Colorectal Surgery Residency Program

Educational Objectives – **St. Michael's Hospital**

University of Toronto

2020

The primary goal of the University of Toronto Colorectal Surgery Program is to produce colorectal surgeons who are dedicated to the pursuit of an academic surgical career.

The clinical year will include a 2-4 month rotation at St. Michael's Hospital working with Drs. Burnstein and Louridas. There is an emphasis on anorectal disorders as well as a large volume of abdominal and perineal operations relating to a wide variety of colorectal problems. The resident spends one to two half days per week in ambulatory clinics and 2 half days per week in endoscopy. The St. Michael's resident attends a multi-disciplinary cancer conference, as well as has exposure to pelvic floor disorders and faecal incontinence.

Evaluations will include a mid-rotation evaluation, communication (written and CANMeds communicator check list), performance-based assessment on operative skills and an oral examination. Finally, an In-training evaluation at the end of the rotation on each resident will be completed.

While this rotation focuses on the CanMEDS Medical Expert, Health Advocate and Scholar, it is expected that the trainee will demonstrate proficiency in all spheres.

EDUCATIONAL OBJECTIVES – St. Michael's Hospital Rotations

1. MEDICAL EXPERT

At the completion of their rotation, colorectal residents will be able to:

1. Demonstrate knowledge relevant to colorectal surgery in the following basic science areas
   a. Anatomy, physiology and genetics and embryology of the colon, rectum and anus.
   b. Pharmacology as related to diseases of the colon, rectum and anus.
   c. Microbiology of the intestine.
   d. Nutrition in colorectal disease.
   e. Critical care.
2. Demonstrate knowledge of the principles of
   a. Medical and radiation oncology in the treatment of colorectal and anal cancers.
   b. Genetics in colon and rectal diseases
3. Demonstrate comprehensive knowledge of anatomy, physiology, pathology, pathophysiology, etiology and radiology of the disease entities listed in Appendix 1.
4. Elicit a history that is relevant, concise and accurate to context and preferences for the purposes of prevention and health promotion, diagnosis and/or management
5. Perform a focused physical examination that is relevant and accurate
6. Arrive at an appropriate differential diagnosis
7. Select appropriate investigative methods in a resource-effective and ethical manner
8. Demonstrate effective clinical problem solving and judgment to address patient problems, including interpreting available data and integrating information to generate differential diagnoses and management plans, including critically ill patients
9. Implement a management plan in collaboration with the patient and their family
10. Demonstrate appropriate and timely application of preventive and therapeutic interventions relevant to colorectal surgery
    a) Manage patients in the ambulatory setting, demonstrating knowledge of common office techniques and procedures
    b) Manage the patient throughout the entire in hospital course, demonstrating knowledge

of, and being able to treat, potential complications of the disease processes, operative procedures, or other treatments.

11. Obtain appropriate informed consent, clearly describing the risks and benefits of the proposed management plan.
12. Order appropriate laboratory, radiologic and other diagnostic procedures and correctly interpret the results of the investigations
13. Safely and effectively perform and/or interpret diagnostic and therapeutic procedures relevant to colorectal surgery, including the procedures listed in Appendix 2:

2. COMMUNICATOR

At the completion of their rotation, colorectal residents will be able to:

1. Develop rapport, trust and ethical therapeutic relationships with patients and families
   a) respect patient confidentiality, privacy, autonomy and cultural diversity
   b) listen carefully and show empathy
   c) be aware of, and responsive to, non-verbal cues
   d) use appropriate language to ensure patient understanding
2. Convey effective written information about medical encounters.

3. COLLABORATOR

At the completion of their rotation, colorectal residents will be able to:

1. Accurately elicit and synthesize relevant information and perspectives of colleagues, and other professionals
2. Convey relevant information and explanations accurately to colleagues and other professionals in such a way that it is understandable, encourages discussion and participation in decision-making
3. Develop a common understanding on issues, problems and plans with other professionals to develop a shared plan of care
4. Recognize and respect the diversity of roles, responsibility and competencies of other professionals in relation to their own and recognize the importance of the multidisciplinary approach to colorectal cancer management
5. Work with other health professionals effectively to prevent, negotiate and resolve interprofessional conflict.
6. Demonstrate a respectful attitude towards other medical and surgical colleagues.

4. LEADER

At the completion of their rotation, colorectal residents will be able to:

1. Demonstrate leadership in the healthcare team, as appropriate
2. Participate in quality process evaluation and improvement, such as patient safety initiatives in the operating room and on the ward
3. Organize colorectal journal club.

