



Dear Resident—

Welcome to the Emergency Department at Children’s Hospital and Research Oakland (CHRCO)!

The ED at CHRCO is an exciting, educational, hands-on opportunity to care for children. It can be a fast-paced environment with multiple things occurring simultaneously—we hope you will maximize your exposure to the various medical problems, levels of acuity, procedures, and needs of the patients and families you will evaluate.

The attendings, fellows, nurses, and support staff are always available to answer any question--don't hesitate to ask.

In this document are orientation materials to help you get started and transition into the system. In addition are general goals and objectives that have been written for the rotation. Take some time to think about how these apply to you and to create personal objectives as well.

On the hard drive of each computer in the ED is a folder of “core” pediatric emergency medicine articles for you to read and reference; we hope this will be a useful addition to the current resources you use.

Enjoy the rotation! Please let us know your feedback so we can continue to improve the experience.

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Orientation Checklist, page 2

Guide to Charting, page 3

Meditech pocket guide, page 4

Goals and Objectives (Part I and II), pages 5-25

CHRCO ED Orientation Checklist—Please go through this checklist with an attending/fellow/or senior resident on your first day.

- 1) Tour of the Department
 - a. Chart carousel
 - b. Resuscitation/Trauma rooms with general familiarity of equipment
 - i. Partial/Full trauma
 - c. Triage
 - d. File cabinet with charts from past month
 - e. Supply room (suture cart, splinting material, etc.)
 - f. Medication room (eyebox, procedural sedation forms)
 - **Make sure to label all medications before leaving the med room
 - Prelabeled stickers available for lidocaine syringes
- 2) Key personnel
 - a. Ward clerk (where to place orders)
 - b. Respiratory Therapy (RT order sheet, calling for treatments)
 - c. CCST (role, how to reach them)
 - d. Social Work
 - e. Spanish interpreter (evenings, other times/languages use phone)
- 3) Computers
 - a. MediTech (see Pocket Guide)
 - i. Go over different columns, especially acuity, wait time, and referred by PMD
 - b. Radiology iSite (radiologists put in official reads for all studies during day, until 10pm for CTs, and after hours CT reads are faxed to ED by nighthawk service)
 - c. MDConsult.com and/or CRS for discharge instructions
 - d. CHOnet for drug formulary (Lexicomp)
 - e. Orientation folder with articles
- 4) Telephone
 - a. Page only to 3240 (main ED number)
 - b. Ward clerk will announce over head what extension call is parked
 - i. Picking up a parked call: 172 then extension number
 - c. Do not give patient advice over the phone
- 5) Resuscitation resident
- 6) AM didactic (resident assigned for that day should be familiar with subject matter, and attending should lead a case-based discussion of the topic); Thurs AM is mock code
- 7) SAFE team (SAM/Kempe's), BERT
- 8) Guide to charting (see separate handout)
 - a. PMD expects will be attached to chart. Be sure to call PMD's
 - *especially if requested at time of referral (will be noted on expect form)

CHRCO ED Guide to charting

Goal: adequate medical documentation, adherence to JCAHO guidelines, and accurate billing.

Most commonly missed areas on main chart:

- 1) Sign and date your charts immediately (so incomplete charts can be given to correct resident)
- 2) Evaluation time (and timed updates throughout chart)
- 3) Review check boxes: allergies, reviewed nursing notes, interpreter (add name of interpreter)
- 4) HPI (Did you know that at least 4 elements of HPI are needed to be complete?)
- 5) ROS: This is necessary for complete care
 - a. Must circle those that are positive, check all negatives related to the presenting problem, before checking "All others negative"
- 6) Checking noncontributory for Past medical/social/and family is not enough (please add detail)
- 7) Using an interpreter
 - a. Note name of interpreter (or use of interpreter phone service)
 - b. Checking who you interviewed documents higher complexity of patient encounter
- 8) Document name and time paged for consultation requests

Procedure note:

- Take time out prior to major procedures
- Special pre-printed form for most common procedures. Take care to fill in all appropriate boxes.

Discharge Instructions:

- To be written in lay terminology. Pre-printed discharge instructions (MDConsult.com) should also be used often (and should be documented on discharge form), but also write specific information.
- Asthma action plan (for those with asthma)

Discharge medications/Medication Reconciliation Form:

- Prescriptions (including, license number, DEA, NPI, and number of total meds on prescription)
- Write down any over-the-counter you suggest or controlled substances that you Rx
 - Controlled substance prescriptions in attending office
- Review list of home medications: check yes/no/change for home medications
- Sign (all forms, even if no medications)

CHRCO ED MediTech Pocket Guide

Getting started

Adding your name to the screen

G – RES – <Enter> x 3 – E – <Enter>

Add name, mnemonic, and shift time -- <F12> x 2

To begin to see a patient (do this before you go into room)

Select patient [with up and down arrows]

A – S – S – <F12> [changes pt color from blue to off]

Reassigning a resident to a patient

A – E – your mnemonic -- <Enter>

Changing nurse color to red after you write an order

(only for orders not initiated by ward clerk)

