

University at Buffalo Pediatric Emergency Medicine Fellowship

Adult Emergency Medicine Rotation — PGY-5 PEM fellows are required to complete training on the emergency care of Adults. This is 2 one month rotations occurring at the **GVI** (Buffalo General Medical Center Emergency Department) and **Millard Filmore Suburban Hospital**. Fellows will complete one month at each hospital. PEM Fellows are expected to participate as an integrated member of the ED clinical staff. As vital members of the ED team, fellows are expected to be present for all assigned ED shifts.

Schedule GVI - This rotation schedule consists of 15 twelve hour shifts, 7 AM – 7 PM or 7 PM – 7 AM. The daily schedules are prepared by the Emergency Medicine Chief Residents. Any schedule requests must be submitted 2 months in advance of the scheduled rotation. The fellows will be scheduled off on Thursday mornings to attend Pediatric Emergency Medicine Division conference and whenever there is a PEM|CoR presentation.

Schedule Suburban – This rotation consists of 17 ten hour shifts. The daily schedules are prepared by Dr John McNamara. Any schedule requests must be submitted 2 months in advance of the scheduled rotation. The fellows will be scheduled off on Thursday mornings to attend Pediatric Emergency Medicine Division conference and whenever there is a PEM|CoR presentation.

The PEM fellow is required to forward a copy of their Adult Rotation schedule to the PEM Division manager prior to the beginning of the month.

If significant emergencies occur which require them to miss a scheduled shift, the fellow is required to contact the EM Chief Resident/Dr McNamara and the PEM Division Office Manager (Sharon Chodora 878-7188). All missed shifts must be made up; this will be coordinated by the EM Chief Resident and Dr McNamara.

Fellows are expected to attend EM Grand Rounds on Wednesday mornings during their Adult rotations.

Contacts / Mentors at each site:

Buffalo General Hospital	Faculty Mentors	Dr. Josette Teuscher jteuscher@buffalo.edu
		Dr. Christian DeFazio, MD Christian.defazio@gmail.com
	Administrator	Dee McCarthy dmccarthy@kaleidahealth.org
Suburban Hospital	Faculty Mentors	Dr John McNamara Pianoman511@gmail.com
		Dr. Alex Ljungberg alexljungberg@gmail.com

Rotation Goals –

The Pediatric Emergency Medicine Fellow will recognize common Life and Limb threatening emergencies in the adult population, will learn to stabilize and begin appropriate treatment of these emergencies, and will coordinate appropriate triage and transfer of the adult patient to an appropriate facility and medical team for further management.

OBJECTIVES – Adult Emergency Medicine Rotation:

CARDIAC

Chest pain
Ischemic Heart
Disease
(MK, PC)

- develop a complete differential diagnosis for Adult Chest Pain
- know the pharmacology of medication commonly prescribed to patients with cardiac disease and hypertension
- identify risk factors for coronary artery disease
- recognize signs and symptoms of ischemic heart disease
- identify ischemic changes on EKG
- use relevant laboratory studies, imaging and monitoring to identify and manage acute ischemic heart disease

Dysrhythmias
(MK, PC, CIS, SP)

- identify dysrhythmias on EKG and Cardiac Monitor
- know the indications for defibrillation
- use the appropriate pharmacologic agent to treat an identified dysrhythmia
- initiate cardiac resuscitation during cardiac arrest
- Accurately communicate the pertinent findings and the patient's condition to the cardiac consultant
- stabilize a cardiac patient for safe transfer to an appropriate facility and medical care team

CHF
(MK, PC)

- recognize the signs and symptoms of congestive heart failure
- order and interpret relevant laboratory, imaging and monitoring studies used in the management of congestive heart failure
- plan the management of patients in congestive heart failure

PULMONARY

Respiratory
Failure
(MK, PC)

- recognize the signs and symptom of respiratory distress and respiratory failure in Adult patients
- perform effective bag mask ventilation of the Adult patient
- identify the respiratory patient in need of mechanical ventilation