5. HEALTH ADVOCATE

At the completion of their rotation, colorectal residents will be able to:

1. Respond to individual patient health needs, identifying opportunities for advocacy, health promotion and disease prevention, with respect to diseases of the colon and rectum.
2. Support the health of patients/families by providing appropriate referrals, support and information on health maintenance, as well as community resources.
3. Demonstrates familiarity with the important determinants of health affecting patients, such as smoking and obesity, and advises appropriate lifestyle or other preventative measures.
4. Identify and refer patients to advocacy and supportive organizations for colorectal cancer.

6. SCHOLAR

At the completion of their rotation, colorectal residents will be able to:

1. Critically evaluate medical information and its sources around colorectal cancer management and successfully integrate information from a variety of sources
2. Choose appropriate articles for critical review within journal club.
3. Facilitate the learning of students, residents and other health professionals on the team, as appropriate
4. Present a research project to colorectal faculty and fellow residents.
5. Critically appraise recent literature in the areas of colorectal cancer, and benign colorectal disease.

7. PROFESSIONAL

At the completion of their rotation, colorectal residents will demonstrate be able to:

1. Exhibit professional behaviours, including honesty, integrity, commitment, compassion, respect and altruism
2. Recognize and respond appropriately to ethical issues in practice
3. Maintains appropriate boundaries, including appropriate draping for a physical examination
4. Discloses an adverse event or medical error to a patient in appropriate circumstances.

Appendix 1 – Disease Entities

A. Abdominal disorders

1. Congenital malformation of the colon
   a) imperforate anus
   b) Hirschprung's disease
   c) Malrotation
2. Infectious diseases
   a) bacterial, viral, fungal infection
   b) parasitic infections

3. Neoplastic Disease

a) Malignant
    i) Adenocarcinoma
4. Functional disturbances
    a) chronic constipation
    b) acquired megacolon
    c) fecal impaction
    d) motility disorders/pseudoobstruction
5. Volvulus
6. Radiation enterocolitis
7. Traumatic injury to colon and rectum

B. Anorectal Disorders

1. Abscess simple/complex
2. Fistulae
    a. Rectovaginal
    b. fistula in ano
3. Anal fissure and stenosis
4. Hemorrhoidal disease
5. Fecal incontinence secondary to obstetrical, neuropathic, trauma, and overflow
6. Solitary Rectal Ulcer Syndrome
7. Descending perineum syndrome
8. Sexually transmitted diseases
    a. condylomata acuminate
    b. gonorrhea
    c. syphilis
    d. AIDS/HIV
    e. Herpes
9. Neoplastic disease
    a. Benign
        a. Fibroma
        b. Schwannoma
        c. Teratoma
        d. Endometrioma
    b. Malignant
        a. -anal cancers
        b. -retrorectal tumours
        c. -melanoma
        d. -intra-epithelial neoplasia
        e. -Paget's disease
10. Functional disorders of anorectum
    a. proctalgia fugax
    b. anismus
11. Miscellaneous
    a. pilonidal disease
    b. procidentia
    c. pruritus ani
    d. rectocele
    e. foreign bodies
    f. mucosal ectropion

Appendix 2 – Procedures

1. Diagnostic procedures
    a. endoscopy of the colon
    b. -ultrasound of rectum
    c. -anorectal electromyography
    d. -anorectal manometry
2. Therapeutic procedures
    a. Anorectal procedures
        a. Excision of thrombosed hemorrhoids
        b. Elastic ligation of hemorrhoids
        c. Hemorrhoidectomy
        d. Anal fistulotomy
        e. Anal sphincterotomy
        f. Anoplasty for stenosis
        g. Advancement flap for rectovaginal and anal fistulas
        h. Treatment of pilonidal sinus
        i. Treatment of hidrandenitis suppurativa
        j. Treatment of condylomata accuminata
        k. Rectocele repair
        l. Mucosal ectropion repair
        m. complex sphincter reconstruction, including muscle transposition
        n. sphincteroplasty for incontinence
3. Endoscopic procedures
    a. Colonoscopy with biopsy and polypectomy
    b. Endoscopic balloon dilatation of stenosis
    c. Reduction of sigmoid volvulus
    d. Anoscopy
    e. endoscopic mucosal resection
    f. Proctosigmoidoscopy, rigid and flexible
4. Operative procedures (laparoscopic and open)
    a. Right hemicolectomy and extended right hemicolectomy with anastomosis
    b. Left hemicolectomy with anastomosis
    c. Sigmoid colectomy with anastomosis
    d. Low anterior resection using total mesorectal excision (TME)
    e. Coloanal resection with or without reservoir
    f. Abdominoperineal resection
5. Miscellaneous Procedures
    a. local treatment of villous tumours, including transanal excision
    b. local treatment rectal cancer including transanal excision, TEMS
    c. rectovaginal/anovaginal fistula repair