A – N – <Enter> – R – <F12>

*Also best to talk face-to-face

Flag patient for discharge by nurse

First complete discharge paperwork and put in rack

A – S – DC – <F12>

Patient color

Blue: waiting to be seen by resident

Red: to be seen ASAP, urgent

Lavender: admit

Green: ready for discharge

White: in x-ray

Reviewing patient information

Select patient [up and down arrows]

M – P – < → >

NEW RECENT CLINICAL RESULT (new lab results)

VISIT HISTORY (Check recent ED or outpatient visits)

LABORATORY/MICROBIOLOGY (To see previous labs and
if current specimens received)

Ordering medications

Select patient [up and down arrows]

M – O – 1 – <Enter>

<space> – <F12> – Y – <Enter> [selects the current patient]

<C> – <Enter> (to continue)

ORDERING Dr: <your name mnemonic> – <Enter>

CATEGORY: PHA – <Enter>

PROCEDURE: (Option 1) ED – <F9> (ED medication order set)

(Option 2) <first few letters of med name> – <F9>

(Option 3) <OTHER> (if you can't find the medication)

Then use up and down arrows and <F12> to select

Hit <Enter> multiple times until you are at

Wt (kg): Enter weight in kg []

Allergies: [Y] in appropriate box

Hit Enter until at the [] for the medication choice you want

[]: [Y] at order you want and Enter dose

F12 to finish

Emergency Medicine Residents

	PGY-1/2	PGY-3	PGY-4
Professionalism Commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	Be professional and ethical in your interactions with patients, families, and co-workers. Through your training, these behaviors should increase; a senior resident should be an example and teacher to junior residents.		
Medical Knowledge Application of established and evolving biomedical, clinical, and scientific knowledge to patient care.	Familiarize yourself with sections III. Common Signs and Symptoms, IV. Common Conditions, and V. Diagnostic Testing in the document "Part II. Educational Goals and Objectives for the ED at CHRCO" prior to each time you rotate at the CHRCO ED; seek knowledge in these topics through clinical experience and self-directed reading. Give special attention towards learning topics with which you've not had experience or are unfamiliar.		
<ul style="list-style-type: none"> ○ Knowledge of differential diagnoses ○ PEM-specific knowledge of diseases 	Gain a basic knowledge of sections III-IV through clinical experiences, didactics, and self-directed reading.	Begin to gain advanced knowledge of other topics in sections III-IV. Have an advanced knowledge of the differentials for fever in various age groups, abdominal pain, respiratory distress, and the ill-appearing infant.	Have an advanced knowledge of sections III-IV.
<ul style="list-style-type: none"> ○ Choosing diagnostic tests and making management plans ○ Synthesis of knowledge 	Basic knowledge of section V. Always independently formulate a diagnostic and management plan. Implement that plan after receiving guidance from the attending or fellow.	Work towards an advanced knowledge of section V. Always independently formulate a diagnostic and management plan. Develop comfort in implementing these plans with minimal guidance from attending and fellows.	Advanced knowledge of section V. Demonstrate to attendings and fellows the ability to independently synthesize clinical information, choose diagnostic tests and create management plans.
Patient Care Treat health problems and promote health in a compassionate, appropriate, and effective manner.			
<ul style="list-style-type: none"> ○ Initial assessment of vitals and severity of illness 	Prior to obtaining history always make an initial assessment of vitals and severity of illness. Reassess pertinent abnormal vital signs during physical exam.		
	Immediately recognize severely ill patients and bring an attending or fellow to the bedside. Recognize	Recognize moderately and severely ill patients and initiate management plans. Involve the fellow or	Independently recognize and treat moderately and severely ill patients. Alert the fellow or attending of the

	moderately ill patients and under the guidance of a fellow or attending initiate management plans early. Recognize that this may need to be prior to obtaining comprehensive Hx and PE.	attending early in the management of the patient.	presence of severely ill patients, and what your plan of management has been/will be.
o Systematic approach to History (Hx) and physical exam (PE)	Develop a systematic approach to a directed Hx and PE. Junior residents should ask for guidance from an attending, fellow, or senior resident in improving skills at the bedside.		
o Continuing management/reassessment of patients	Continually reassess the clinical status of all your patients (in particular after tests results are available, clinical interventions have been done, or a long period of waiting).	Improve in your ability to continually reassess the clinical status of all your patients (in particular after tests results are available, clinical interventions have been done, or a long period of waiting).	In addition to reassessing one's own patients, senior residents should be mindful of the whole ED environment and remind and help junior residents reassess and update their patients.
o Leading a resuscitation/trauma	Attend all pediatric resuscitations and traumas (as clinical work allows) to be a member of the resuscitation team, and to watch how the team leader is running the resuscitation.	You will be assigned the role of RESUSCITATION resident. Take the lead and be able to systematically organize, lead, and implement a plan during a pediatric resuscitation with the guidance of an attending or fellow.	You will be assigned the role of RESUSCITATION resident. Take the lead and be able to systematically organize, lead, and implement a plan during a pediatric resuscitation in an independent fashion using the attending as back-up as needed.
o Procedural skills	Read about all procedures in Section II, V, and VI.		
	Know how and begin to perform basic pediatric procedures under the guidance of staff, attending or fellow (urinary catheterization, IV placement, laceration repair, splinting, lumbar puncture, bag-valve	Demonstrate performance of basic procedures (listed to the left) with minimal guidance from an attending or fellow. Begin to develop proficiency in remaining procedures in sections II,V, and VI.	Be able to independently perform procedures in sections II, V, and VI with minimal guidance from the attending.

