Pediatric Ward and PICU Manual:
Everything you need to know from before admission to after discharge.

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July 2010
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This manual will be updated annually in July.

Please send corrections or suggestions for future editions to Mariene at mbrous2@lsuhsc.edu
Expectations

1. Learn about Pediatrics. You will need to know some pediatric medicine to pass each step of the USMLE regardless of your future specialty.

2. Participate in the care of your patients. You will get out of this rotation what you put into it.

3. Professionalism. No food or drinks at the nurses’ station, in the hallways, or in the patients’ rooms (“patient care areas” is how OSHA words it).

4. Teamwork is essential! Work with the nurses, consultants, ancillary staff, etc. to make every patient’s care what you would expect for your child or family member. The nurses’ station is for the nurses. Please respect their space; they respect ours.

5. Ask questions. The only stupid question is the one you should have asked but didn’t.

6. Enjoy your time with us. Kids are fun! Play with them. But no white coats or medical equipment in the Playroom, please.
Weekdays (excluding holidays)

8:00 AM  Morning Report or Morning Lecture (See page 5)
8:30 AM  Morning Checkout Rounds (See page 5)
9:00 AM  Work Rounds (See page 5)
10:00 AM Attending Rounds (See page 5)
12:00 PM Noon Conference and/or Lunch (See page 6)
1:00 PM  PICU Only: Lecture 2x/week (dates TBA)
2:00 PM  Post-call Intern MUST leave (make sure you check-out before leaving)
4:00 PM  Afternoon Check-out Rounds (See page 6)
8:00 PM  Ward Only: Evening Check-out Rounds with Night Float (See page 6)

Your day does NOT begin at 8 AM, nor does it end at 4 PM! You should get here early enough to see your patients and do all necessary work before rounds (see “Work Rounds”); and you are required to stay until all required work is completed on your patients (except if you are post-call).
DAILY SCHEDULE

• Morning Report or Morning Lecture
Morning report or lectures begin promptly at 8:00 a.m. Monday through Friday. Weekday morning report is usually held in classroom 5-333 in the hall between the 5th floor of the Medical School Building and the 5th floor of the hospital. Morning report lasts 30 minutes. Monday morning lectures are usually in classroom 6-329. These are excellent educational opportunities to discuss evaluation and management of pediatric patients. Anyone using a PowerPoint presentation during one of these conferences should have Heather make copies (use the handout format with 6 slides per page). These will be placed in your permanent file.

• Morning Checkout Rounds
Morning checkout rounds will be held after morning report or lecture in the same classroom. This is a brief checkout with the post-call team. They will give a brief update on the events of the last evening for known patients and they will give a brief summary of the new admits. These checkout rounds should last no more than 30 minutes (maximum 15 minutes for each team). These rounds can be minimized by the on call team writing frequent on-call notes throughout the night.

• Work Rounds
Work rounds are daily, including weekends and holidays, and usually follow morning report. During this time you should accomplish the following for each of your patients:
1. SEE PATIENTS: No excuses will be accepted on rounds!
2. Be courteous…Knock before entering any patient’s room.
3. Check orders over the last 24hrs: This is one way to know what happened to your patients since you left yesterday.
4. Check labs (Place on lab flow sheet): Be able to interpret them on rounds.
5. Check X-rays: **Look at the x-rays** as well as listen to the dictations.
6. Check Medication Administration Record (MAR): These are now located in Invision. Know what medications your patients are taking. If they have PRN medications but aren’t using them, they need to be discontinued. If pain medications have been automatically discontinued, do they need to be reordered?
7. Review nurses’ notes.
8. Write daily SOAP notes (See page 22).
9. Proof read, correct and co-sign notes written by medical students.

If you need more than one hour to accomplish these tasks, you should begin work rounds before Morning Report/Lecture.

• Attending Rounds

(a) **Weekdays**
During the week, attending rounds usually begin at 10 AM. This sometimes varies so check with your attending to confirm when rounds will begin.

PGY-1 residents and medical students are expected to have seen their patients and know their latest progress and lab. They will also be encouraged to become involved in developing the plan of action for the day.
Attending rounds will end promptly at 11:30 AM. If you notice that rounds may not finish by 11:30 AM, politely make your attending aware of the time restraint. It may be necessary to finish rounds after noon conference/lunch.

(b) Weekends and Holidays
On weekends and holidays, attending rounds begin at 8 AM (check with the attending for exceptions). All patients must have a resident and student note on the chart BEFORE attending rounds. Therefore, all patients must have been seen and evaluated BEFORE 8 AM. After rounds and all daily notes are completed, the post-call team may leave. If you are not on the call schedule on a weekend and/or holiday, you are off that day.

(c) What do I need for Attending Rounds?
1. Know everything about your patients. You are expected to present each patient to your attending and answer questions regarding your patients and/or their conditions.
2. Calculator: Everything is dosed in mg/kg in pediatrics.
3. Labs: Be able to interpret them
4. T-Max for 24hrs/Vital signs: Be able to interpret them
5. In’s and Out’s: Be able to interpret them
6. Babies should also have cc/kg/day and cal/kg/day calculated every day as well as today’s weight and how that differs from yesterday and/or admit.
7. Order Sheets: Extras in case orders need to be written on rounds
8. Consult Sheets: Extras in case consults need to be written on rounds
9. Harriet Lane Handbook
10. Assessments and Plans: These do not need to be written prior to rounds, but you need to have an assessment and plan for each of your patients to discuss on rounds. Make sure your daily notes reflect what was discussed on rounds. Use addendums. No patient should have “discuss with team and/or attending” as the plan. If you write this, make sure you go back and write what was discussed in an addendum.

• Noon Conference and/or Lunch
All residents working on the Pediatric Ward are expected to attend noon conferences. There are no exceptions. This includes off-service PGY-1 residents. Seventy percent (70%) attendance is required to pass the rotation. See the monthly Pediatric Conference Schedule for specific conference dates and room numbers.

• Afternoon and Evening Checkout Rounds
When you are on call, you are expected to actively care for all patients; you are NOT just a babysitter for the night!!
Afternoon and evening checkout rounds will be held at 4 PM and 8 PM, respectively. This is a brief checkout to the on-call team. You should give a brief update on the events of the day for known patients and a brief summary of the new admits. Make sure you address things that must be done (labs to be checked, etc.) and give instructions for any anticipated problems that may occur overnight with all patients. These checkout rounds should last no more than 30 minutes (maximum 15 minutes for each team). These rounds can be minimized by the primary team writing frequent addendum notes IN THE CHART throughout the day.
Ward Teams

There are two General Pediatric Ward Teams: Red Team and Green Team.

Each team consists of 1 full time faculty attending, 1 upper level pediatric resident, up to 4 PGY-1 residents, up to 4 acting interns (MS-4), and up to 6 MS-3 students.

The attending schedule for 2010-2011 is as follows: (changes may occur at any time)

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**Updated 6/2010**
Patients Not Permitted on the Pediatric Unit

According to Hospital Policy 5.10, the following patients shall not be admitted to the Pediatric Unit:

- Gang members
- Prisoner patients
- Pregnant patients
- Patients with gunshot wounds/stab wounds resulting from criminal activity
- Patients with pending felony/misdemeanor charges
- Patient with previous sexual misconduct on the unit
- Any patient deemed as an inappropriate admission to the pediatric unit by the Chief of Pediatrics

In addition, these patients shall not be admitted to or maintained on the Pediatric Ward:

- Patients requiring mechanical ventilation (including CPAP and BiPAP when used as a means of continuous ventilatory support) In the event that a patient is intubated and placed on a ventilator while admitted to the Pediatric Unit, arrangements must be made to transfer the patient immediately.

The following patients should not be admitted to or maintained on the Pediatric Ward unless deemed appropriate by the Hospitalist on call after collaboration with the Pediatric Ward Charge Nurse:

(The Chief of Pediatrics may be contacted if assistance is needed.)

- Patients with external ventricular/subdural drains
- Patients requiring frequent (more than every 3 hours) or continuous respiratory treatments, nitric oxide, or heliox
- Patients requiring intensive monitoring for an unspecified or extended amount of time (Ex. Neurological checks every 1 hour, vital signs every 1 hour, blood glucose monitoring every 1 hour*, etc.)
Ward Admissions

All pediatric admissions alternate between the two ward teams. The only exceptions are:

- Siblings will be admitted to the same team (and in the same room if possible).
- Patients previously admitted to your team who are returning (for whatever reason) should go back to your team for continuity of care.

There are 2 categories of patients on 2 separate, alternating admission lists. These lists are kept on the small dry-erase board in the Doctors’ Room. The Protocol Admission list is in the left margin of the board with alternating colored ink. The Regular Admission list is in the main portion of the board with a column for each team. Only the senior residents are allowed to write on this board. It is their responsibility to keep up with the admissions and assign them to the PGY-1 residents and acting interns.

- **Protocol Admissions**

These patients are admitted for 24 hour observation (hospital account number begins with 106… and there should be yellow stickers on the face sheet) for scheduled treatments. Examples include: Sickle cell hypertransfusion protocol, Remicade infusion, Chemotherapy infusion, Heart Catheterization, etc.

If the patient’s admission requires more than 24 hours, the patient should not be placed on the “protocol admission” list.

A senior resident will be notified of the patient’s arrival. It is his/her responsibility to then notify the PGY-1 resident that will be responsible for the patient. Do not ask the nurses to notify anyone else; that is your responsibility.

The PGY-1 resident is responsible for the care of these patients. These patients require:

1. Admission orders (most are pre-printed or pre-written)
2. Admission note
   **Procedural Sedation Consult Form replaces admission note in patients admitted only to have a procedure under sedation (page 36)**
   a. Complete HPI
   b. PMH, Social history, Family history
   c. Complete ROS (minimum of 10 systems)
   d. Thorough PE
   e. Brief assessment and plan
3. Any necessary consent forms
4. A dictated discharge summary is not required, although it is desirable.
5. If the patient’s admission spans over more than one calendar day, a note for each day must be in the chart, i.e. admission note on 7-1-10 and daily/discharge note on 7-2-10. If the patient’s admission spans over only one calendar day, the admission/discharge note may be combined into one entry in the chart. If there are any complications or unexpected occurrences during these admissions, a dictated discharge summary becomes a necessity.
- **Routine Admissions**

These patients are admitted for routine admission (hospital account number begins with 110… and there are no yellow stickers on the face sheet) or have an unplanned 24 hour observation (hosp acct # 106…), i.e. IVVD that is expected to resolve quickly. **Video EEG patients fall into this category.**

A senior resident will be notified of the patient’s arrival. It is his/her responsibility to then notify the PGY-1 resident that will be responsible for the patient. Do not ask the nurses to notify anyone else; that is your responsibility.

All of these patients need the following paperwork:

1. Admit approval form (should already be done if patient is coming from ED, clinic or another unit).
2. Admission orders
3. Admission notes
4. Any consents or test requests necessary to care for the patient
5. Daily SOAP notes
6. Discharge orders
7. Discharge summary written in the chart and dictated

- **Transfer Admissions**

**Accepting a Patient from Another Hospital**

1. Get the name and phone number of the person you are speaking with.

***NEVER TELL THE PERSON TO CALL SOMEONE ELSE!!***

2. Where is the patient located, i.e. Clinic, ED, Ward, PICU?

3. Patients must be transferred to a place of equal or greater care and they cannot go from an inpatient setting to an outpatient setting.
   
   a. We generally do not accept direct admits to the Ward from outside Clinics or EDs. The on-call Attending must make the decision to accept direct admits.
   
   b. Clinic and ED patients should go to our Clinic or ED, unless they are ill enough to go directly to the PICU.
   
   c. PICU patients must go to the PICU.
   
   d. Ward patients can go to the Ward or PICU, depending on the severity of the illness.

4. If you are not working in the area where the patient will be accepted, tell the transferring physician you will have the appropriate person call him/her back in a few minutes. Make sure you call the appropriate person, and that they understand to call the physician ASAP.

5. Once you have determined that you are the correct person to accept the patient in transfer, obtain the following information:
   
   a. Patient’s name, age, and weight in Kilograms
   
   b. Chief complaint and HPI
   
   c. Pertinent history including surgeries
   
   d. Physical exam including actual numbers for vital signs
   
   e. Medications received and currently receiving
f. Labs (actual numbers, not just “they are OK”) and x-rays on admit and changes if any

6. Tell the physician you must find out if there is an available bed (if PICU or Ward) and discuss the case with your attending. Tell him/her you will call back ASAP.

7. Contact the charge nurse to find out if there is a bed available in the PICU or on the Ward for the patient.

8. Contact your attending. Together you will determine:
   a. Does the patient need to be transferred?
   b. Can we provide the services the patient will need?
   c. Is the patient stable for transfer?
   d. What diagnostic tests and/or treatments need to be performed prior to transport?
   e. What is the best method for transport? POV (per own vehicle) is almost never appropriate!

