasts, blog posts, infographics or videos for medical learning. The trainee and supervisor will agree on objectives for this half-day at the beginning of the rotation.  If the trainee decides to create FOAMed content, they will be required to send their completed project to the supervisor at the end of the rotation. Content will be distributed to learners via the Program’s xxxx account. If the trainee decides to utilize FOAMed content they will be asked to provide a tracked record of the resources they used during this protected time. |
| **1 academic half-day** (Wednesday afternoons) |

***Example of Weekly Schedule – for customization by Program***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Monday** | | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| **AM** | Supervisor A | Supervisor A | Clinic | Supervisor B | Supervisor B |
| **PM** | Supervisor A | Clinic | Academic Half-Day | Supervisor B | E-Module Half day |

**Resident Supervision**

Rotation supervisors will be recruited from a group of virtual medicine champions.

Per iteration, the rotation supervisor will be responsible for the following:

* + **Orientation:** Cover rotation expectations and basic introductions to virtual medicine.
  + **Learning Goals:** Review individual clinical goals with resident and goals for flex half-days at the beginning of the rotation.
  + **Resident evaluation:** Compile individual preceptor evaluations into a single evaluation for the rotation (verbal or written-online).

### Resident Evaluation

Residents will be responsible for triggering individual ITARs to each preceptor during their rotation. The rotation supervisor will combine the assessments into a single ITAR at the end of the block. If the resident chooses to create a FOAMed project, the evaluation of this activity will be included in the final ITAR.

When applicable, residents will be responsible for asking their supervisors for appropriate EPAs (the aim should be one per half-day). Residents should request that an assessment be completed IN ADVANCE of a clinical interaction whenever possible. These assessments should:

* + Involve direct or indirect observation in the clinical or non-clinical setting
  + Include coaching
  + Be followed by in the moment face-to-face feedback with electronic documentation with the Medsis interface.

## Target EPA Completion:

3 EPAs per week.

During the rotation try to sample at least:

* 3 different evaluators
* 5 different EPAs to be assessed

### Absences and Post Call Days

It is the resident’s responsibility to email Staff Lead and the virtual medicine rotation assistant regarding any post call days, vacations, half days or any other clinical absences. If a resident feels unwell/sick and unable to attend clinic, they must contact their supervisor as soon as possible.

## CONTACT INFORMATION

## Enter program contacts/emails below.

Resident Lead:

Staff Leads:

## REFERENCES

1. Sharma R, Nachum S, Davidson KW, Nochomovitz M. It’s not just FaceTime:

core competencies for the Medical Virtualist. International Journal of

Emergency Medicine. 2019;12(1):8.

1. Association CM. Virtual Care in Canada: Discussion Paper Ottawa, ON2019.
2. Canadian Medical Association TCoFPoC, Royal College of Physicians and

Surgeons of Canda Virtual Care: Recommendations for Scaling Up Virtual

Medicine Services Report of the Virtual Care Task Force. 2020:35-9.

## APPENDIX

## EPA Descriptions

*\*PGY-1 EPA’s applicable during COVID-19 crisis only*

## Foundations of Discipline (Mid-Late PGY-1)

**FD1 Assessing, diagnosing, and initiating management for patients with**

**common acute medical presentations in acute care settings**

## Detailed Description

* Performs complete and appropriate assessments of patients with common acute medical presentations
* Generates differential diagnoses along with appropriate diagnostic strategies
* Implements initial management plans
* Presentations include but are not limited to chest pain, gastrointestinal bleeding, shortness of breath, acute kidney injury, weakness, nausea and vomiting, fever, altered mental status, toxidromes, delirium, overdose, pain.

**FD3 Consulting specialists and other health professionals,**

**synthesizing recommendations, and integrating these into the**

**care plan**

## Detailed Description

* Recognizes limits in abilities and scope of practice, and consults specialists when needed
* Incorporates consultant recommendations into diagnostic and management plans
* Consults and coordinates involvement of other health professionals in the care of patients

**FD6 Discussing and establishing patients’ goals of care**

## Detailed Description

* Assesses capability of patients to make goals of care decisions
* Identifies the substitute decision maker when patients lack decision-making capacity
* Discusses and documents advanced directives and/or goals of care

**FD7 Identifying personal learning needs while caring for patients and**

**addressing those needs**

## Detailed Description

* Reflects on strengths and weaknesses in delivering clinical care
* Identifies gaps in knowledge and abilities
* Addresses professional development needs in identified areas
* Logs professional development activities using ePortfolio (or other appropriate logging system)

## Core of Discipline (PGY-2-3)

**CD1 Assessing, diagnosing and managing patients with complex or**

**atypical acute medical presentations**

## Detailed Description

* Performs complete and appropriate assessments of complex clinical presentations including presentations with competing treatment needs
* Generates and prioritizes the differential diagnosis
* Generates management plans that address on-going diagnostic uncertainty, address treatment needs, evolve with the clinical course, and incorporate best practice and evidence-based guidelines
* Incorporates interdisciplinary and interprofessional teams in developing and executing management plans for patients
* Critically appraises relevant medical literature to make evidence informed medical decisions
* Utilizes point of care evidence-based resources
* Performs these tasks in the inpatient, outpatient, and emergency room settings
* Utilizes health care resources discriminately minimizing unnecessary expenses to the health care system (e.g., unnecessary diagnostic testing, office visits, or treatments)
* Presentations include but are not limited to chest pain, gastrointestinal bleeding, shortness of breath, syncope, palpitations, weakness, fatigue, fever, hypotension, hemoptysis, altered level of consciousness, delirium, toxidromes, headache, diarrhea, abdominal pain, arthritis, jaundice.