	mask ventilation, chest compressions)		
Interpersonal and Communication Skills Effectively team with and exchange information with patients, families, and other health professionals.	1) Strive towards succinct, goal-directed, and courteous communications with your team of co-workers and consultants. 2) Continually communicate with families so that they understand their experience in the ED. They should always know who you are, what they plan is, and what they are waiting for. If they are discharged, you should give an understanding of their probable diagnosis, its management, follow-up care, and signs that they should return to the ED.		
o Presenting to an attending/fellow	Develop a systematic approach towards patient presentation that includes Hx, PE, discussion of differential and management options.	Improve upon your systematic approach by mastering the presentation of pertinent elements.	Succinctly present the pertinent Hx, PE, differential and management with minimal need for an attending or fellow to clarify or intervene.
o Calling consults	Call consultants only after discussion with an attending or fellow. When calling a consult understand the indication, make a list of the clinical questions, and give the appropriate patient information.	Let an attending or fellow know when you are going to call a consultant. With help from the attending, understand the indication for consultation, formulate and present an initial plan, and give the pertinent information succinctly.	Let an attending or fellow know when you are going to call a consultant. Be able to independently formulate a comprehensive plan prior to calling the consultant and give the pertinent information succinctly.
Practice-Based Learning and Improvement Investigate and evaluate one's own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.	Use and appraise the literature to add to and enhance clinical management.		
o Seek out feedback and self-evaluate o Receive and incorporate feedback	Openly give, receive, and incorporate feedback from attending, fellows, and other ED staff. Self-evaluate strengths and areas of improvement.		
o Follow-up on patients	For your education, follow-up on patients with challenging, questionable, or unclear diagnoses (including admitted and discharged patients, diagnostic dilemmas, and outstanding cultures). Communicate your follow-up with co-workers and attendings who participated in the care. As a senior resident, volunteer to help the attending with morning follow-up labs.		
Systems-Based Practice Demonstrate and	1) Respect and clearly communicate with the different		

<p>awareness of and responsiveness to the larger context and system of healthcare and effectively utilize system resources to provide optimal care</p>	<p>members of the medical team. In particular when giving or receiving sign-out be sure to include face-to-face interaction with the patient.</p> <p>2) Charting—Complete and sign all resident sections of the chart (including procedure notes, and medication order sheet).</p> <p>3) Advocate on behalf of your patients. Try to understand their life circumstances, and how and why it is they came to use the ED.</p>		
<ul style="list-style-type: none"> ○ Awareness of greater ED and hospital environment <ul style="list-style-type: none"> ▪ Waiting room, acuity of pts waiting 	<p>Be able to prioritize and efficiently manage all patients assigned to you. Look at the acuity level of all patients assigned to you; prioritize and efficiently multi-task (with guidance from an attending or fellow).</p>	<p>Be able to prioritize and efficiently manage all patients assigned to you. Look at the acuity level and wait times of all patients in the ED to see if resident reassignment is needed.</p>	<p>In addition to managing your primary patients, help the attending or fellow manage the ED. Watch the tracking board and waiting room to see if resident reassignment is needed, and teach junior residents multi-tasking skills.</p>

Pediatric Residents

	PGY-1	PGY-2	PGY-3
Professionalism Commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	Be professional and ethical in your interactions with patients, families, and co-workers. Through your training, these behaviors should increase; a senior resident should be an example and teacher to junior residents.		
Medical Knowledge Application of established and evolving biomedical, clinical, and scientific knowledge to patient care.	Familiarize yourself with sections III. Common Signs and Symptoms, IV. Common Conditions, and V. Diagnostic Testing in the document "Part II. Educational Goals and Objectives for the ED at CHRCO" prior to each time you rotate at the CHRCO ED; seek knowledge in these topics through clinical experience and self-directed reading. Give special attention towards learning topics with which you've not had experience or are unfamiliar.		
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<ul style="list-style-type: none"> ○ Choosing diagnostic tests and making management plans ○ Synthesis of knowledge 	Basic knowledge of section V. Always independently formulate a diagnostic and management plan. Implement that plan after receiving guidance from the attending or fellow.	Work towards an advanced knowledge of section V. Always independently formulate a diagnostic and management plan. Develop comfort in implementing these plans with minimal guidance from attending and fellows.	Advanced knowledge of section V. Demonstrate to attendings and fellows the ability to independently synthesize clinical information, choose diagnostic tests and create management plans.
Patient Care Treat health problems and promote health in a compassionate, appropriate, and effective manner.			
<ul style="list-style-type: none"> ○ Initial assessment of vitals and severity of illness 	Prior to obtaining history always make an initial assessment of vitals and severity of illness. Reassess pertinent abnormal vital signs during physical exam.		
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o Procedural skills	Read about all procedures in Section II, V, and VI.		
	Know how and begin to perform basic pediatric procedures under the guidance of staff, attending or fellow (urinary catheterization, IV placement, laceration repair, splinting, lumbar puncture, bag-valve	Demonstrate performance of basic procedures (listed to the left) with minimal guidance from an attending or fellow. Begin to develop proficiency in remaining procedures in sections II,V, and VI.	Be able to independently perform procedures in sections II, V, and VI with minimal guidance from the attending.