9. Set up transport if you are accepting the patient.
   a. Ambulance: The transferring physician should set this up with his/her local ambulance company.
   b. Helicopter: You will have to call Life Air (phone number 1-800-762-9562) to set this up once you have the patient’s insurance information.
   c. Fixed wing: If the transferring facility will use their own fixed wing, make sure they will set up ambulance transport from the airport to the hospital through Balentine Ambulance (phone number 222-5358).

10. Call the physician back with the above information.

11. If you are accepting the patient, have his/her staff fax a copy of the patient’s “face sheet” (name, address, contact information, insurance information) along with pertinent notes, labs, etc. to you. PICU 5-7208, Ward 5-8535, Clinic 5-8638, Peds ER 5-8556

12. Make sure he/she will send copies of the chart, all lab results, and copies of all radiology studies with the patient.

13. Give him/her the phone number for his nurses to call report to our nurses. PICU 5-7225, Ward 5-6143, Clinic 5-8636, Peds ER 5-8289

14. Fill out an Admission Approval Form (see below for specific instruction) if the patient is coming to the PICU or Ward. Have the nurses send this to Admitting.

15. Once the patient arrives, the paperwork is the same as for any other patient.

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**PICU Admissions**

There are 2 types of PICU admissions:

- Pediatric Medicine
- Surgical Subspecialty with an automatic PICU consult

All Pediatric Medicine admissions to the PICU must be discussed with the attending prior to the patient’s arrival and immediately after your initial assessment (just minutes after the patient arrives).

All surgical patients must be discussed with the primary team. You are responsible for reviewing their orders and then discussing the patient with the PICU attending. When reviewing the primary team’s orders, pay close attention to medication dosages.
Policy for Co-management of Pediatric Trauma Patients on the Pediatric Ward

Section 1: General Principles
I. Trauma will be the primary team caring for all Pediatric Trauma Ward patients. All patients will be co-managed by one of the Pediatric Ward Teams.
II. All Pediatric Trauma Ward patients will be evaluated by a Pediatrician for co-management of:
   1. Underlying Medical Conditions
   2. Nutrition
   3. Pain Control
   4. Medication dosages
   5. Immunization status
   6. Discharge planning
   7. Emotional and social well being of the patient
III. Major changes to any of these issues must be discussed and agreed upon by BOTH services before orders are written.

Section 2: Responsibilities and Duties of Clinical Services

Pediatric notification of Trauma patient requiring co-management
1. PICU patients transferred to the ward: The PICU Resident caring for the patient is responsible for calling the Pediatric Ward Resident to give report.
2. Patients directly admitted to the ward: The Trauma Ward Resident caring for the patient is responsible for calling the Pediatric Ward Resident to give report.

Pediatric Responsibilities
1. An interval note will be written by the Pediatric Ward team at point of contact addressing the above issues.
2. A Pediatric daily note will be written until the patient is discharged or the Pediatric Attending deems co-management is no longer required (sign-off).

Trauma Responsibilities
1. Write a daily note on each patient.
2. Complete all discharge paperwork unless care is transferred to Pediatrics (see below).

Transfer to Pediatrics: If at any time the patient is ready for discharge from Trauma’s standpoint, but still has one or more of the above issues, the Trauma service may discuss with Pediatrics the potential for transfer of care. Before this transfer will be made the following MUST occur, in this order:
1. Trauma discusses the case with the Pediatric Attending
2. The patient’s care is dictated from the time of admit by Trauma until the date of transfer of care to Pediatrics.
3. An order is written in the patient’s chart: “Transfer to Pediatrics”
Admission Paperwork

- **Admission Approval Form** (rev 05/10)
  Stamp the form with the patient’s addressograph card. Fill in the following sections:

1. **Admission Date**
2. **Service**: usually Pediatrics
3. **Diagnosis**: do not use “Rule Out” or list symptoms
4. **Admitting physician**: This is the resident on the ward at the time of admission. The physician who saw the patient in the clinic or ED will not get paid for seeing the patient if he/she is listed as the admitting physician.
5. **Attending physician**: This is the attending for the ward team that will be admitting the patient.
6. **Procedures**: List any planned procedures in this section (for insurance purposes).
7. **Check all that apply**: This should be self-explanatory
8. **Admit Type**: (You may only check **ONE** box in **ONE** column.)
   - **Inpatient**:
     - Formally admitted as inpatient with an expectation that he or she will remain at least overnight and occupy a bed.
     - Physician has made a complex medical decision to include
       - medical history,
       - severity of Signs/Symptoms
       - Predictability of something adverse happening
       - Need for diagnostic studies
     - MR must include documentation that MD assessed patient risk to determine observation service.
     - **Inpatient Types**:
       - **Emergency Admit**: patient comes from the Emergency Room
       - **Urgent Admit**: patient comes from LSU Clinic or Day Surgery
       - **Elective Admit**: patient is scheduled to be admitted, usually comes from home
       - **Transfer Admit**: patient comes from an outside hospital or facility
   - **Observation**:
     - Observation is an outpatient service ordered by a physician.
     - It is a well defined specific, clinically appropriate service, which includes:
       - Ongoing short term treatment
       - Assessment
       - Reassessment
ADMISSION PAPERWORK

- Observation service is used before a decision can be made whether to admit or discharge.
- Requires a significant period of treatment or monitoring in order to make a decision concerning admit or discharge.
- MR must include documentation that MD assessed patient risk to determine observation service.
- Majority of case decisions can be made in less than 48 hours and most less than 24 hours.
- ALL hospital observation services, regardless of duration, that are medically reasonable and necessary are covered by Medicare.
- Observation service begins at clock time documented in MR and ends when all medically necessary services are completed.
- Items that aren’t observation services:
  - Post op monitoring during standard recovery,
  - Routine prep for diagnostic testing,
  - Diagnostic or therapeutic services for which active monitoring is a part of the procedure,
  - Patients waiting for nursing home placement
- Examples: Chest pain that doesn’t meet inpatient Interqual Criteria.

Outpatient in a Bed:

- Patient needs a bed for post procedure medications, monitoring, dietary services, etc. prior to being released.
- Examples: Gamma Knife, Pediatric MRI Sedation, Day Surgery, Cath Lab, Remicaid Treatment, Chemotherapy, Lap Coli, Vein Stripping, etc.

8. Physician’s Signature and Printed Name

9. Date and Pager Number

- Admission Orders

THE PATIENTS WEIGHT IN KILOGRAMS AND ALLERGIES MUST BE LISTED AT THE TOP OF ALL ORDER SHEETS!!

A-D-C-VAAN-DRIML

- **Admit**: Service, Team, Doctors
- **Diagnosis**: Do not use “rule out”. If the patient does not have a definitive diagnosis, list his/her symptoms.
- **Condition**: Stable, critical, etc.
- **Vitals**: “Routine” is every 4 hours. “Q shift” is every 8 hours.
- **Activity**: Ad lib, Bed rest, ambulate every ___ hours, etc.
- **Allergies**: Note any drug reactions, food or environmental allergies
- **Nursing**: Strict I&O, daily weights, routine newborn care, dressing changes, call MD orders, etc.
- **Diet**: NPO, Ad lib age appropriate, clear liquids, name of formula with amount and frequency, neutropenic, etc.
- **Respiratory**: Pulse oximeter, respiratory treatments, oxygen, incentive spirometry, CPT, etc. All orders must be rewritten every 72 hours (green sticker reminders will appear)
- **IVFs**: Name of fluid, additives, rate, flushes
**ADMISSION PAPERWORK**

- **Medications:**
  - ALWAYS check the dosage in a book before ordering ALL medications.
  - The patient’s **weight in kilograms** and **allergies** must be written on all order sheets.
  - Route of administration Ex. IV, PO, IM, etc. must be written in the order.
  - Timing of administration Ex. Q4 hrs, qday, etc. must be written in the order. If you want the first dose to be given now, you must order it that way (**1st dose now**).
  - The dose must be written in units/weight/time followed by the total dose to be given.
  - **Example:** *Rocephin 50mg/kg/day (wt 20 kg) = 1000mg IV qday, 1st dose now*
  - If a dosage or amount is less than one, always precede the decimal with a zero (**0.5 cc**).
  - **Never** write a zero after a decimal (**1.0 cc**). If the decimal is not seen, this will result in a 10-fold increase in the amount of medication given (**10 cc instead of 1 cc**).
  - Oxygen is a medication (fill out a respiratory order sheet also)
  - Fill out PCA sheet for Morphine pumps.

- **Labs, tests, procedures:** Labs, EKG, ECHO, EEG, MRI, etc. Fill out any necessary request forms. When ordering radiology studies, write the indication for the test on the order sheet.

- ****Old Chart to Floor**
  - Always review patient’s old chart and/or discharge summaries!!

There are preprinted admit orders for Sickle Cell Hypertransfusion (page 46).

****Make sure you sign the pre-printed orders for flushes and procedural pain.****

- **Admission Note**
All patients need a COMPLETE admit note and all Inpatient Admissions to the ward also need a RAN (resident admit note). If the RAN is COMPLETE, then an IAN (intern admit note) is not required. However, the PGY-1 resident is still responsible for knowing everything about the patient.

For billing purposes, every admit note must include:

1. HPI with at least 4 components
2. Medical History with PMH, Social history and family history
3. ROS with 10 systems (residents may write “ROS: See HPI, rest negative” if you reviewed the rest and that’s truly the case)
4. Comprehensive PE
5. Pertinent labs and studies reviewed
6. Assessment and Plan

**In the PICU, use the PICU Admission History and Physical Examination form.**

Make sure you complete ALL sections of the form. At the end of your Impression and Plan, document the **name of the attending** that you spoke with regarding the care of the patient. If the preprinted form is not available, follow the format for Ward Admissions.
HISTORY AND PHYSICAL GUIDE

CHIEF COMPLAINT:
The patient or caregiver’s reason for presentation. Use his words and place in quotes.
“He is having a pain crisis.”

Informant & reliability - (ex. mother, grandmother, appears to be a reliable historian)

HISTORY OF PRESENT ILLNESS:
State patient’s age, race, sex, any pertinent birth or past medical history, his usual state of health
and the reason he presented to the doctor. Discuss the history in logical, chronological order.
Address the onset, location, duration, context, timing, associated signs/symptoms,
exacerbating/relieving factors, previous episodes, etc. of each chief complaint. Include all
pertinent history and ROS.
(Ex. The patient is a 5 year old black male with sickle cell disease who was in his usual state of
good health until 2 days prior to admission when he developed fever up to 102º F and began
vomiting 3 times a day.)

PAST MEDICAL HISTORY:

- Birth history: gestational age in weeks if known, full term (> 37 weeks GA) or premature
  infant (< 37 weeks GA), birth weight/length/head circumference, vaginal delivery or C-
  section (ask why C-section?), age and parity of mother, duration of labor, rupture of
  membranes, complications of pregnancy, if any prenatal care (or not), infant APGAR
  scores if known, neonatal course (oxygen requirements, fever, treated for any infections,
  jaundice, feeding problems, length of nursery stay (normal newborn nursery versus
  NICU)

- Maternal history: medications taken during this patient’s gestation, smoking history, drug
  use, alcohol use, presence of risk factors for HIV in mother and father (IV drug use,
  blood transfusion, multiple sexual partners) and testing for HIV during pregnancy, any
  illness during pregnancy (and at what GA), gestational diabetes, hypertension, vaginal
  bleeding, UTI’s, yeast infections, history of STD’s and treatment for them (syphilis,
  gonorrhea, chlamydia, herpes simplex virus, hepatitis B, hepatitis C, HIV, genital warts).
  List mother’s other pregnancies if any in chronological order. Include date of birth,
  weight, sex, mode of delivery, health of child.

- Immunizations: Check LINKS (direct link on the Resources page of the Pediatric
  website) Is the child up to date on his shots? If not, why? If so, what immunizations
  does this include? Received where? Next due? If this patient has a disease process
  requiring particular immunizations, have those been given? When? Where?
  - If the patient’s LINKS sheet shows that he/she is behind, verify this information
    with the parent, PCP, or anyone else that may have this information. If the child
    is up-to-date, provide documentation of this to Karen so she can update the
    website (slide it under her door if she’s not here). If the child is not up-to-date,
    order the appropriate immunizations to be given BEFORE the time of discharge.

- Previous hospitalizations: List dates if known, where hospitalized, approximate age, and
  reason for hospitalization.