RSI

- perform rapid sequence orotracheal and naso tracheal

(MK, PC)

intubation using appropriate medications and equipment for the Adult patient

Pulmonary Edema

(MK, PC)

- explain the pathophysiology of Pulmonary Edema
- use pathophysiology to generate a differential diagnosis for Pulmonary Edema
- Recognize the signs and symptoms of Pulmonary Edema
- initiate appropriate medical management to stabilize a patient in Pulmonary Edema

COPD

(MK, CIS, SP)

- contrast the pathophysiology and management of Chronic Obstructive Pulmonary Disease (COPD) with that of Asthma/Reactive Airway Disease (RAD)
- arrange safe transfer of the patient in respiratory distress / respiratory failure to the appropriate medical team and facility

PE

(MK, CIS, SP)

- recognize the signs and symptoms of Pulmonary Embolism
- identify the risk factors for Pulmonary Embolism
- utilize the proper laboratory and radiologic studies to diagnose Pulmonary Embolism
- initiate the treatment for Pulmonary Embolism and arrange transfer of care to an appropriate medical team and facility

DVT

(MK, PC)

- know the risk factors for DVT
- recognize the signs and symptoms of DVT
- use appropriate lab and radiologic studies to diagnose DVT
- initiate the management of DVT

RENAL

Hypertension

(MK, PC)

- develop a differential diagnosis for Hypertension in the Adult population
- recognize the signs and symptoms of Hypertensive Crisis
- stabilize and begin the management of the patient in Hypertensive Crisis
- arrange safe transfer of care to the appropriate medical team and facility
- identify the patient with renal insufficiency and renal failure
- know the diagnostic and therapeutic limitations associated with the patient in renal insufficiency or renal failure

Hematuria

(MK, PC, CIS, SP)

- know the differential diagnosis of hematuria
- recognize the risk factors, signs and symptoms of Renal Stone Disease

- Select the appropriate diagnostic studies to evaluate for renal stone disease
- Develop an effective pain management plan and arrange transfer of care to an appropriate consultation service
- Know the etiology and explain the pathophysiology of myoglobinuria/ rhabdomyolysis
- Identify the patient at risk for myoglobinuria / rhabdomyolysis
- Recognize and interpret laboratory studies for myoglobinuria / rhabdomyolysis
- Recognize and begin management of the life threatening complications of rhabdomyolysis

UROLOGY

(MK, CIS)

- Know the etiology of acute urinary retention
- Initiate evaluation and management of acute urinary retention
- Generate a differential diagnosis for a Groin Mass based on the patient's sex and age
- Recognize serious and potentially life threatening causes for groin mass in adults
- Select relevant lab and imaging studies to evaluate a groin mass and select the appropriate consultant service to aid in the evaluation and management

GYNECOLOGY

(MK, CIS)

- Develop a differential diagnosis for Dysfunctional Uterine Bleeding (DUB) based on age
- Based on the differential dx for DUB, select appropriate laboratory studies, imaging studies and consultations to evaluate and manage DUB
- Differentiate the potential etiology of a breast mass based on the patient's age, family history and reproductive history
- Recognize serious and potentially life threatening causes of a breast mass
- Initiate relevant lab and imaging studies to evaluate a breast mass and select the appropriate consultant service to aid in the evaluation and management

ENDOCRINE

(MK, PC)

- Differentiate the etiology by age and understand the pathophysiology of hypoglycemia
- Recognize the signs and symptoms of hypoglycemia in the adult population
- Plan the management of hypoglycemia

- Compare and contrast the epidemiology, pathophysiology, pharmacologic management and natural progression of disease in Type 1 and Type 2 Diabetes Mellitus (DM)
- Recognize and explain the medical management implications of end organ disease in Type 1 and Type 2 DM
- Recognize the signs and symptoms of Hyperthyroidism and Hypothyroidism
- Explain the pharmacology, application and adverse effects of common medications used to manage thyroid disease

GASTROINTESTINAL

(MK, PC)