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Practice-Based Learning and Improvement Investigate and evaluate one's own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.	Use and appraise the literature to add to and enhance clinical management.		
<ul style="list-style-type: none"> ○ Seek out feedback and self-evaluate ○ Receive and incorporate feedback 	Openly give, receive, and incorporate feedback from attending, fellows, and other ED staff. Self-evaluate strengths and areas of improvement.		
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<p>Systems-Based Practice Demonstrate and awareness of and responsiveness to the larger context and system of healthcare and effectively utilize system resources to provide optimal care</p>	<ol style="list-style-type: none"> 1) Respect and clearly communicate with the different members of the medical team. In particular when giving or receiving sign-out be sure to include face-to-face interaction with the patient. 2) Charting—Complete and sign all resident sections of the chart (including procedure notes, and medication order sheet). 3) Advocate on behalf of your patients. Try to understand their life circumstances, and how and why it is they came to use the ED. 		
<ul style="list-style-type: none"> ○ Awareness of greater ED and hospital environment <ul style="list-style-type: none"> ▪ Waiting room, acuity of pts waiting 	<p>Learn the basics of managing more than one patient at a time. Look at the acuity level of all patients assigned to you; prioritize and efficiently multi-task (with guidance from an attending or fellow).</p>	<p>Be able to prioritize and efficiently manage all patients assigned to you. Look at the acuity level and wait times of all patients in the ED to see if resident reassignment is needed.</p>	<p>In addition to managing your primary patients, help the attending or fellow manage the ED. Watch the tracking board and waiting room to see if resident reassignment is needed, and teach junior residents multi-tasking skills.</p>

Family Practice Residents

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	mask ventilation, chest compressions)	ventilation, chest compressions)	sections II,V, and VI.
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<p>larger context and system of healthcare and effectively utilize system resources to provide optimal care</p>	<p>receiving sign-out be sure to include face-to-face interaction with the patient.</p> <p>2) Charting—Complete and sign all resident sections of the chart (including procedure notes, and medication order sheet).</p> <p>3) Advocate on behalf of your patients. Try to understand their life circumstances, and how and why it is they came to use the ED.</p>		
<ul style="list-style-type: none"> ○ Awareness of greater ED and hospital environment <ul style="list-style-type: none"> ▪ Waiting room, acuity of pts waiting 	<p>Learn the basics of managing more than one patient at a time. Look at the acuity level of all patients assigned to you; prioritize and efficiently multi-task (with guidance from an attending or fellow).</p>	<p>Be able to prioritize and efficiently manage all patients assigned to you. Look at the acuity level of all patients assigned to you; prioritize and efficiently multi-task (with guidance from an attending or fellow).</p>	<p>Be able to prioritize and efficiently manage all patients assigned to you. Look at the acuity level of all patients assigned to you; prioritize and efficiently multi-task.</p>

Part II.

**EDUCATIONAL GOALS AND OBJECTIVES FOR THE CHILDREN'S HOSPITAL OAKLAND
EMERGENCY DEPARTMENT**

FOR Pediatric Interns and Residents, Visiting Residents, and Subspecialty Fellows

The rotation in the Emergency Department (ED) at CHO will provide experiences in all of the following categories. Objectives listed in regular type are to be achieved by all residents after they have completed rotations through the ED. Interns are expected to achieve general familiarity, while second and third year residents, Pediatric Emergency Medicine fellows – to achieve progressively more comprehensive knowledge of the listed areas over the senior years of training. Familiarity with the objectives in italics, while desirable for all residents, is an absolute requirement for the Pediatric Emergency Medicine subspecialty resident (fellow). All clinical and administrative activities will be performed under direct supervision of the on-site Pediatric Emergency Medicine attending physician.

- I. Emergency Medical Services for Children : EMS-C**
- II. Resuscitation and Stabilization of Patients in the Emergency Department**
- III. Common Signs and Symptoms**
- IV. Common Conditions**
- V. Diagnostic Testing**
- VI. Monitoring and Therapeutic Modalities**
- VII. Management and Decision-Making**
- VIII. Teamwork and Consultation**
- IX. Patient Support and Advocacy**
- X. Financial Issue and Cost Control**
- XI. Medical Records**

I. Emergency Medical Services for Children : EMS-C

Understand the basic principles of emergency medical services for children, including the role of the primary care provider, prehospital care systems, regional trauma systems.