- Previous operations: List dates and type of surgery
ADMISSION PAPERWORK

- **Current medications:** Prescription and over-the-counter with total dose, dose per kilogram, how often, duration, time of last dose, and indication for each (ex. Children’s Tylenol 1 ½ tsps.= 10 mg/kg PO every 4-6 hours for 3 days, last dose 2 hours ago for fever).
- **Allergies:** List drug, food, and environmental allergies and patient’s reaction to them. (ex. Amoxil causes skin rash, peanuts cause anaphylaxis), any history of dermatitis, eczema, urticaria, hay fever, allergic rhinitis, asthma, allergy shots
- **Nutrition history:**
  - Infants: breast or bottle fed, type of formula, # of ounces fed and how often (ex. 2-3 oz every 3-4 hours), milliliters per kilogram per day (ex. 110 cc/kg/day). Has he had changes in his formula and why? Solid foods started at what age?
  - Older children: types of foods they eat, assess appetite, juice intake, milk intake (ex. likes chicken, potatoes, drinks 4 oz of juice and 2-3 8 oz glasses of milk a day).
  - If patient is unable to eat by mouth, is he fed via gastrostomy tube, nasogastric feeding, or TPN? (given IV). If one of these modes, what nutrition is he on and how much? (Ex. takes Pediasure 1 can through gastrostomy tube 4 times a day and then receives continuous feeding with Pediasure at 15 cc/hr over 12 hours at night from 8 pm to 8 am)
- **Developmental history:** What can the patient do that is age-appropriate? If the patient is delayed, what is his current developmental age?

FAMILY HISTORY:
- Father’s age, health status
- Mother’s age, health status
- Caretaker’s age and health status
- Presence of familial diseases and who has them, (including diabetes mellitus, cancer, hypertension, kidney disease, liver disease, congenital heart disease, collagen vascular disease (rheumatoid arthritis, lupus, juvenile rheumatoid arthritis), anemia, (sickle cell anemia or trait), immunodeficiencies (AIDS, Wiskott-Aldrich, IgA deficiency), genetic disorders (Down’s syndrome, Turner’s syndrome, cystic fibrosis), etc.
- Any negatives from the list above?

SOCIAL HISTORY:
- Where was child born? Where does child live and with whom? Primary caretaker?
- Apartment, trailer, institutional setting or in a home? How long at this address?
- In the country or in city?
- City water and sewage or well water and septic tank?
- Lives with biological parents, foster parents, adoptive parents, or relative?
- Employment of parents or primary caretaker and what they do? Marital status of parents? Legal custody of child?
- Financial status: self pay with own private insurance, military insurance or medicaid, food stamps, receives checks from SSI or aid to dependent children?
- Smokers in the home?
ADMISSION PAPERWORK

- Pets: (ask about dogs, cats, birds, ferrets, turtles, snakes, iguanas, hamsters, gerbils, birds). Do the pets live inside the home or outside? Ask about recent bites or scratches inflicted by pets.
- List everyone who lives with or has contact with the child.
- Does child attend daycare? Babysitter?
- Travel history (particularly to foreign countries)? What country and for how long?
- Name of primary care physician.

ADOLESCENT HISTORY/ISSUES:

- What grade are you in and what type of grades do you make? Have you had to repeat a grade or have you ever been suspended from or dropped out of school?
- Are you planning to graduate from high school? Go to college?
- Do you have a job and if so what type of work and how many hours a week?
- Who do you live with? Have you ever lived in foster care or institution? Have you ever run away from home? If so, why?
- Have you ever had any thoughts about harming yourself (suicide) or others (homicide)?
- Do you ever have feelings of sadness or depression for more than 3 days in a row?
- Have you lost or gained weight in the past year? If yes, how much weight have you lost or gained in lbs and over what period of time.
- Do you drink alcohol and how much? Do you smoke or chew tobacco and how much? Have you smoked marijuana, or used drugs (heroin, cocaine, speed, acid, etc)
- Does anyone in your family have a drug or alcohol abuse problem?
- Have you ever had sexual intercourse? At what age? How many different partners? Do you use birth control and what do you use? (Birth control pills, condoms)
- Have you ever had a sexually transmitted disease? (GC, syphilis, herpes simplex, genital warts, chlamydia, HIV) If yes, were you treated?
- For sexually active males: Do you know how to properly use a condom? Have you had any problems with penile discharge or lesions? Have you fathered a child?
- For females: Have you started your period? And at what age did you start? What date did your last menstrual period start? Are your periods regular? (once a month?) Have you ever had a vaginal infection? Do you have painful or excessively heavy periods or bleed in between periods? Do you think you may be pregnant? Have you ever been pregnant?
- Do you use a seat belt? Do you ride in a car when the driver is drunk or “high”? Do you feel safe at home? At school? Have you ever been hit by a parent, relative, friend, including boyfriend / girlfriend? Does your mother or caregiver ever get hit by his / her significant other? Are you bullied at school, at home, or on cyberspace? Has your date ever raped you?

REVIEW OF SYSTEMS: 2-3 questions concerning each system
If the information is pertinent to the HPI, place it there. If the information is already in the HPI, do not repeat it here…just write “See HPI”.

- General Health: fatigue, weight loss, weight gain, appetite, physical activity level
  (Typically all of this information goes in the HPI to show how the current problem has changed the patient from his baseline.)
ADMISSION PAPERWORK

- **HEENT**: headaches, trauma, vision or hearing impairment, blurry or double vision, need for glasses/contacts, eye or ear infections, sore throat, runny nose, nosebleeds, sinus infections, strabismus
- **Cardiovascular**: heart murmurs, congenital heart defects (ASD, VSD, coarctation, ToF, etc), abnormal heart rate (sinus tachycardia, bradycardia, palpitations), chest pain, hypertension
- **Hematological**: Any excessive bruising, clotting disorders (history of blood clots or hypercoagulability), excessive bleeding with or without surgery, history of anemia, history of sickle cell disease or trait, history of Thalassemia, leukemia, or other white blood cell abnormalities, history of tumors.
- **Breasts**: development, trauma, lumps, pain, nipple discharge, gynecomastia
- **Respiratory**: shortness of breath, wheezing, dyspnea, coughing, orthopnea, hemoptysis, night sweats, chest pain, pneumonia, asthma, bronchitis, TB
- **GI**: appetite, dysphagia, nausea, vomiting, (ex. vomiting 3 x/day about ½ cupful for past 2 days, blood-tinged, non-bilious, usually 30 minutes after eating), diarrhea (describe stool color, consistency, frequency, bloody or not) constipation, abdominal pain, gas, melena, hematochezia, jaundice, problems gaining weight or problems with excessive weight gain
- **GU**: dysuria, polyuria, oliguria, bedwetting, incontinence, hematuria, hesitancy, frequency, decreased urinary stream, urgency, UTI history, kidney stones, kidney disease, hypospadias, circumcision.
- **Neurologic**: seizures, motor tics, cerebral palsy, muscular dystrophy, normal or abnormal gait, disturbances of smell, vision, hearing, speech, developmental delay, performance in school
- **Musculoskeletal**: trauma, fractures, arthritis, muscle weakness or atrophy, flexor contractures, scoliosis, club feet, deformities
- **Skin**: color, pigmentation, scaling, bruising, dry skin, rashes, pruritus, skin lesions, eczema, psoriasis, atopic dermatitis, abnormal loss or growth of hair, nail changes

PHYSICAL EXAMINATION:

- **Vital signs**:
  - Temperature: ___ (°C or °F, how taken: oral, axillary, rectal, tympanic)
  - BP: ___ (use appropriate size cuff according to age/size of child) Is BP normal, high normal, or hypertensive (for age, sex, height or weight of child or adolescent)
  - Pulse: ___ (count for 1 minute); is this normal for the age of the child?
  - Respiratory rate: ___ (count for 1 minute); is this normal for the age of the child?

- **Growth parameters**: plotted on age/sex appropriate growth chart and placed on EVERY patient’s chart. Also, attach a copy of completed growth chart to your write-up that is turned in to your attending.
  - Weight: ____ (kg), percentile for age _____
  - Height or length: ____ (cm), percentile for age _____ (length is lying measurement, height is standing measurement)
  - Weight for length or BMI: _____, percentile for age _____
  - Head circumference: ____ (cm), percentile for age (mainly on infants)
ADMISSION PAPERWORK

- **General appearance**: State of health and nutrition (ex. well-developed, well-nourished infant in no acute distress; malnourished child in moderate distress due to pain)
- **Skin**: note color, skin turgor, presence of lesions, or rashes. Describe any rashes (ex. generalized, erythematous maculopapular rash with few discrete 2-3 mm papules noted over chest and back)
- **Head**: fontanelles in infants (soft/flat versus firm/bulging), shape (normal, microcephalic, macrocephalic, dolicocephalic (flattened on sides), hydrocephalic. Note if cranial sutures are closed, any scalp lesions, seborrhea, hair loss.
- **Eyes**: red reflex bilaterally, pupil size, pupils equal and reactive to light, extraocular movements, conjunctivae clear, red, or icteric. Any strabismus, nystagmus, cataracts, presence of sty, excessive tearing, exudate, eyelid edema or erythema surrounding eye
- **Ears**: normal shape and placement or low set, appearance of tympanic membranes (describe color, mobility, light reflex, presence of normal landmarks, PE tubes, evidence of middle ear effusion, perforation of ear drum), external ear canal (any edema, erythema, drainage)
- **Nose**: nares patent, any drainage, nose bleeds, nasal polyps, nasal flaring (sign of respiratory distress)
- **Mouth**: moist or dry mucous membranes, condition of teeth, any mucosal lesions noted, erythema or exudate of posterior pharynx, normal or enlarged tonsils, exudate of tonsils, uvula midline or not, arched palate, palatal petechiae, appearance of gingiva, oral thrush
- **Throat/neck**: cervical adenopathy (note location, size in cm, freely moveable or fixed to underlying tissue, firm or fluctuant, tender or nontender, overlying skin discoloration, increased warmth to touch, pain on palpation, single node or several nodes matted); neck supple or signs of meningismus (positive Kernig’s or Brudzinski’s sign); check for neck masses, enlarged thyroid gland
- **Thorax**: external appearance, pectus excavatum or carinatum, barrel chest
- **Lungs**: describe what you hear and where you hear it - wheezes (inspiratory vs. expiratory or both), rales, rhonchi, crackles, or clear and equal breath sounds; note diminished or absent breath sounds and where located; suprasternal or intercostal retraction (sign of respiratory distress)
- **Heart**: inspection, palpation for thrills and PMI, percussion, auscultation, assess rate, rhythm, splitting of S2 with inspiration, murmurs (characterize whether systolic, or diastolic and where it’s loudest), gallops, pericardial friction rubs. Check peripheral pulses (radial, brachial, femoral, dorsalis pedis)
- **Breasts**: Tanner stage, symmetrical, skin lesions, nipple discharge, palpate for masses or tenderness, gynecomastia
- **Abdomen**: soft or distended, normal or hypo or hyperactive bowel sounds, guarding, rebound or referred tenderness, presence of any masses and location, condition of umbilicus, hepatosplenomegaly (How many centimeters below the right costal margin is the liver if it’s enlarged? How many centimeters below the left costal margin is spleen or is only the tip palpable?), presence of umbilical or inguinal hernia (note size in cm; easily reducible or incarcerated?); palpate inguinal area for femoral pulse and for presence of lymphadenopathy
- **Genitalia**: external appearance; note any lesions. In males: note if circumcised or not, foreskin easily retractable or not, hypospadias, palpate for descended testes bilaterally, presence of inguinal hernias. In females: note if erythema of external genitalia, presence
of vaginal discharge. In infants: note diaper rash and describe the rash. For adolescent: note Tanner Stage of puberty.

- **Anus:** appearance of mucosa, note any rectal fissures or tears (Describe location according to face of a clock, i.e. rectal fissure seen at 1 o’clock). If rectal exam indicated, describe sphincter tone, tenderness, presence and character of stool in vault, heme positive or negative on guaiac.
- **Extremities:** note any digital clubbing, cyanosis, edema; deformities of limbs, digits, or nails; extra or missing digits; range of motion of all joints; motor strength
- **Neurologic/reflexes:** mental status, cranial nerves, test deep tendon reflexes, presence or absence of primitive reflexes in infants See Table C, sensation, cerebellar function, etc.

**LABS, XRAYS, OTHER DIAGNOSTIC/THERAPEUTIC TESTS:**
List all tests done, the results of each and explain what the results mean.

**ASSESSMENT/IMPRESSION:**
- Give a summary of what you have found.
- Include differential diagnosis for this patient’s problem(s).
- Based on the history, clinical signs and symptoms, lab results and x-ray findings, describe why you are considering or discarding each diagnosis.