- Explain the risk factors and the pathophysiology of biliary tract disease
- Differentiate between the signs and symptoms of cholelithiasis and cholecystitis
- Contrast the evaluation and management of cholelithiasis and cholecystitis
- Know the etiologies / epidemiology of Pancreatitis in the Adult population
- Recognize the signs and symptoms of pancreatitis in the Adult
- Initiate the appropriate laboratory and imaging studies for the diagnosis of pancreatitis
- Initiate appropriate medical management of the patient with Pancreatitis
- Recognize the signs and symptoms of gastric esophageal reflux
- Initiate medical management of GERD
- Contrast the signs and symptoms of upper GI bleed with those of a lower GI bleed
- Know the differential diagnosis, evaluation and management plan for upper and lower GI bleed
- recognize life threatening GI bleed
- Recognize the signs and symptoms of gastric and duodenal ulcer disease
- Recognize and respond effectively to the life threatening complications of ulcer disease.
- Recognize the signs and symptoms of hemorrhoids
- Plan the management of hemorrhoids

NEUROLOGIC

(MK, PC, CIS, SP)

- Know the etiology of seizures by patient age
- Recognize and manage life threatening complications of seizures

- Outline the stabilization and pharmacologic management of acute seizures / status epilepticus
- Recognize the side effects and complications of commonly used anticonvulsant medications

- Know the differential diagnosis of encephalopathy / altered mental status in the Adult population
- Initiate the relevant laboratory and imaging studies for the evaluation of encephalopathy / altered mental status
- Stabilize and triage the patient to the appropriate medical facility and consultant

- Know the population at risk for stroke / transient ischemic attack (TIA)
- Recognize the signs and symptoms of stroke and TIA in the Adult patient
- Initiate emergent management , stabilize and triage the stroke patient to the appropriate medical facility and consultant

- Recognize the signs and symptoms of Migraine Headache and differentiate migraines from other causes of headache in the Adult
- Plan management of the Acute Migraine Headache
- Know the medications used for prophylactic treatment of Migraine Headache

RHEUMATOLOGY

(MK, PC)

- Recognize the signs and symptoms of Systemic Lupus Erythematosus (SLE)
- Recognize the complications and the life threatening complications of SLE
- Initiate management of the life threatening complications of SLE and triage the patient to the appropriate consultative service / medical facility
- Recognize the symptoms of osteoarthritis and initiate appropriate pain management

OPHTHALMOLOGY

(MK)

- Recognize the signs and symptoms of acute glaucoma
- Initiate evaluation, and management of acute glaucoma and triage to the appropriate consultative service.

INFECTIOUS DISEASE

STD

(MK, PC)

- Identify the patient at risk for STD
- Recognize the signs and symptoms of STD

- Chose the appropriate laboratory studies to evaluate for the suspected STD
- Define Pelvic Inflammatory Disease (PID) and differentiate it from cervicitis and vaginitis
- Plan the treatment and follow up for STD based on the extent of infection i.e. cervicitis / vaginitis vs. PID
- Know the etiology by age of epididymitis / orchitis
- Know how to evaluate and manage epididymitis / orchitis\
- Recognize the signs and symptoms of Urethritis
- Know the etiology of Urethritis and the appropriate treatment regimen

HIV

(MK, PC, SP)

pathophysiology of Human Immunodeficiency Virus (HIV)

- Differentiate by age the etiology and explain the
- Recognize signs and symptoms of HIV
- Recognize life threatening complications of HIV
- Know the pharmacology and drug-related adverse effects if therapy for HIV
- Identify the opportunities for prevention of transmission of HIV
- Plan post exposure prophylaxis after exposure to a source of HIV

Toxic Shock Syndrome

(MK, PC)

- Differentiate by age, the etiology and explain the pathophysiology of toxic shock syndrome
- Recognize the signs and symptoms of Toxic Shock Syndrome
- Identify the life-threatening complications of Toxic Shock Syndrome
- Outline and initiate the management plan for acute Toxic Shock Syndrome