Objectives:

- A. Describe the organization of the Alameda County, Bay Area EMS-C system, including:
 - Pre-hospital care: access, training, and limitations of providers; transportation systems, the effect of time/distance on response
 - Availability of trauma and other center capable of providing care for critically ill children
 - Facilities for inter-hospital transport
 - How to arrange transport to another facility (including timing with respect to the condition of the patient, appropriate mode of transport, and communication between facilities)
 - Disaster preparedness: role of the pediatrician in preparing for and responding to disasters
 - Optional opportunity to schedule ride-alongs (interns especially encouraged) with local EMTs
 - *Familiarity with:*
 - *ED Policy and Procedure Manual Chapter 9: Prehospital*
 - *ED Policy and Procedure Manual Chapter 12: Transfer*
 - *ED Policy and Procedure Manual Chapter 7: Disaster/Safety Policies*

- *Elective experience for the fellow at the EMS office with Dr. Jim Pointer, ALCO EMS Medical Director; 2 weeks of participation in ambulance ride-alongs, EMS research group, teaching activities and evaluation of EMT's and paramedics*
- B. Explain the unique medical-legal issues in providing emergency care, including:
- Caring for patients with no financial support
 - Consent for urgent medical care of minors, including special circumstances (i.e. rape, abuse, substance abuse, STD's)
 - Obligations of the emergency physician to provide/arrange followup care
 - Physician responsibilities and COBRA regulations regarding inter-hospital patient transfer
 - Medical examiner/coroner cases
 - *Familiarity with:*
 - *Title XXII and ED Policy and Procedure Manual, Chapter 1: Purpose*
 - *ED Policy and Procedure Manual Chapter 19: Medical Records/Consent/Confidentiality*
 - *ED Policy and Procedure Manual Chapter 12: Transfer*
 - *ED Policy and Procedure Manual Chapter 20: Code Blue/Death*
 - *HIS Library item: Postmortem Protocol*
 - *Optional elective for fellows with Marva Furmidge, CHRCO Risk Manager*
- C. Describe the equipment, staff training, and reference material needed to ensure office preparedness for emergencies
- *Reference Hodge et al article, AAP Committee on Office Preparedness statement.*
- D. Discuss how principles of injury prevention apply to the role of EMS-C (i.e. in minimizing the impact of injury)
- *Reference Trauma article (in the red packet), our participation in the CPSC surveys, bicycle helmet program etc.etc.*

II. Resuscitation and Stabilization of Patients in the Emergency Department

Understand how to rapidly assess, resuscitate, and stabilize a critically ill or injured child in the ED setting.
Objectives:

A. Rapidly assess urgent patients

- Recognize respiratory failure and/or shock
- Formulate a diagnosis quickly, especially with respect to conditions which may need respiratory or cardiovascular support, other immediate intervention (i.e. tension pneumothorax, cerebral edema with impending herniation, cardiac tamponade)
- Assist in evaluating and stabilizing the child with multiple trauma
- *Familiarity with:*
 - *ED Policy and Procedure Manual, Chapter 17, Medical and Nursing Protocols and Procedures*
 - *PALS or APLS providers (interns and residents, visitors) or instructors (fellows)*
 - *ATLS providers (fellows), supplemental trauma rotations (fellows)*
 - *Ongoing reviews with fellowship director, other attendings at twice-monthly ED staff conferences, HGH Wednesday morning conferences, chapter – by- chapter review of Review for Textbook of Pediatric Emergency Medicine, Sharma S and Wang V (eds), Lippincott Philadelphia 2000 over the academic year (fellows)*

B. Establish and manage airway for infant, children, and teens

- Demonstrate proficiency in: bag-valve-mask ventilation, nasal and oral airways, endotracheal intubation, mechanical ventilation, cognizance of cervical spine protection during the airway management of trauma patients, oro- and nasogastric tube placement

- Know indications for and technique of nasotracheal intubation, emergency cricothyrotomy, needle thoracostomy
- *Familiarity with same sections of the ED P&P manual, APLS or PALS, ATLS; in addition residents will have gleaned this experience during other rotations (PICU, NICU, trauma rotations, ED rotations off site); policy requires ED attending or fellow to perform endotracheal intubation on all patients requiring this procedure. The fellow will have also had a required 4 week rotation and possibly some optional rotations in pediatric anesthesia to supplement training.*

C. Identify priorities for vascular access; establish access; perform fluid resuscitation

- Demonstrate proficiency in the cannulation of peripheral veins, intraosseous needle insertion, umbilical vessel cannulation
- Explain indications and describe technique for: central venous access and arterial access
- *Familiarity with same sections of the ED P&P manual, APLS or PALS and ATLS; experience during other rotations for the residents; procedure labs twice yearly for all houseofficers, to take place during noon conference given by the ED attendings.*