**PLAN:**
List all diagnostic and therapeutic maneuvers specifically related to each problem listed in your assessment.

Ex. For a patient with pneumonia and 10% dehydration:
1. 20 cc/kg NS bolus x 1 for resuscitation fluids and then IV fluid hydration with D5 1/2 NS + 20 meq KCL/L at a rate of 75 cc/hr to replace the rest of the deficit over 24 hours.
2. IV Rocephin at 250 mg IV q 12 hours empirically pending blood culture results to cover most likely pathogens for pneumonia (i.e. Streptococcus pneumoniae)
3. Supplemental oxygen for pulse ox < 94%. Check pulse ox q 6 hours.
4. Repeat CXR in AM to assess the progression/regression of the pneumonia.

**For patients with multiple issues, list your assessment and plan systematically from head to toe (i.e. Neuro, CV, Resp….).**

**Always document the name and recommendations of any subspecialist or attending that you spoke with regarding the patient’s care.**
Daily Paperwork

- **SOAP Note**

**PICU**

**Use the Pediatric Critical Care Progress Notes form in the PICU. Make sure you complete ALL sections of the form. At the end of your Problem List-based Evaluation and Treatment Plan, document the name of the attending that you spoke with regarding the care of the patient. This Problem List and Treatment Plan will be used by others to care for the patient when you are not present. Be sure it is thorough!!**

If the Pediatric Critical Care Progress Notes form is not available, write a systems-based progress note on the blank yellow Progress Note paper.

**WARD**

***Fill out the Central Line Bacteremia Prevention box EVERYDAY!!!***

On the ward, each patient who was admitted before midnight and will not be going home today needs a daily SOAP note written by a physician.

- **Subjective information:** this is chief complaint and HPI for today.
- **Objective:** this is today’s physical exam including vital signs, intake/output, weight and how this has changed since admit/since yesterday.
- **Assessment:** this is your thought processes about the patient’s condition and/or problem list, differential diagnosis, status and progress of each, etc.
- **Plan:** this is what you intend to do and why

Also include the following in your daily notes:

1. summary of what has happened over the last 24 hours
2. current medications
   - dosage including mg/kg/day ÷ every _?_ hours
   - frequency (especially for PRN orders)
   - Day # or dose # if on antibiotics or something that will be given for a specific time period
3. “See lab flow sheet” if new labs are on the flow sheet or “no new labs” if nothing was done. Comment on the significance of abnormal lab values. Place the completed lab flow sheet in the Labs section of the chart. If the patient has reference or unusual labs or tests ordered, make your own flow sheet of these and place in the Labs section of the chart, also.
4. culture results, x-ray and other test results
5. anything else pertinent to the care of the patient

Notes written by medical students must be proof read, corrected, and then co-signed by an M.D.
- Notify Anne
  Anne Eichler: Pager 0770, Phone 5-7014, Fax 5-4484, Email: aheffe@lsuhsc.edu
  **Each upper level resident should talk with Anne each day about all patients on your team!!**
  1. All patients who have, or will need, Home Health (including Synagis)
  2. Special equipment (wheelchair, hospital bed, bedside potty, etc.)
  3. Special diet requirements (special formulas or more than the WIC allowance)
  4. All CPA issues: A STAT dictation is required the day **before** discharge
  5. All daytime transfers in or out of our hospital
  6. Need for placement (rehab, long-term care facility, etc.)
  7. BEFORE ordering Synagis on a patient in the hospital
  8. Any patient with funding issues
  9. Childnet referrals
  10. Transportation needs
  11. Medication assistance especially those on compounded medications (see list in Pharmacy/Medication section page 54)
  12. Homebound tutors for children out of school ≥3 weeks
  13. Check the brown Case Management progress note sheet in the patient’s chart prior to discharge for specific discharge instructions from Anne
  14. Give Anne a copy of the D/C orders on all patients requiring Home Health at discharge. A STAT dictation is required the day **before** discharge
  **15. WHEN IN DOUBT, NOTIFY ANNE!!**

- Notify Child Life
  Child Life Specialist: Professionals specifically educated to assist children and their families in understanding and managing the hospital experience. They offer developmental, educational, and therapeutic interventions to help reduce stress and anxiety while promoting positive coping skills.

**Reasons to Contact**
  1. Introduce Child Life Services to new patients and families.
  2. Explain any diagnosis, test, procedure or surgery to a patient in age/developmentally appropriate manner.
  3. Provide support and comfort during any test, procedure or treatment.
  4. Teach patient coping strategies as a form of non-pharmaceutical pain management.
  5. Enable patients to share information about illness or injury.
  6. Discuss the impact of illness, injury or death with a patient.
  7. Assist siblings in the understanding of the patient’s hospitalization/diagnosis.
  8. Help parents comprehend their child’s reactions to hospitalization/diagnosis.
  9. Normalize the hospital environment through activities and play.
  10. Provide a volunteer to spend time with a lonely patient.

**Amanda Hays**
CL Manager, Certified Child Life Specialist
Mon-Fri 8:00am – 4:30pm
Office 5-4684, Pager 1618

**Lacey Lyle**
Certified Child Life Specialist
Mon – Fri 8:00am – 4:30pm
Office 5-8536, Pager 1661

**Vanessa Anderson**
Certified Child Life Specialist
Mon – Fri 8:00am – 4:30pm
Office 5-4684, Pager 1816
Discharges

1. Discharges should be done as early as possible to make room for new admissions.
2. Along with prescriptions for medications, remember that most of our school age children will need an excuse for school. Parents may need work excuses, too.
3. Check the medical record for completeness: all verbal orders, medical students’ notes, etc. are signed.
4. A discharge dictation is required for all inpatient admissions within 24 hours of discharge.
5. A dictated discharge summary is not required for outpatients, although it is desirable. Remember, we all read discharge summaries on the computer to find out what has happened to a patient in the past. If it is not dictated; it’s like it didn’t happen! If the patient’s admission spans over more than one calendar day, a note for each day must be in the chart, i.e. admission note on 7-1-10 and daily/discharge note on 7-2-10. If the patient’s admission spans over only one calendar day, the admission/discharge note may be combined into one entry in the chart. If there are any complications or unexpected occurrences during these admissions, a dictated discharge summary becomes a necessity.

Discharge Orders

Immunizations at discharge: If the patient’s LINKS sheet shows that he/she is behind, verify this information with the parent, PCP, or anyone else that may have this information. If the child is not up-to-date, order the appropriate immunizations to be given at the time of discharge.

****You MUST write vaccine orders the day BEFORE discharge to prevent delays.

1. The patient’s weight in kilograms and allergies must be listed at the top of all order sheets!!
2. Discharge: When, To where, With whom
3. Diagnosis: Do not use “rule out”. If the patient does not have a definitive diagnosis, list his/her symptoms.
4. Diet: NPO, Ad lib age appropriate, clear liquids, name of formula with amount and frequency, neutropenic, etc.
5. Activity: Ad lib, Bed rest, ambulate every ___ hours, etc.
6. Allergies: Note any drug reactions, food or environmental allergies
7. Medications: Write these following the rules in the Admission Orders. However, the nurses will copy this and give it to the parents so you must also include “parent-friendly” information.
   - Write individual prescriptions for each medication
   - ALWAYS check the dosage in a book before ordering ALL medications
   - Medication name, strength and form
   - Dispense: # tabs or if liquid you can just write “QS xx days” (quantity sufficient)
   - Sig: This is the set of instructions that will appear on the medication bottle. Write it so that the parent will understand how, when and quantity to give.
   - Write the quantity in # tabs or # cc (do not write milligrams here)
   - Route of administration Ex. IV, PO, IM, etc.
Timing of administration Ex. Q4 hrs, qday
Give the caregiver appropriately marked measuring devices if liquids prescribed
If a dosage or amount is less than one, always precede the decimal with a zero (0.5 cc).
Never write a zero after a decimal (1.0 cc). If the decimal is not seen, this will result in a 10-fold increase in the amount of medication given (10 cc instead of 1 cc).

8. Follow-up: Speak to a PCP first (see Discharge Summary below)!
State what clinic or to whom the patient will return, when the patient is to return and the purpose of the return visit (i.e. General Peds Clinic in 2 weeks for repeat CXR).

• Discharge Summary
If a patient is to be discharged, write a discharge summary note in the chart.
This is a small paragraph summarizing the patient’s initial history and presentation, diagnosis, management, pertinent lab results, culture results, and therapy (antibiotics, IV fluids, etc), as well as a list of all discharge diagnoses and discharge medications.

You must include today’s physical exam and vital signs.

***Make sure you include admit and discharge weights in all infants and children.***

If the patient has a PCP (this includes Continuity Care Clinic), call that physician to give an update and arrange follow-up. Ask for a fax number to send a discharge summary. Make sure to include this number at the end of your dictation.

If the patient does not have a PCP and LSU is listed as the Medicaid provider, assign the patient to a Continuity Care Clinic. (Make sure you get approval from that physician first.)

Include follow-up plans. State what clinic or to whom the patient will return, when the patient is to return and the purpose of the return visit (i.e. General Peds Clinic in 2 weeks for repeat CXR).

Interns are responsible for dictating discharge summaries, not students. Write the dictation job # on the discharge summary.

When you go to Medical Records to review your summaries, you are required to print out at least 2 each month and review them with your attending.
• Dictation Format for Discharge Summary

Read the following from the patient’s chart when dictating:

1. Patient name
2. Medical record number
3. Hospital service
4. Attending physician
5. Resident physician
6. Intern physician
7. Referring physician
8. Admit date
9. Discharge date
10. Discharge diagnosis
11. ***Admit growth parameters
12. ***Discharge growth parameters
13. Reason for Hospitalization (HPI from admit note)
14. Medical history (rest of admit note)
15. Admit PE
16. Admit labs, x-rays, etc. (significant ones only)
17. Hospital course (discharge summary)
18. Discharge orders
19. Tests that need to be followed up
20. Please send copies to referring MD, PCP, and all consultants (give fax #s)

• Off-service/Transfer Note and Orders

PGY-1 residents on the ward and all residents in the PICU must write and DICTATE off-service notes on all patients prior to leaving the rotation.

This note should summarize the patient’s hospital course, include a current complete physical exam, list the patient’s problems/diagnoses, and give the status and plan for each problem/diagnosis.

If the patient has been in the hospital more than a few days and is expected to be there for a prolonged period of time (greater than 7 days), the PGY-1 resident must dictate an off-service note. This will facilitate speedy, accurate discharge of the patient. If the patient will be in-house for >72 hours more, use the “01” Routine dictation service. If the patient will likely go home within 72 hours, use the “10” STAT dictation service.

Rewrite all patient orders, including medications and diet, on a new Physician’s Order Form. This updates the next intern taking care of the patient and it prevents chronic medications from being automatically stopped by the computer system.

• Transfer Discharges

Transferring a Patient to Another Hospital

1. Determine that the patient needs services not offered at LSU.
2. Notify your Attending Physician.
3. Talk to Anne Eichler at 5-7014 or pager #0770 or the House Supervisor (after hours) at pager #1614 to find out where the patient can be transferred according to their insurance status.
4. Tell the parents that you must transfer their child. Find out which of the above hospital choices they prefer to go to.
5. Call the Facility to which you want to transfer the patient. You must find an accepting physician. Be sure to write down his/her name, phone number and fax number. You will need these again.
6. Tell Anne or the House Supervisor where the patient is going. They will call the accepting facility to make further arrangements and get administrative approval for the transfer. They also usually set up transportation for you if the accepting facility is not going to pick up the child themselves.

7. Once you have an accepting physician, the paperwork begins. This includes
   - A STAT dictated discharge summary. Fax a copy to the accepting facility.
   - A legible handwritten discharge summary (in case the dictated one doesn’t make it)
   - Transfer orders
   - The 2 page Inter-facility Transfer Form
   - Copies of things to be transferred with the patient:
     - The chart: during the day, Anne does this. At night, call Medical Records at 5-5981.
     - DVD of all radiology studies: During the day, call the File Room at 5-6205. At night, call the ER X-ray department at 5-6222.
     - Print all of the patient’s labs since admit.

• Transferring a Patient from PICU to the Ward
  1. Determine that the patient no longer needs PICU care.
  2. Notify your Attending Physician and all other services involved in the care of the patient.
  3. If Pediatrics is not the primary team, does Pediatrics need to continue to follow the patient on the ward? If Trauma, the answer is always “YES”.
  4. Notify the ward resident of all PICU transfers requiring Pediatric Medicine care.
  5. Write a transfer note (see above).
  6. Dictate a transfer summary for all patients.
  7. The primary team is responsible for writing transfer orders. You write transfer orders for Pediatric Medicine patients. Check the orders if another service writes them.
- Death
As the physician, you are the one who will pronounce the patient dead. The patient’s attending should be aware of the death (I’m sure you already called because the circumstances before the event required you to call). A general rule of thumb is to look and listen (with stethoscope) for respiratory effort and heart tones for a MINIMUM of one minute. When you determine the patient is dead, you tell the nurse, “Time of death is ___xx__.”