Tuberculosis

(MK, PC)

- Identify patients at risk for TB based on the epidemiology
- Recognize the signs and symptoms of TB
- Initiate relevant laboratory and imaging studies to diagnose and manage TB
- Initiate management of TB

SUBSTANCE ABUSE

(MK, PC, SP)

- Recognize the signs and symptoms of abuse of the following substances commonly available to our patient population – oral and parenteral narcotics, sympathomimetics (cocaine, methamphetamine, ecstasy, MDMA), hallucinogens (LSD, mushrooms), ketamine, GHB, PCP
- Recognize and manage acute, life threatening complications of commonly abused substances listed above

ALCOHOL

(MK, PC)

- Recognize and manage the signs and symptoms of acute ethanol toxicity
- Identify the life threatening complications of acute ethanol toxicity and provide effective medical intervention
- Identify signs, symptoms and complications of chronic ethanol abuse
- Know the signs, symptoms and management of alcohol withdrawal
- Contrast the signs, symptoms, complications and management of alternate alcohol ingestions / toxicity – isopropyl alcohol, methanol, ethylene glycol

PSYCHIATRY

(MK, PC, P, CIS)

- Describe the epidemiology of depression and suicide in the adult population
- Describe and recognize symptoms and signs of depression
- Describe signs and symptoms of suicidal ideation
 - Identify the depressed patient in need of immediate psychiatric referral and admission to hospital
 - Define lethality in relation to suicidal ideation, suicide gesture and suicidal attempt and identify the patient in need of immediate psychiatric evaluation and hospitalization
 - Describe and recognize the signs and symptoms of Psychosis
 - Differentiate the features of organic versus non organic psychosis
 - Create a management plan for the decompensating psychotic patient in the ED
 - Know the indications and contraindications for chemical and physical restraint of the potentially violent patient

SOCIAL

(MK, PC, CIS, SP)

- recognize signs and symptoms of Domestic Violence and Elder abuse / neglect
- Know the appropriate agencies to contact to arrange Victim support and protection

PAIN / SEDATION

(MK, PC, P)

- Know the indications for sedation in the ED
- Know the actions and indications for various drugs available for pain management and sedation in the Adult population
- Know the contraindications and complications for various drugs used for pain management and sedation in the Adult population
- Plan an effective pain management regimen for ED patient

TEACHING METHODS:

Case-based / Clinical teaching (one on one) during scheduled Adult ED shift – precepted by ED attending

Didactic presentations by ED faculty and residents at weekly ED Grand Rounds

Evaluation:

Observation of the individual Fellow's work by the supervising ED attending during clinical case management with on-site feedback

Concern and Compliment cards regarding a fellow's performance – submitted to MedHub by a supervising attending. These cards are reviewed by Program Director and fellow.

End-of-Rotation Evaluation submitted to MedHub by the faculty mentor after consultation with all faculty involved with the fellow during the rotation month. This evaluation is reviewed and discussed by the Program Director and the fellow.

Fellow evaluation of the completed Adult rotation – to be reviewed by the Program Director - any concerns to be discussed with the fellow

Our Pediatric Emergency Medicine Curriculum is extrapolated in part from the **American Board of Pediatric Content Outline for Pediatric Emergency Medicine**. It is a competency based curriculum.

THE COMPETENCIES (ACGME Bulletin)

Patient Care (PC) - "Resident must be able to provide patient care that is compassionate, appropriate and effective for the treatment of health problems and the promotion of health."

Medical Knowledge (MK) - Residents must demonstrate knowledge about established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, and the application of this knowledge to patient care.

Professionalism (P) – "Residents must demonstrate a commitment to carry out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population."

Communication and Interpersonal Skills (CIS) – "Resident must demonstrate effective information exchange and teaming with patients, their families and other health care professionals."

Practice-Based Learning and Improvement (PBL) – "Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence and improve their patient care practices."

Systems-Based Practice (SP) – "Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, and the ability to effectively call on system resources to provide care that is of optimal value."