D. Demonstrate proficiency at cardiopulmonary resuscitation

- Obtain certification as PALS provider (see above)
- Direct resuscitation efforts in mock codes and actual emergency situations
- Understand the pharmacology of the drugs used in resuscitation.
- *Officiate (run) mock codes for and with colleagues; text for case templates: Handbook of Pediatric Mock Codes, Roback MG, Teach SJ, First LR, Fleisher GR (eds), Mosby, St. Louis, 1998*

III. Common Signs and Symptoms

Understand how to evaluate and manage common signs and symptoms in infants, children, and adolescents presenting to the ED. Objectives:

- ◆ Perform an ED appropriate problem-oriented history and physical
- ◆ Document pertinent positive and negative findings on paper ED record
- ◆ Formulate a differential diagnosis, with appropriate prioritization, recognizing patients with possible life-threatening conditions
- ◆ Describe indications for admissions to the ward or PICU or transfer to another facility
- ◆ Arrange appropriate followup, inform primary physicians

List of Signs and Symptoms which Present Emergently

1. **General:** Septic or ill-appearing infant/child, unexplained crying, fever, hypothermia, ALTE, SIDS, weight loss, behaviorally disturbed child, dehydration, the child suspected to have abused or neglected.
2. **Allergy/Immunology:** Acute allergic/anaphylactoid/anaphylactic reactions
3. **Cardiorespiratory:** Apnea, respiratory distress, tachypnea, respiratory failure, cyanosis, tachycardia or other arrhythmias, cough, wheezing, stridor, chest pain, palpitations, foreign body aspiration, hyper- and hypo-tension
4. **Dermatologic:** skin rashes, hair loss, itching, burns, graft-versus-host reactions
5. **EENT:** epistaxis, sore throat, earache, ear discharge, hearing loss, red eye, abnormal vision, eye pain
6. **Endocrine:** DKA, new onset diabetes, thyroid storm sx, congenital adrenal hyperplasia sx
7. **GI:** abdominal pain, distension, diarrhea, vomiting, constipation, ingestion of foreign body, GI bleeding, jaundice

8. **GU/Renal:** edema, changes in urination, bloody or discolored urine, groin or scrotal mass, pain,
 9. **GYN:** menstrual problems, vaginal bleeding or other discharge
 10. **Heme/Onc:** abnormal bleeding, petechiae, masses, organomegaly, lymphadenopathy, pallor, fever or illness in the immunocompromised child
 11. **Musculoskeletal:** limb pain, limp, arthralgia, joint swelling, inability to move an extremity, trauma to any of these areas
 12. **Neurologic:** ataxia, coma, lethargy, confusion, syncopal spells seizures, headache, weakness or paralysis, bulging fontanel, stiff neck, head injury, dizziness
 13. **Psychiatric:** behavior disturbance, suicidal ideation and attempts, depression, anxiety
 14. **Surgery/trauma:** lacerations, burn, multiple major and minor trauma; cross-referenced surgical conditions under GI, GU especially
- *ED Policy and Procedure Manual, Chapter 17: Medical and Nursing Protocols and Procedures*
 - *Hospital wide clinical Practice guidelines – all on file in the ED core in labeled binders; also available in Magic Office library*

IV. Common Conditions

Understand how to manage common illnesses and injuries presenting emergently (coordinate with previous section). Objectives:

- ◆ Discuss the pathophysiologic basis of the disease or injury
- ◆ Discuss and implement initial rapid assessment and stabilizing treatment, including specialized examinations when indicated
- ◆ Make a decision regarding disposition from the ED
- ◆ Discuss the appropriate use of consultants and the role of the generalist in management.

List of Common Diagnoses which Present Emergently

1. **Allergy/Immunology:** asthma, anaphylaxis, angioedema, serum sickness, HIV/AIDS, acute illness in the immunocompromised child
2. **Cardiovascular:** acute hyper-, hypo-tension, CHF, pericarditis, dysrhythmias, shock, Kawasaki's, acute illness in a patient with CHD, endocarditis, myocarditis, rheumatic fever
3. **Dermatology:** acute drug reactions, contact dermatitis, bacterial,viral,fungal infections of the skin and hair, infestations, cutaneous manifestations of systemic illness