Once the patient is declared dead, there are numerous forms that need to be filled out and a few phone calls to be made.

In the PICU, the nurses will get the paperwork for you. They also help fill out most of it. On the ward, the hospital policy and all of the paperwork are in the Angel Book. This book is in the bottom right hand drawer when you are sitting at the Nurses’ station facing the Staff restroom.

1. **Notification of Death** form must be filled out and signed.
2. **Organ Donation Form** must be filled out. Also, call the phone number on that paper.
3. **Call the Coroner.** If deemed a coroner’s case, an autopsy will automatically be done.
4. If not a coroner’s case, get the **Autopsy Form** signed by the legal guardian (either requesting or denying autopsy). It is an excellent educational experience to observe the autopsy of your patient. Indicate on the form that you want to be paged (give your pager #) when the autopsy is performed.
5. **Funeral Home Release Form** must be signed.
6. A **death note** must be written and dictated. This note should include brief clinical history, summary of events leading to the death of the patient, date and time of death, cause of death (not cardiopulmonary arrest!), coroner’s decision regarding autopsy, and any other pertinent information.
On Call

- Call is approximately every fourth night. If you are not on call on a weekend or holiday, then you do not have to report to the hospital.
- While on call you will be responsible for all Pediatric Medicine patients in-house and new admissions and will also be part of the pediatric code team.
- The on call team should meet prior to going to bed every night and discuss any pertinent happenings or lab findings on the ward.
- The upper level resident on call needs to be aware of any problems; please ask questions and keep him/her informed.
- **Write on-call notes!** This is a brief summary of what happened with the patient overnight (if nothing, then no note is required), pertinent PE findings, what changes/additions have been made, and your thought process for these interventions. This is the only way the primary team will know what has happened and why.
- Update the team list frequently. Remember, this is NOT a part of the patient’s chart. **Important information MUST be in the chart**, too!!
- Remember, you are not alone! Call the resident in the PICU or Ward. Go to the Peds ER and ask the attending down there. Call your attending.

- **On Call and Post Call Rules**
  Residents are responsible for teaching interns and medical students. They must be called and actively participate in all admissions. They must stay in the hospital the entire time they are on call.

(d) **Weekday Call**
1. Report to the ward team room or the PICU at 4PM (Night float at 8PM). If you will be late for any reason, call to let someone know. Remember, every minute you are late, someone else is doing your work.
2. Receive report from the person/people leaving. Make sure you can adequately take care of all patients with the information they have given you.
3. Be ready to check out the next morning when your relief shows up.
4. Report to Morning Report or Lecture at 8 AM. If you are going to be late because you are busy taking care of a patient, call and let someone know. You may not be late to go home and change, go upstairs to shower, eat breakfast in the cafeteria, etc.
5. You must complete all patient care by 2 PM when you are post call. You must also leave your designated area by 2 PM.
6. If you go home early without permission from your attending, you will be given extra call in the future.
ON CALL

Friday Call
1. See # 1-3 above.
2. Saturday mornings: The “ward team” leaving is responsible for writing all of the daily notes. The “ward team” includes the night resident, the intern on call, and the medical students. All patients must be seen by an MD prior to check out rounds. In the PICU, the daily notes are split between the person leaving and the person coming in.

Weekend Call
1. Report to the ward team room or PICU at 8 AM. If you will be late (only emergency situations are acceptable), call and let someone know. Remember, every minute you are late, someone else is doing your work.
2. See # 2-3 above.
3. Sunday mornings: The “team” leaving is responsible for writing all of the daily notes. The “team” includes the night resident, the intern on call, and the medical students. All patients must be seen by an M.D. prior to check out rounds. In the PICU, the daily notes are split between the person leaving and the person coming in.
4. Monday Post Call: See # 4-6 above.

• When to Call the Attending
Factors that require the resident to notify the attending:
1. Admission to or Transfer of a patient to the intensive care unit
2. Respiratory or Cardiac arrest or significant changes in respiratory or hemodynamic status
3. Development of significant neurological changes
4. Development of major wound complications
5. Medication errors requiring clinical intervention
6. Any significant clinical problem that will require an invasive procedure or operation
7. Need for sedation
8. Request from an outside MD to transfer a patient to LSU
9. ER/Clinic wants to admit a patient to the ward and you are uncomfortable caring for that child on the ward (you think the child should go the PICU instead).
10. Unplanned discharge of a patient after rounds or on the weekend, especially when co-managing patients with other services
11. Unplanned transfer of a patient to another facility

12. WHEN IN DOUBT, CALL!!
Filling Out Forms

The most commonly used forms are explained below.

General rules for completing any form:

- STAMP ALL FORMS WITH THE PATIENT’S ADDRESSOGRAPH CARD!
- Read the form carefully.
- Fill in all blanks.
- Ask for help if you are unsure of something.
- Sign and print your name, date everything.

Order Forms

1. All orders are part of the medical record. These are legal documents.
2. The patient’s weight in kilograms and allergies must be at the top of every order sheet.
3. Write legibly.
4. Date and time all entries.
5. Only use hospital approved abbreviations.
6. Do NOT use the prohibited abbreviations listed at the top of the page.
7. Make sure all orders are easy to interpret (by a 3rd grader).
8. Sign, print your name legibly below your signature and your pager #.
9. When ordering medications:
   - ALWAYS check the dosage in a book before ordering ALL meds
   - The patient’s weight in kilograms must be written in the order
   - Route of administration Ex. IV, PO, IM, etc. must be written in the order
   - Timing of administration Ex. Q4 hrs, qday, etc. must be written in the order
   - The dose must be written in units/weight/time followed by the total dose to be given (Ex. Rocephin 50mg/kg/day (wt 20 kg) = 1000mg IV qday)
   - Range orders are NOT allowed in the hospital (Lortab 1-2 tabs q 4-6 hours)
   - If a dosage or amount is less than one, always precede the decimal with a zero (0.5 cc)
   - **Never** write a zero after a decimal (1.0 cc). If the decimal is not seen, this will result in a 10-fold increase in the amount of medication given (10 cc instead of 1).
FILLING OUT FORMS

STAMP ALL FORMS WITH THE PATIENT’S ADDRESSOGRAPH CARD!

10. ***Verbal/telephone orders should be reserved for emergency situations. All verbal/telephone orders must be signed within 24 hours.*** You must print your name, the date and the time you sign the order. You may sign verbal orders given by other MDs as long as you were in town when it was given and you agree with the order.

- **Consent Form**
  Consent forms are required for
  - ALL invasive procedures, including, but not limited to:
    - Surgery
    - Incision and drainage
    - Sutures
    - Lumbar Puncture
    - Central line placement
    - Suprapubic aspiration
    - ALL blood products (there are preprinted blood product consent forms)
    - ALL treatment that carries significant risk, including, but not limited to:
      - Conscious or deep sedation (there are preprinted consent forms)
      - Chemotherapy
      - Experimental treatments
    - When in doubt, it is best to get a consent form signed.
    - If you are repeating a procedure that was previously consented during this hospital stay, you must get consent again.

  **According to one of the hospital attorneys: “It is my opinion that each separate procedure, particularly days apart, require a new consent. I base this on the requirement that informed consent be based on a full disclosure of what is to be done, by whom, what are the risks, alternatives, etc. If you are in an emergent situation, which can be somewhat a matter of interpretation, you can proceed without reaching the parent.”**

  Filling out the consent form: (consent must be obtained by an MD who will participate in the procedure)
  1. Stamp the form with the patient’s addressograph card.
  2. Fill in the following sections without using abbreviations:
     a. Name of Procedure: Use the technical term but no abbreviations
     b. Side: Circle all that are applicable
     c. What is it: Explain in layman’s terms what the procedure is and how it is performed
     d. What it is for: Explain in layman’s terms why this procedure is necessary
     e. Risks: Circle applicable risks from the list. Write in any other risks that are not in the list.
     f. Choices: What alternative treatments exist? What are the risks of these?
  3. Doctor performing procedure: List physicians that will do the procedure.
  5. Date and time: Must be completed when signature is obtained.
6. Witness: This is anyone who witnessed the explanation of the procedure and will not be involved in the performance of the procedure.
7. Doctor’s Signature, Date, Time, Printed Name

Who May NOT Sign Consent Forms
- Anyone without legal custody of the child, including, but not limited to:
  - Grandparents
  - Aunt, Uncle, Cousin, Sister, Brother, Friend, etc.
  - Foster Care Parent
  - Sitter in the room with the child

Who May Sign Consent Forms
- Patient who is 18 years old or older
- Parent or legal guardian, regardless of age, of patient who is under 18 years old (i.e. 16 year old mother may sign for her 2 year old child)
- The Judge who is overseeing the care of a child in state custody

Obtaining Phone Consent
- If an authorized individual is not available to sign the consent, obtain phone consent in non-emergent situations.
- Call the appropriate person, have them identify themselves to you over the phone and confirm they are authorized to give consent.
- Explain the procedure over the phone in its entirety. Ask if the authorizing person has questions. Answer those questions.
- Then TWO nurses must also talk to the authorizing person to confirm their understanding.
- The 3 people who talked to the authorizing person on the phone will then sign the consent. Place the words “Phone consent obtained from [name of person you spoke with] in the Patient or Person authorized blank.

- Consult Form
All consults must be Ordered, Written and Called.
1. Write an order “Consult [name of service you are consulting].”
2. Stamp the Consult form with the patient’s addressograph card.
3. Fill in the top portion of the form. The name of the attending for the patient MUST be on the form for billing purposes.
4. When filling in the “Reasons for requesting consultation”, write specific information about the patient. Always ask the consultant a specific question. “Please eval and treat” is not very specific and some consultants will refuse to complete the consult until obtaining a specific request.
5. Under the name of the service consulted, write in the name and pager # of the person you spoke with. Write the date and time of the conversation on the form, too.
6. If consulting Pediatric Neurology, write “INPATIENT” on the top of the form. Fax this to the Pediatric Neurology office at 5-7805. Write the date and time that you faxed the consult. Don’t forget to call the Attending on Call.

- **EEG Form**

These are the green and white forms titled “Neurophysiology Lab Request”.

1. Stamp the form with the patient’s addressograph card.
2. Fill in the top two sections. Please provide good clinical information. The Neurologist reading the EEG reads this information and uses it when interpreting the EEG.
3. Check the test you want, usually “Routine EEG”.
4. If you want the patient to receive Benadryl if needed, fill in that information.
5. Date, time, print, sign and put your beeper # in the appropriate blanks in the 3rd section of the form (not at the bottom).
6. Rarely do we order sleep studies or evoked potentials. Speak to the Pediatric Neurologist on call to properly fill out these sections.

- **HIV Consent Form**

This is a blue form that we no longer use. Document in your PROGRESS NOTE that you discussed HIV testing with the patient/caregiver.

- **MRI Patient Screening Form**

This is a white form otherwise known as “MRI Checklist”. It has the picture of a patient in anatomical position in the left hand column.

1. **DO NOT ORDER AN MRI UNTIL THIS FORM IS COMPLETED, SIGNED AND PLACED ON THE CHART!!**
2. Stamp the form.
3. Fill in the top portion as completely as possible.
4. Have someone who knows the patient well, preferably a parent or guardian, answer all of the yes/no questions on the front of the form and sign and date the bottom on the “patient signature” line. Whoever asks the questions must sign the “Questionnaire Completed By” line. Have someone witness and date the form, also.
5. Write an order for the MRI. If contrast is used, the patient’s GFR must be included in the order.

- **Non-Formulary Drug Request Form**

This is a blue form that is required anytime a patient must receive a medication that is not on formulary and there are no acceptable substitutions on formulary.

The hospital formulary (drugs that are routinely kept in stock and used for patient care) can be found on the main LSUHSC-Shreveport website.

- [myhsc.lsuhschreaveport.edu/pharmacy/](http://myhsc.lsuhschreaveport.edu/pharmacy/) → Scroll over to formulary → Click on the option desired.

As the form says **“ALL BLANKS MUST BE COMPLETED”**.
When filling in the “Reason why this drug is preferable to formulary drugs” you must give a legitimate medical reason. “Because Dr. Herbst says” will get the medication to the patient but it really isn’t a “legitimate medical reason”. An example of this: “Patient requires Xopenex because she has complex congenital heart disease and will not tolerate the tachycardia produced by Albuterol.”

Please be aware that not all medications requested on these forms can be obtained immediately. If this is the case, a pharmacist will call you to discuss the time frame for obtaining the medication and possibly substitutions until it is available. If you do not receive this call and find out this is the case, please fill out a Variance Report (page 36).

- **Pediatric Patient Controlled Analgesia (PCA) Form**

This is a white form with an attached yellow carbon copy otherwise known as “PCA orders”. It must be completed for all Pediatric patients requiring continuous and/or PCA Morphine.