**CD2 Assessing, diagnosing, and managing patients with complex chronic**

**diseases**

## Detailed Description

* Performs complete and appropriate assessments of chronic disease presentations
* Incorporates best practice guidelines into management of chronic disease
* Identifies and addresses interactions between different diseases and different treatments
  + Addresses competing treatment goals involving chronic diseases
* Accounts for multi-morbiidity and frailty in formulation and management
* Critically appraises relevant medical literature to make evidence informed medical decisions
* Utilizes point of care evidence-based resources
* Appropriately involves subspecialists and allied health in treating patients with chronic disease
* Manages patients with chronic disease as part of longitudinal, ambulatory care
* Utilizes health care resources discriminately minimizing unnecessary expenses to the health care system (e.g., unnecessary diagnostic testing, office visits, or treatments)
* Chronic conditions include but are not limited to hypertension, coronary artery disease, congestive heart failure, diabetes mellitus, chronic fatigue, chronic obstructive pulmonary disease, asthma, chronic kidney disease, arthritis, anemia, cirrhosis, connective tissue disease, dementia

**CD3 Providing consultation to other clinical service**

**Detailed Description**

* Identifies relevant clinical questions and provides focused assessments and recommendations to other services
* Communicates recommendations in a timely and collaborative manner
* Provides continuing care in a consultative role as appropriate
* Recognizes and respects the boundaries of the consultative role within the care of the patient
* The trainee must be able to apply these skills across peri-operative care, obstetrical medicine care, and general medical consultation to other clinical services (e.g. surgical services, psychiatry, obstetrics and gynecology, family medicine/hospitalists)

**CD6 Assessing capacity for medical decision-making**

## Detailed Description

* Determines patients’ understanding of their condition, risks associated with treatment options, and alternatives to proposed treatments
* Uses this information to assess capacity for patients facing decisions in medical care
* Involves substitute decision makers, mental health, legal expertise, and other professionals, as appropriate, in making the assessment
* Takes into account patients’ personal preferences, cultural values, and religious beliefs
* Recognizes the role of own biases
* Communicates effectively with patients, family members, and caregivers from a patient-centred perspective
* Treats patients according to legal regulations and professional guidelines surrounding capacity and competence

**CD7 Discussing serious and/or complex aspects of care with patients,**

**families, and caregivers**

## Detailed Description

* Communicates serious findings and diagnoses, medical errors, and prognosis
* Leads discussions to address changes in goals of care
* Uses a patient-centered approach integrating medical expertise, cultural understanding, and patient preferences
* Identifies and collaborates with substitute decision-makers
* Recognizes and mitigates conflict situations
* Incorporates allied health professionals in discussions when appropriate
* Includes leading family meetings and routine discussions with patients and caregivers

**CD10 Implementing health promotion strategies in patients with chronic**

**diseases**

## Detailed Description

* Counsels/supports patients in areas of risk factor reduction, ie. smoking cessation
* Assesses and acts on relevant determinants of health in managing patients
* Applies focused health promotion and surveillance activities for patients in at risk populations
* Implements primary & secondary prevention strategies

## Transition to Practice

**TP3 Assessing and managing patients in whom there is uncertainty in**

**diagnosis and/or treatment**

## Detailed Description

* Makes reasoned clinical decisions when faced with limited, non-diagnostic, or conflicting clinical data
* Develops assessment strategies to address uncertainty in clinical diagnosis
* Recognizes limitations and engages consultants appropriate to patients’ presentation and acuity
* Provides care that addresses the needs of patients in whom there is undifferentiated disease
* Communicates uncertainty to healthcare providers and patients

**TP6 Working with other physicians and healthcare professionals to**

**develop collaborative patient care plans**

## Detailed Description

* Integrates recommendations from all providers involved in caring for patients
* Negotiates consensus when there are differences in recommendations provided by different health care providers
* Engages patients and families in shared decision-making in developing plans

**TP7 Identifying learning needs in clinical practice, and addressing them**

**with a personal learning plan**

## Detailed Description

* Applies a self-regulated approach to learning
  + Uses a structured approach to identifying learning needs
  + Responds to identified needs by seeking out relevant learning and training opportunities
* Pays deliberate attention to health care needs within his/her own practice and/or community
* Records/logs continuing medical education credits in accordance with regulations of supervisory bodies (i.e., Royal College Maintenance of Certification Program)