4. **Endocrinology:** diabetes and DKA, hypoglycemia, calcium metabolism problems, electrolyte abnormalities, acute illness in a child with underlying endocrine/metabolic disease, thyroid storm, congenital adrenal hyperplasia, inborn errors of metabolism
 5. **GI/Surgical:** Acute abdomen, peritonitis, bowel obstruction, ileus, appendicitis, volvulus, malrotation, pyloric stenosis, peptic ulcer disease, constipation, biliary tract disease, inflammatory bowel disease, upper and lower GI bleeding, pancreatitis, foreign body in the GI tract
 6. **GU/Renal:** ARF, hematuria, proteinuria, UTI, phimosis, balanitis, paraphimosis, testicular torsion, epididymitis, STD, edema, nephrolithiasis, acute illness in child with transplanted kidney or on chronic dialysis
 7. **GYN:** dysfunctional vaginal bleeding, vaginal discharge, PID, pregnancy (intrauterine, ectopic, abortion)
 8. **Heme/Onc:** sickle cell vasoocclusive crisis, aplastic crisis, sequestration crisis, acute chest syndrome, fever in a child with sickle cell disease or leukemia, anemia, thrombocytopenia, coagulopathy, hemophilia, tumors-masses
 9. **Infectious disease:** otitis media/externa, pharyngitis, cervical adenitis, peritonsillar abscess, retropharyngeal abscess, cellulitis (buccal/orbital/periorbital), sinusitis, meningitis, encephalitis, sepsis/bacteremia/fever without a source, osteomyelitis
 10. **Neurologic:** ALOC, migraine, muscle contraction headache, shunt malfunction/infection, increased ICP
 11. **Ophthalmologic:** corneal abrasion, conjunctivitis, ocular foreign body, penetrating trauma to the globe, hyphema
 12. **Otolaryngology:** epistaxis, foreign body aspiration, epiglottitis, croup, tracheitis
 13. **Orthopedic:** gait disturbance, sprains, strains, fractures – nondisplaced and those requiring reduction, arthritis, bone and joint infection, common dislocations, SCFE, Osgood Schlatter
 14. **Respiratory:** resp failure, pneumonia, asthma, status asthmaticus and complications, pneumothorax, bronchiolitis, pleural effusion, smoke inhalation, acute illness in a child with CF, BPD, severe asthma
 15. **Surgical/Trauma:** burns, closed head injury, skull fractures, soft tissue injury: lacerations, abrasions, contusions, dental injuries, other major and minor trauma
 16. **Toxicology/Environmental:** ingestion/poisoning with unknown substance, bites and stings, submersion, heat and cold injuries
 17. **Psychiatric:** depression, suicide attempt/ideation, combative patient, conversion reaction/panic attacks
 18. **Social:** child abuse, neglect, sexual abuse, rape, substance abuse, domestic violence
- *Textbooks and formats mentioned in the previous sections will also apply here...*

V. **Diagnostic Testing**

Understand how to use and interpret laboratory, imaging, and other commonly used studies, diagnostic procedures in the ED. Objectives:

- ◆ Explain the indications and limitations and be aware of age-appropriate normals

- ◆ Understand the statistical aspects of lab tests commonly ordered: sensitivity, specificity, positive and negative predictive values, etc. to assess utility of individual tests in specific clinical situations
- ◆ Recognize cost utilization issues
- ◆ Understand the benefits and disadvantages of family presence during procedures
- ◆ Independently interpret results in the context of a particular patient; know therapeutic options for correcting 'abnormal' lab results

ED laboratory studies

- CBC, diff, plts, indices, ESR, CRP , coagulation studies
- Rapid screens for bacterial, viral, fungal pathogens
- Serologic tests for infection (monospot, VDRL, hepatitis, RSV, PCR)
- Blood chemistries: lytes, ca, mag, glu
- Blood gases – arterial, venous, capillary
- Hepatic function tests
- Renal function tests
- Drug screens, and levels
- Simple micro procedures: gram stains, CSF counts, UA
- Pregnancy test (urine, serum)
- *ED Policy and Procedure Manual, Chapter 16: Lab/X-ray*
- *Senior residents and fellows will assist the attending physician in following up lab results which require action, and will learn to appropriately document such activity on the HIS system*

Imaging and radiologic studies

- Plain radiographs
- Ultrasonography
- CT scanning – contrast and without
- Appropriate use of emergency echocardiography
- *ED Policy and Procedure Manual, Chapter 16: Lab/X-Ray*

Other studies and procedures

- EKG
- Vision
- Peak flow
- Lumbar Puncture
- Urinary catheterization
- *ED Policy and Procedure Manual, Chapter 16: Lab/X-Ray*

VI. Monitoring and Therapeutic Modalities

Understand the application of physiologic monitoring and special technology and treatment in the ED.

Objectives:

- ◆ Discuss indications, contraindications, complications
- ◆ Demonstrate proper use and technique in children of varying ages
- ◆ Interpret results of monitoring based on the method used
- ◆ *Hospital wide Sedation Policy and Procedure*

Monitoring techniques

- Vital sign monitoring
- Pulse oximetry
- Capnometry/ end tidal CO₂

- *ED Policy and Procedure Manual, Chapter 14: Equipment and supplies*

Treatments and Techniques

- Universal precautions
- Injury, wound (including lacerations, bites, crush, abrasions, etc.) and burn care
- Gastrointestinal decontamination
- Administration of nebulized medications
- Splinting
- Incision and drainage
- Oxygen delivery systems
- **Pain management** : methods for recognizing, evaluating pain; ASA classification system, topical, local, regional anesthesia;
- **Procedural sedation**, appropriate use of narcotic and non-narcotic analgesics, other
- Rapid Sequence Intubation
- Restraints : behavioral and chemical, for procedures
- Nonpharmacologic methods of pain control: distraction, humor therapy

Hospital wide Policies on all these topics

Third year residents and fellows will be expected to be 'Sedation Certified' as per hospital-wide sedation committee credentialing. They will thus participate directly in the pain management and administration of procedural sedation for those patients requiring this in the ED.