1. **Date and Time**
2. **Patient Weight in Kilograms**
3. The standard drug used in Morphine 1mg/1ml. However, some of the teenagers use such large amounts of Morphine that a 1mg/ml vial only lasts a very short time. For these patients, you may order Morphine 5mg/1ml.
4. **PCA mode**
   a. PCA only is “on demand, button” only
   b. PCA with continuous is an infusion all the time (basal rate) with on demand usage, also.
   c. Continuous infusion only: Basal rate without on demand usage. This is usually used for continuous morphine infusion in younger patients who do not understand how to use the PCA feature.
5. **PCA Doses**
   a. Intermittent Dose is the amount the patient gets when pushing the PCA button. Follow the recommendations.
   b. Continuous Infusion is the amount the patient gets per hour, continuously. Follow the recommendations.
   c. Lockout Interval: This is the time from which the patient receives a PCA dose (pushes button) and the next time the pump will allow another dose to be delivered. The standard lockout interval is 10 minutes.
   d. Four Hour Limit: This the maximum amount of medication the pump will deliver in 4 hours. If the 4 hour limit is less than the continuous rate plus the total PCA dosage permitted by the lockout interval for four hours, the patient will go some time without being allowed to use the PCA feature. If this is occurring and the patient is still in pain, consider increasing the continuous rate.
6. No other systemic narcotic or sedative medications…approval of Pediatric service.
7. Fill in the Monitoring portion with appropriate numbers for your patient.
9. **PRN Medications**: Be very careful with these. They have sedative effects!!
   a. Consider giving Benadryl PO.
   b. We typically use Zofran for nausea.
   c. PRN Breakthrough Pain: not routinely administered in Pediatric patients.
10. For...problems..., call Pediatric Intern On Call.
11. Signature and printed name if not legible.
12. **All patients placed on a PCA should also have a Respiratory Order for continuous pulse oximeter and incentive spirometry. Also order Colace and Senna to prevent constipation.

• **Procedural Sedation Consult Form & Admit History & Physical**
Contact the Sedation Team as soon as you know a patient will need Procedural sedation.
Office 5-7899 Amanda pager # 3500
Sedation unit 5-6696 Jennifer pager # 0630

This is a black and white form found in the sedation packets. It must be completed in its entirety.

Purpose: provide accurate, relevant, complete, medical documentation for Pediatric procedural sedation.

1. Stamp the form with the patient’s addressograph card.
2. If the patient is an outpatient here to have a procedure with sedation only, you may use this form as your admit H&P.
3. Fill in the blanks at the top of the form PRIOR to the sedation.
4. Answer all questions and document your physical exam in the MD Assessment part of the form.
5. Fill out the bottom part of the page AFTER the sedation is completed.
6. Sign the bottom of the form.
7. If Adverse Drug Reaction or Adverse Events occurred, document these on the back of the form.

• **Post-Operative/Post Procedure Progress Note**
Purpose: provide JACHO-compliant post procedure documentation.

After completing a procedure on a patient, fill in each section of this bright salmon-colored form with the requested information and place in the progress note section of the patient’s chart.

• **Variance Reporting Form**
Purpose: provide a confidential mechanism of identification, tracking, and follow-up of variances occurring in the hospital setting.

A variance is defined as any event or circumstance not consistent with the standard routine operation of the Hospital and its staff or the routine care of a patient/visitor.

A variance report is NOT a means of punishing someone for doing something wrong. It is a way of finding out why something went wrong and how to prevent it from occurring again.

The Variance Reporting Form is found on the internet and can be filled out very quickly and easily.
FILLING OUT FORMS

STAMP ALL FORMS WITH THE PATIENT’S ADDRESSOGRAPH CARD!

- www.lsuhshrevenile.edu → Inside myHSC (bottom right hand corner) → “V” at the top of the page → Variances → Variance Reporting Form

Fill out the Variance Reporting Form. This only takes a few minutes.

“Unit Manager” choices
Lois Anderson: Pharmacy/medication errors
Mark Randolph: Radiology and Respiratory Therapy (Cardiopulmonary)
Brenda Bickham: Pediatrics
Ward Standard Orders

Remember, there are many ways to accomplish the same thing in medicine. These are basic guidelines and will change depending on the patient and the attending physician.

- ACTH Protocol
  Developed by Drs. Riel-Romero and Kalra
  **Complete protocol is located on the Resources page of the Peds website**

These patients are admitted by Neurology for suspected or confirmed Infantile Spasms. They are being admitted to potentially initiate ACTH injections.

Each patient will be different! Make sure you communicate with Dr. Kevill or Kalra directly.

Typical workup prior to giving ACTH:

1. Admit to a private room
2. Notify Anne and Lois
3. Calculate BSA (body surface area)
4. Acyl Carnitine profile
5. CBC d/p/r, CMP
6. CXR
7. ECHO
8. EEG (w/ pyridoxine 100 mg infusion)
9. Karyotype (high resolution) if dysmorphic
10. LP (mitochondrial disease):
    a. lactate, pyruvate
    b. cell count w/ diff
    c. glucose, protein
    d. gram stain, culture
11. MRI brain w/o contrast (seizure protocol)
12. Ophthalmology Consult
13. PPD
14. Serum Amino Acids
15. TORCH titers if:
    a. microcephalic
    b. cataracts
    c. hearing loss
16. Urine Organic Acids
17. Urinalysis and culture

Notify Kelsey Green, PharmD upon admission that the patient is here and why. It takes a few days to get the ACTHAR gel (repository corticotrophin preparation in 16% gelatin, 80 USP units per ml, 5 ml multidose vial) in the pharmacy.

Once the workup is completed and Dr. Romero or Kalra writes the ACTH dosing schedule in the chart, order for the ACTH to be given daily in the morning. Also order the following:

1. Bactrim for PCP prophylaxis
2. PPI for GI prophylaxis
3. EMLA cream to injection site 30 minutes prior to injection
4. Use smallest needle available (26 gauge or smaller)
5. Nurses to teach the parents to give the injections. “Practice on an orange”

Monitoring after ACTH is initiated:
1. # of spasms once ACTH is started (give the caregiver pen and paper to document)
2. vital signs, especially blood pressure
3. glucose
4. CBC
5. temperature (fever is an emergency)
6. EEG after 10-14 days of therapy (contact Neurology for details)

Additional Information:
1. Talk to Dr. Romero or Dr. Kalra daily.
2. The patient will likely go home on day 12 or 14 of treatment. Notify Anne way before this. It takes 3-4 days to get the medication as an outpatient.
3. Most of these patients have private insurance (Anne has to call the company almost daily) and Home Health may not be an option for daily injections. Write an order for the nurses to teach the parents to give the injections. “Practice on an orange” works well.
4. Close follow up with labs will be required after discharge. Arrange this well in advance (PCP, Home Health, your continuity clinic, etc.).
   - Weight weekly
   - Vital signs, including blood pressure, heart rate, temperature, respiratory weight 3x per week (ensure that an adequate blood pressure cuff is available)
   - CBC, Electrolytes and stool for guaiac weekly
   - Fax all of this information to Neurology at 318-675-7805
5. Not all patients can continue on ACTH. This admission is a trial period.

- Anticoagulation in Pediatrics – some reminders
  1. Unfractionated Heparin - rarely used, requires PICU
  2. LMWH – Fragmin on formulary currently –
     a. Monitor anti-Xa levels (goal 0.5 – 1) – measure levels 4 hrs post does
  3. Coumadin – Use “Warfarin Physician Order” form

- IDDM
Whether the patient is new onset or known, the following orders should be written:
1. Use patient’s own lancets when doing finger sticks for dxt.
2. Diet: Regular ### of calories, 3 meals, 3 snacks, no concentrated sweets (do NOT order an ADA diet…gross!). Use Maintenance IVF requirements as a starting point. The Type 1 children will need lots more calories.
3. Dxt q AC, q HS, Q 3 AM (before meals, before bedtime, at 3AM)
4. If dxt < 80 (adolescents) or < 100 (small children), give juice then call MD
5. If dxt > 240, dip urine for ketones then call MD
6. Diabetic teaching consult (order, write consult and call the diabetic RN educator, Marcia)
7. Dietary teaching consult (order, write consult and call Cynthia)

Some things I’ve learned over the years (exceptions do occur/always clarify with Endocrine):

1. Peds Endocrine does not recommend standing orders or a sliding scale for insulin in newly diagnosed patients.
2. You should only have to call Endocrine before breakfast and dinner (PM meal) to get insulin orders. Exception: dxt is >240 with ketones in the urine.
   a. Review the patient’s chart carefully before you call.
   b. Have the patient’s chart in hand when you call.
   c. Suggest insulin doses when you call…don’t just ask “How much?” If you are wrong, ask why.
3. NPH is given at breakfast and at bedtime
4. Humalog is given with breakfast and with dinner (PM meal)
5. Rarely will insulin be given with lunch or at 3AM (that’s when the NPH is peaking)
6. Even if a patient is NPO, some NPH is REQUIRED. Learn the explanation so you can educate the nurses if needed.
7. Make sure all IV medications are mixed in normal saline (not D5W).

- **Meningitis**
  It is standard of care for all patients with bacterial meningitis to be admitted to the PICU for the 1st 24 hours of treatment. Thus, LP results must be available before deciding where to admit a patient with suspected meningitis.

- **Neonate with Fever**
  The algorithms are in the Harriet Lane. Follow them. Dr. Bocchini’s lecture is based on these algorithms.

Remember, all patients with bacterial meningitis must be admitted to the PICU for the 1st 24 hours of treatment.

- **Neutropenia with fever, Immunocompromised patient**
  **Neutropenia** is defined as an Absolute Neutrophil Count (ANC) <1000.
  \[ ANC = (\%Neutrophils + \%Bands) \times WBC \times 100 \]

  **Fever** is defined as any temperature equal to or greater than 100.4°F. If the child does not have fever upon presentation but has a history of fever at home (measured or subjective and has taken an antipyretic), he must also be treated according to this protocol.

**Workup** of these patients must be initiated immediately by the nursing staff even before receiving orders from a physician. This workup includes the following:

1. Immediate placement in neutropenic isolation/precaution
2. Vital signs: temperature, heart rate, respiratory rate, blood pressure, weight in kilograms and pulse oximetry—Notify MD immediately if any of these are abnormal for the patient.
4. List current medications and allergies (especially penicillin and cephalosporins)
5. Lab work: CBC with differential/platelet count/retic, blood culture (peripheral, AND from any and all ports/lines or hardware present, each lumen if applicable) CMP, extra red top to hold, urinalysis (NOT catheter) and urine culture
6. IV access--do not delay obtaining the above lab work if IV access is difficult
7. If not allergic, Vancomycin and Cefepime should be your initial antibiotic choice, and started **within 30 minutes** of patient presentation. If patient also with GI symptoms or complaints, initial antibiotic choice recommended per Dr. Jeroudi is Vancomycin and Meropenem. **Do not delay** giving antibiotics if lab work is difficult to obtain. If allergic, notify MD immediately.
9. Order old chart

The **physician must immediately evaluate the patient for life-threatening conditions** and decide if the following work up is also necessary:
1. Rapid strep screen and throat culture, RESVS
2. Lumbar Puncture
3. Any other work up dictated by the patient’s current condition or past medical history
Almost ALL of these patients require admission unless Dr. Jeroudi approves otherwise

**Pediatric Parenteral Nutrition (TPN): “The Cheat Sheet”**

1. **Total Volume**: calculate maintenance fluids (page 57)
2. **Lipids**:
   a. ____ g/kg/d x wt (kg)
   b. Divide by 0.2 (for 20% lipid) = ____ ml intralipid
3. **ml PN**: Subtract “ml lipid” from “total volume”
4. **Glucose**:
   c. Divide “ml PN” by wt (kg)
   d. Multiply by % dextrose (i.e. 0.1 for 10%) = ____ g dextrose/kg/d
   e. Divide by 1.44 to figure mg/kg/min
5. **Protein**: ____ = g/kg/d
6. **Calories**:
   f. Glucose: g/kg/d x wt x 3.4
   g. Fat: ml lipid x 2
   h. Protein: g/kg/d x wt x 4
   i. Total kcal is sum of the above
   j. Non protein calories to g nitrogen ratio:
      i. Total g protein (g/kg/d x wt in kg) divided by 6.25 = g nitrogen.
      ii. Non protein kcals (glucose + fat) divided by g nitrogen = ____ :1

- In children, usually infuse lipids separately over 20 hours
- Always choose to add heparin
- May add Zantac if pt is NPO and on TPN

**pH Probe Orders**
These orders are generally written by the GI nurse, Cathy (pager #1177). They should include orders for a CXR to confirm pH probe placement. Please check the x-ray. Rarely does Cathy
“miss the mark” but if she does and the x-ray isn’t checked, the results obtained are invalid and time has been wasted.

- **Remicade Orders**
Dr. Herbst has patients with Crohn’s disease on this protocol.

Notify Dr. Herbst that his patient is here AFTER you see the patient, do a complete history and physical exam (including **RECTAL**) and write admit orders. If Dr. Herbst is not in town, notify the Ward attending on call.

**Remicade Orders**
1. Stamp the Order form with the patient’s addressograph card.
2. Place the patient’s weight in kilograms and allergies on the top of the page.
3. Use the standard Admit order format (ADCVAANDRIML) on page 14.
4. Admit to pediatrics: 24 hour observation
5. Include the following orders:
6. Remicade 5 mg/kg = __?__ mg (rounded to the nearest 100 mg). Infuse over a minimum of 3 hours.
7. Premedicate with Benadryl 1.25 mg/kg/dose = __?__ mg (max 50 mg) IV
8. Vital signs every 30 minutes x 2, then every hour x 3
9. Observe for rash and nausea: Notify MD
10. Anticipate discharge 1 hour after infusion or in the AM
11. Labs: CBC, ESR, UA, CMP
12. 6MP metabolite level (2 purple top tubes to reference lab) if patient is on Imuran/Azathioprine
13. Send a reference slip with the patient’s dose of Imuran on it.

- **Respiratory Orders for Cystic Fibrosis**
The Pulmonary team usually writes these orders prior to admission. However, if a patient comes in through the Emergency Department, follow the guidelines below to “tuck in” the patient until the next morning when you call the Pulmonary Consultant. Do not call Pulmonary after-hours unless it is an emergency and you have talked to your attending 1st!

1. There are preprinted orders available at the ward clerk’s desk. These order forms may be used to guide initial admission orders.
2. Please obtain patient’s old chart as a guide when writing admission orders.
3. Order the same antibiotics (dosage and frequency, too) that the patient was on last admission. Find the therapeutic dose/frequency in the old chart…not what was ordered on admit last time.
4. Oxygen therapy/pulse oximetry: Varies per patient
5. Infection Control: CF patients have specific Infection Control Guidelines
6. Medicated Aerosol Therapy: May vary but these are the usual ones ordered
   a.  “Treatment times 6A, 2P, 8P”
   b.  Albuterol 2.5 mg TID
   c.  Pulmicort 0.5 mg with PARI neb BID at 6A/8P
   d.  Pulmozyme 2.5mg once daily with PARI neb and compressor (8P or when patient takes it at home)
7. Bronchopulmonary Hygiene
   a. CPT/Postural Drainage: TID after Albuterol with hands only
   b. You must get Pediatric Pulmonary’s permission to use vest CPT
8. Please note:
   a. Sputum culture including all strains of pseudomonas, AFB, and Fungi should be obtained prior to initiation of antibiotics. Use the results of the last culture in the computer to decide what abx to start now.
   b. RTs collect sputum cultures. If the patient is NOT producing sputum, an MD must collect a GAG throat culture.

- Scan Protocol
  ***Always extensively document any conversation you have with the caregiver/alleged perpetrator, CPS worker, etc. You may be the only person who gathers this history/circumstances surrounding the event before the caregiver is removed from the facility.***

Suspected Physical Abuse
1. Ensure the patient is safe
2. Treat life-threatening injuries immediately
3. Call CPA
4. Once the patient is stable and in a safe place (typically admitted to the Pediatric ward), begin the SCAN workup:
   a. CT head
   b. Skeletal survey
   c. Ophthalmology evaluation
   d. Labs as indicated by injury
   e. Consult Dr. Springer
      i. Immediately if you have questions
      ii. At a “decent hour” if the patient is stable and the workup is in progress

Suspected Sexual Abuse
Acute Assault (within 72 hours)
  • If the patient is 17 years old or younger, Pediatrics is responsible for treating the patient.
  • Call the police where the assault occurred.
  • Rape kits must be requested by the Detective. These are collected in the ER by the SANE nurse per ED protocol.
  • Consider admission
  • Call CPA and Dr. Springer pager #0603

Recent Assault (“a few days ago”)
  • Call CPA (if it happened at home) or police (if outside of the home)
  • Quick look: NO SPECULUM
  • Symptomatic: bleeding, discharge, fever, urinary frequency, incontinence (urine or feces), depression, suicidal
    o Culture carefully: CZ and GC cultures (not PCR), general culture and sensitivity, Herpes
    o Labs: HIV, RPR, Hepatitis B SAg (repeat in 6 months)
    o Treat symptomatically
• If the patient has a SAFE place to go and asymptomatic (does not warrant admission), send the patient home with follow-up at the CARA Center with Dr. Springer if ok with CPA or police.

Remote Assault
• Call CPA or police
• Treat the patient
• Document findings
• If the patient has a SAFE place to go and asymptomatic (does not warrant admission), send the patient home with follow-up at the CARA Center with Dr. Springer if ok with CPA or police.

• Sedation Guidelines/Orders

General Guidelines
• Extreme age: < 6 months (although some younger kids may be considered based on the procedure, length of sedation, etc) (Prematurity must also be taken into consideration when determining age)
• Presence of severe underlying illness that limits activity (ASA class III or IV):
  – severe cardiorespiratory dysfunction (including patients on oxygen)
  – severe hepatic or renal insufficiency
  – an unstable airway (mediastinal mass, facial trauma, some neck masses, etc)
  – severe trauma victim (especially severe head or facial trauma)
• Does not meet NPO guidelines for elective procedures
• Procedure requires prone positioning (some flouro-guided LPs are done prone—be sure to ask when consulting IR)

**All patients are considered on a case by case basis—so if there is a question, the resident should always consult with the sedation team.

Orders
These are pre-printed orders in pre-made packets for Pediatric patients requiring conscious or deep sedation. As a resident, you are only allowed to perform CONSCIOUS sedation on ASA Class I or II patients (see classification below).

You MUST notify your attending before sedating any patient.

The sedation packets are in the Sedation Unit and the Nurse’s stations (ask the nurses where). Do not take out any parts of the packet. If you need individual pages, they are in the sedation unit.

1. Stamp all pages with the patient’s addressograph card.
2. Orders: date, time, patient’s weight in kilograms, allergies, fill in all blanks, carefully calculate drug dosages, always order Ketamine (if an attending isn’t present to use the Ketamine, it can be returned), sign, print your name and pager #.
3. Consent Form: There is a pre-printed form in the packet. Fill in all blanks and get appropriate signatures (see section on completing consent forms).
4. Sedation Monitoring Flow Sheet: Once the sedation is finished, the staff MD will have to sign the inside middle page (ask the nurse where).
5. Procedural Sedation Consult Form and Admit History & Physical (page 36).

ASA Physical Status Classification System

- ASA I
  Patients are considered to be normal and healthy. Patients are able to walk up one flight of stairs or two level city blocks without distress. Little or no anxiety. Little or no risk. This classification represents a "green flag" for treatment. The supervising DDS will not need to be made aware of the presence of this patient before treatment.

- ASA II
  Patients have mild to moderate systemic disease or are healthy ASA I patients who demonstrate a more extreme anxiety and fear toward dentistry. Patients are able to walk up one flight of stairs or two level city blocks, but will have to stop after completion of the exercise because of distress. Minimal risk during treatment. This classification represents a "yellow flag" for treatment. The supervising DDS will need to be made aware of the presence of this patient before treatment. Examples: well-controlled non-insulin controlled diabetes, epilepsy, asthma, and/or thyroid conditions; ASA I with a respiratory condition, pregnancy, and/or active allergies.

- ASA III
  Patients have severe systemic disease that limits activity, but is not incapacitating. Patients are able to walk up one flight of stairs or two level city blocks, but will have to stop enroute because of distress. If dental care is indicated, stress reduction protocol and other treatment modifications are indicated. This classification represents a "yellow flag" for treatment. The supervising DDS will need to be made aware of the presence of this patient and may want to examine patient and/or have medical consultation before treatment. Examples: angina pectoris, myocardial infarction or cerebrovascular accident history, insulin dependent diabetes, congestive heart failure, chronic obstructive pulmonary disease.

- ASA IV
  Patients have severe systemic disease that limits activity and is a constant threat to life. Patients are unable to walk up one flight of stairs or two level city blocks. Distress is present even at rest. Patients pose significant risk since patients in this category have a severe medical problem of greater importance to the patient than the planned dental treatment. Whenever possible, elective dental care should be postponed until such time as the patient's medical condition has improved to at least an ASA III classification. This classification represents a "red flag" - a warning flag indicating that the risk involved in treating the patient is too great to allow elective care to proceed. The supervising DDS will need to be consulted before proceeding with treatment. Examples: unstable angina pectoris, myocardial infarction or cerebrovascular accident within the last six months, high blood pressure, severe congestive heart failure or chronic obstructive pulmonary disease, uncontrolled epilepsy, diabetes, or thyroid condition.

- ASA V
  Patients are moribund and are not expected to survive more than 24 hours with or without an operation. These patients are almost always hospitalized, terminally ill patients. Elective dental treatment is definitely contraindicated; however, emergency care, in the realm of palliative treatment may be necessary. This classification represents a “red flag" for dental care and any care is done in a hospital situation.

- ASA VI
  Clinically dead patients being maintained for harvesting of organs.
Sickle Cell Pain Crisis Orders

Include the following:

1. Nursing: Strict I/O, Daily weight, assess pain severity q4 hours. If 4 or more, call MD. Call MD for fever (100.4 or more)
2. IVF: typically D5 ¼ NS at maintenance or 1 ½ maintenance if you’re not worried about acute chest syndrome
3. Medications:
   a. Morphine PCA
   b. Consider Miralax, Colace and/or Senna to prevent constipation
   c. Folic Acid 1 mg po q day for ALL Sickle Cell patients
   d. If not on antibiotics, does the patient need Pen VK?
4. Labs: CBC with Diff and Retic on admit and daily, CMP on admit
5. Respiratory: Continuous Pulse Oximeter, Incentive Spirometry 10 breaths every 2 hours, Oxygen PRN to keep Pox 92% or greater
6. If fever occurs, follow the Sickle Cell with Fever Protocol below.

Sickle Cell with Fever Protocol

Fever is defined as any temperature equal to or greater than 100.4°F. If the child does not have fever upon presentation but has a history of fever at home (measured or subjective and has taken an antipyretic), he must also be treated according to this protocol.

Workup of these patients must be initiated immediately by the nursing staff even before receiving orders from a physician. This workup includes the following:

1. Vital signs: temperature, heart rate, respiratory rate, blood pressure, weight in kilograms and pulse oximetry--Notify MD immediately if any of these are abnormal for the patient.
3. List current medications and allergies (especially penicillin and cephalosporins)
4. Lab work: CBC with differential/platelet count/retic, blood culture, CMP, extra red top to hold, urinalysis (preferably catheter) and urine culture
5. IV access--do not delay obtaining the above lab work if IV access is difficult
6. If not allergic, Rocephin 50 mg/kg IV/IM (one gram maximum) within 30 minutes of patient presentation. Do not delay giving Rocephin if lab work is difficult to obtain. If allergic, notify MD immediately.
7. Chest x-ray
8. Order old chart

The physician must immediately evaluate the patient for life-threatening conditions and decide if the following work up is also necessary:

1. Rapid strep screen and throat culture
2. Lumbar Puncture
3. Any other work up dictated by the patient’s current condition or past medical history

Hospitalization should be strongly considered in the following high-risk patients:

1. Less than 12 months of age
2. Toxic appearing
3. Questionable clinical status
4. Recent missed doses of prophylactic penicillin (or suspicion of noncompliance)
5. Not vaccinated against *H. influenza* or *S. pneumonia*
6. WBC <4,000 or >30,000
7. Hematologic parameters vastly different from baseline values
8. Any pulmonary process
9. History of sepsis
10. History of positive blood culture for *S. pneumonia*
11. Noncompliance
12. Unreliable transportation or other factors prohibiting outpatient management

If outpatient management is elected, the patient must return within 24 hours for reevaluation. At that time, the physician must check all cultures done the previous day, give a second dose of wide spectrum antibiotics (PO vs. IM at the physician’s discretion) and decide on the appropriate definitive therapy for that patient. Call Dr. Jeroudi with any questions or concerns.

- Sickle Cell Hypertransfusion Protocol

These patients are admitted as “Outpatient in a Bed” (with a few exceptions) for hypertransfusion protocol and some also receive chelation therapy. They have pre-printed orders.

As soon as you are notified that the patient is here, obtain blood consent (and verbal HIV consent if needed) from the parent or guardian because the majority of them will be here for only a few minutes before they must leave. Follow the guidelines for filling out a consent form.

When filling out the order form, follow the guidelines for writing orders.

See Protocol Admissions for paperwork requirements (page 9).