VII Management and Decision-Making

Develop a logical and efficient approach to the care of emergency patients, applying principles of decision-making and problem solving. Objectives:

- A. Demonstrate ability to prioritize care needs – perform accurate ED triage, including telephone triage; provide care to multiple patients, with varying levels of acuity: use appropriate timing of diagnostic/therapeutic interventions; adjust pace to ED patient acuity, volume, flow;
- B. Understand one's own limitations
- C. Act consistently and responsibly, adhering to professional standards of behavior
- D. Demonstrate respect for patient privacy and awareness of HIPAA regulations in both behavior and treatment of the patient's medical record
- E. Maintain timely, appropriate, accurate medical records
- F. Be aware of quality control/quality improvement processes in the ED and when appropriate use the results to improve patient management.

G. ED Policy and Procedures Manual, Chapter 21: Quality Assurance

Medical Staff Bylaws

A professionalism lecture series, started in August 2004, will cover monthly topics relevant to the above competencies. Attendance is required for all interns, residents, and fellows. All subspecialty fellows (not only the one in the ED) will be required to attend evening sessions, some of which will focus on the very same issues, quarterly during the academic year.

All interns, residents, fellows must be familiar with HIPAA regulations as part of Hospital Policy

VIII. Teamwork and Consultation

Understand how to function as part of an interdisciplinary team in the ED

Objectives: Participate effectively in the patient care team (nurses, clerical staff, financial workers, attending physicians, trauma team/ surgeons, residents, respiratory therapists, social workers, etc.);

Use consultants appropriately and communicate effectively with them.

Serve as pediatric consultant to primary care providers and specialists who manage children in the ED

ED Policy and Procedure Manual Chapter 10: Admit/Discharge

ED Policy and Procedure Manual, Chapter 18: Consultation

Trauma Service Policies and Procedures

See also Medical Staff By-Laws

Professionalism lecture series monthly at noon, for all interns, residents and fellows, as well as a separate quarterly evening meeting on more expanded versions of these topics for all subspecialty fellows

IX. Patient Support and Advocacy

Understand how to provide sensitive support to families and patients with acute illness and injury, arrange for on-going support and/or preventive services as needed

- A. Listen to concerns of patients and families
- B. Deal with them in a non-judgmental, culturally-sensitive manner which conveys warmth and caring
- C. Identify risk factors for the child and family, even outside the scope of the ED visit
- D. Deal with the “difficult” parent or child
- E. Demonstrate sensitivity in dealing with dying or deceased children and their families
- F. Explain to the family the role of the PMD, supporting the multilevel provision of healthcare
- G. Enlist parents’ support in the care of their own child after discharge – they should be understanding of, and invested in this process
- H. Be familiar with the problems of indigent families seeking care
- I. Identify and try to prevent problems in one’s own community

ED Policy and Procedure Manual, Chapter 19: Medical records, Consent, confidentiality

ED Policy and Procedure Manual, Chapter 22: Patients’ Rights

Professionalism lecture series mentioned above

X. Financial Issue and Cost Control

Understand key aspects of cost, billing, reimbursement issues in the ED

- A. Identify the general cost range for diagnostic and therapeutic interventions in the ED; utilize these appropriately with an appreciation for the impact on medical outcome, the family, the service unit, the managed care or other providers
- B. Select medications with sensitivity to cost issues
- C. Practice appropriate utilization of Consultant

- D. Participate in billing/managed care routines required of providers in the ED facility, showing attention to detail, accuracy, documentation
- E. Be familiar with principles of various types of insurance coverage as it applies to the ED visit
- F. Be sensitive to the financial constraints of patients when deciding followup, disposition
- G. *Every other month Administrative Seminars for ED physician and nursing managerial staff*

XI. Medical Records

Maintain accurate, timely, legally appropriate medical records in the ED setting

- H&P appropriate for the condition
- Problem list and final diagnoses
- Plan
- Detailed procedure notes for those done in the ED
- Accurate, timed, signed record of when medications are ordered, given in the ED
- Results of any diagnostic studies available during ED visit
- Condition on transfer or discharge from the ED
- Condition at taking over the patient from another physician
- Evidence of appropriate discharge instructions
- Communicate effectively in writing and over the phone with referring and consulting, and primary physicians.

ED Policy and Procedure Manual, Chapter 19: Medical Records/Consent/Confidentiality

ED Policy and Procedure Manual, Chapter 10: Admit/ Discharge

ED Policy and Procedure Manual, Chapter 12: Transfer

Hospital wide discharge information sheets, ED/UCC specific such sheets.

Part II: Original AJSaulys 6-04, revised 8-09 CHRCO ED Education Committee