A few tips:
1. Get the consent signed immediately. Document that you discussed HIV testing in your Progress Note, too, just in case you need it.
2. If the patient receives Desferal, write that order immediately so the nurse can send that to pharmacy and get it started (15 hour infusion).
3. All of these protocol patients need HIV, Hepatitis Panel, etc. every 3 months. Check the computer to see if they are due.
4. Ask the nurses to notify you when the patient’s H&H returns so you can calculate the amount of blood to transfuse.
5. Do NOT use the last H&H in the computer to calculate the amount of blood to transfuse (there are a few exceptions and the nurses will tell you about these).
6. Write the patient’s labs in the progress notes.
PICU Standard Orders

Remember, there are many ways to accomplish the same thing in medicine. These are basic
guidelines and will change depending on the patient and the attending physician.

There are some basic guidelines and information sheets on the Critical Care Medicine website.
www.ccm.lsuhsshreveport.edu

- **Respiratory Survival Guide**
  Respiratory Therapist beeper #0733, if no response #0202
  1. Daily CXR’s need to be ordered on all vent patients (usually around 8am)

  2. **Initial Ventilator Set-up:**
     a. Mode: PRVC
     b. Rate*: infants approx. 25-30/min; child approx. 15-20/min; teen 10-15/min
     c. *ABG or VBG within hour
     d. Tidal volume: 6-8 cc/kg standard
     e. FiO2: begin with 100% and wean as tolerated
     f. PEEP: begin with 5

  3. Oxygenation—PO2: to improve and/or alter a patient’s oxygenation, manipulate one or all of
     the following parameters:
     a. FiO2
     b. PEEP
     c. I-Time

  4. Ventilation—PCO2: to improve and/or alter a patient’s ventilation, manipulate one or all of
     the following parameters:
     a. Respiratory rate (vent rate)
     b. Tidal volume
     c. **If changes to rate and TV do not improve PCO2, consider shortening the I-time
        (which lengthens E-time) to allow the patient a longer time to fully exhale.

  5. Important numbers to monitor while on vent:
     a. Peak Inspiratory Pressure (PIP) <40 cmH2O
     b. Tidal volume 7-10cc/kg
     c. Goal of FiO2 ≤ 40%
6. If unsuccessful at removing CO2 with conventional vent; may initiate High Frequency Oscillator for improving oxygenation and ventilation at higher frequencies and higher mean airway pressures (MAP).
   a. Start at a MAP 2-5cmH2O higher than MAP on conventional vent
   b. Set Amplitude (tidal volume) to adjust for adequate chest “wiggle” to navel
   c. Determine Hertz (resp. rate) based on size of pt. (infants 8-10, adolescents 5-8 Hz).
   d. For oxygenation: ↑ MAP
   e. For ventilation: may manipulate Amplitude and/or Frequency:
      f. ↑ Amp. and ↓ Frequency will decrease PCO2
      g. ↓ Amp. and ↑ Frequency will increase PCO2

7. Proper ETT size = 16+ age (yrs) / 4

8. Tape at lip = “proper” ETT size x 3

9. Assessing for readiness to extubate:
   a. Wean sedatives, ionotropics
   b. Spontaneous breathing trial (able to breathe 5cc/kg tidal vols.)
   c. AM CXR improved?
   d. Start Decadron q6 hr. for 24hr, then assess for leak around ETT
   e. Have Vaponephrine (racemic epi) 0.5ml for inhalation on standby
   f. May use Heliox therapy for stridor post extubation (on standby in PICU)

10. Ordering continuous Albuterol/Xopenex for severe asthmatics:
    a. Continuous breathing treatments are only allowed in the unit, not on floor, due to change in pt. status. Cont. Albuterol/Xopenex are prepared for a four hour dose, then refilled as needed.
    b. Cont. Albuterol/Xopenex orders should include:
       i. Dose/hr…ex. 5mg/hr
       ii. O2 concentration…ex. 21%-100% FiO2
    c. Reassess frequently for possible weaning to Q2 hr. treatments, then Q4hr. when ready.
• DKA (diabetic ketoacidosis)
Definition: Glucose > 250 mg/dl with an increased anion gap due to the production of ketones (check the urine)

Orders:
1. IVF: Set up fluids as 2 different drips to make things easier later on when you start changing things (see below).
   a. Correct the deficit with Normosol (2/3 over the 1st 24 hours and 1/3 over the next 24 hours). This will NOT change the first 24 hours that the patient is here.
   b. Maintenance is also needed. See page 57.
2. Insulin drip at 0.1 units/kg/hour. Use Regular Insulin. If the glucose drops more than 200 mg/dl in an hour, call your attending (see FYI below)!
3. Admit Labs
   o Plasma glucose
   o VBG
   o CBC with differential
   o CMP with Mg and Phos
   o C-peptide
   o Insulin level
   o Islet cell Ab
   o Anti-GAD Ab
   o Anti-insulin Ab
   o HgBA1C
   o Serum ketones
   o Free T4 and TSH
   o UA
   o Blood and urine cultures
4. Recurring Labs
   o Dxt every 1 hour
   o RFP with Mg every 2 hours
   o Urine glucose and ketones every 2 hours until negative x2
5. Other orders
   o Neuro checks every hour
   o When K< 6, add K to IVF (20 meq/l KCl and 20 meq KPhos)
   o When dxt <250 mg/dl, add D5 to maintenance IVF
   o When anion gap closes: feed the patient at a “normal” time and then give SQ insulin, stop the insulin drip and take D5 out of fluids, (5-10 minutes after Humalog, 30 minutes after Regular, 1 hours after NPH).
FYI
- If glucose decreases more than 200mg/dl in an hour on an insulin drip and the patient still has an increased anion gap, do NOT decrease the insulin drip. Increase the dextrose in the maintenance IVF to D10. The patient needs the insulin to correct the DKA.
- If the dxt is not decreasing as expected, check all meds to ensure none of them are mixed in D5W!
- If the corrected Na decreases rapidly, you are giving too much fluid.
- All fluids (bolus, maintenance and deficit) should not exceed 4 L/m²/day
- If worried about cerebral edema, decrease fluid, give mannitol 0.25 mg/kg, get STAT head CT
- If initial pH <7.0, consider bicarb
- See IDDM in Ward Standard Orders once more stable (page 39)

DDx of DKA
- Nonketotic hyperosmolar coma
- Hyper Na dehydration
- Salicylate or organophosphate poisoning
• SIADH vs. Salt Wasting

<table>
<thead>
<tr>
<th></th>
<th>SIADH</th>
<th>Salt Wasting</th>
</tr>
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<tbody>
<tr>
<td>Serum Na</td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>UOP</td>
<td>↓</td>
<td>↑</td>
</tr>
<tr>
<td>Urine Osmol</td>
<td>↑ (&gt;150 mosm/kg)</td>
<td>normal</td>
</tr>
<tr>
<td>Urine Na</td>
<td>Slight ↑ (&gt;20 meq/l)</td>
<td>↑ (&gt;150 meq/l)</td>
</tr>
<tr>
<td>Serum Osmol</td>
<td>↓ (&lt;280 mosm/kg)</td>
<td>↑</td>
</tr>
<tr>
<td>Total Volume</td>
<td>Euvolemic</td>
<td>↓</td>
</tr>
</tbody>
</table>

Treatment

• SIADH: fluid restrict, if symptomatic give 3% NaCl with lasix

• Salt wasting: 3% NaCl (NO Lasix, patient already has ↑ UOP)

• Severe Asthma
Asthma that remains unresponsive to initial treatment and/or a patient requiring medications for the asthma more frequently than every 3 hours MUST be admitted to the PICU.

Labs on admit:
CBC
CMP
CXR
ABG only if lethargic or worsening despite treatment. (We don’t routinely torture patients who are already having trouble breathing!)

Therapy
1. Oxygen if increased WOB or hypoxia
2. SubQ Epinephrine if not moving air
3. Albuterol, change to Xopenex if continuous or frequent treatments required.
4. Atrovent, only for the 1st 24 hours and not more frequent than every 6 hours
5. Steroids, IV if respiratory distress to decrease aspiration risk
6. Magnesium, for smooth muscle relaxation at 50 mg/kg IV every 6 hours
7. IVF, don’t forget to replace deficit from increased insensible losses
8. If the patient is still not getting better after all of this, call your attending!!
• Status Epilepticus

The following guidelines are intended as general guidelines, and may not be appropriate for all patients or in all circumstances. Compiled by Rosario Maria S. Riel-Romero, MD.

0 – 5 Minutes
1. Diagnose status epilepticus
2. Assess & control airway
3. Oxygen by NC or mask
4. Position patient’s head for optimal airway patency.
5. Monitor VS (BP, HR, RR, Temp, O2 sats) at outset and thereafter.
6. Pulse ox or ABG
7. Establish IV line. Start Plasmalyte or Normosol.
8. Draw blood for: CBC diff plt, CMP, Ca, Mg, Phos, AED levels
9. Urinalysis, Urine Drug Screen, Urine Pregnancy Test
10. Administer lorazepam
   a. Adults: 4 mg (at 2mg/min)
   b. Children: 0.1 mg/kg
11. Alternate for children: diazepam rectal gel (Diastat)
   a. 2-5 years: 0.5 mg/kg/dose
   b. 6-11 years: 0.3 mg/kg/dose
   c. ≥ 12 years: 0.2 mg/kg/dose

6 – 10 Minutes
1. Start 2nd IV line
2. Adults:
   a. Thiamine 100 mg IV then
   b. Glucose 50% 25-50cc (check glucose 1st, not in stroke)
3. Children < 18 months:
   a. Pyridoxine 100 - 200 mg IV
   b. Glucose 50% 2cc/kg if hypoglycemic
4. If seizures persist:
   a. Fosphenytoin 20 mg/kg PE IV at 150 mg/min (or IM if no IV access)
   b. Do not give phenytoin IM

10 – 20 Minutes
1. If seizures persist:
   a. Fosphenytoin 10 mg/kg PE (total dose 30 mg/kg PE)
2. If seizures persist:
   a. Intubate
   b. Phenobarbital 20 mg/kg IV (at 50 mg/kg for adults, 25 mg/kg)
   c. Valproate sodium [Depacon] 20 mg/kg IV (at 3-6 mg/kg/min)

30 – 60 Minutes
1. Transfer to ICU
2. Arrange for EEG monitoring
3. If seizures persist:
PICU STANDARD ORDERS

4. If seizures persist:
   a. Phenobarbital 10 mg/kg IV
   b. Pentobarbital 5-15 mg/kg load then 1 mg/kg/hour, increase by 0.5-1 mg/kg/hour, titrate to burst-suppression on EEG.
   OR
   b. Propofol 3-5 mg/kg load then 1-15 mg/kg/hour
   OR
   c. Midazolam 0.2 mg/kg load then 0.05 - 0.2 mg/kg/hour
   d. Consider folinic acid supplementation for children with intractable status epilepticus
Nutrition

PICU and Pediatric Floor Inpatient Dietitian:
Julie Richardson, MS, RD, LDN, CNSD
Ext 5-5130 Pager 1821

- Formulas Available

**Infant**
- Enfamil Lipil with Iron (standard milk based)
- Enfamil Gentlease (reduced lactose, partially hydrolyzed)
- Enfamil Prosobee with Iron (soy)
- Enfamil AR (milk-base, thickened with added rice)
- Enfamil Enfacare 22cal (premature formula used for NICU grads)
- Similac Neosure 22cal (premature formula used for NICU grads)
- Nutramigen (hypoallergenic)
- Pregestimil (hydrolyzed, hypoallergenic, MCT)
- Alimentum (hypoallergenic, MCT)
- Neocate (elemental, free amino acids)
- Elecare (elemental, free amino acids)
- Neocate Junior (for pts >1 yo, free amino acids, 30 cal only)

(All of the above formulas can be concentrated to 24, 27 or 30 cal)

**Children**
- Pediasure (standard intact formula)
- Pediasure with Fiber (standard with fiber)
- Peptamen Jr with Prebio (elemental with prebiotics)
- Boost Kid Essentials 1.5 (high calorie and protein, indicated for burns)

**Adolescents (>10 yo)**
- Fibersource HN (standard intact formula)
- Isosource 1.5 (high calorie, high protein, intact formula)
- Crucial (elemental high protein with arginine and glutamine)
Pediatric Ward Nutrition Guidelines

Infants

- **Dietary Interview**: What formula, how much, how often, how do you mix
- **Forms of formula**: Ready to feed (nothing added), Concentrate (20 cal: mix 1 can with 1 can water), Powder (20 cal: mix 1 scoop to every 2 ounces of water)
- **Infant formula/Breastmilk**: Up to 12 months of age, 20 kcal/oz (can concentrate to 24, 27, or 30 kcal/oz), usually feed every 2-3 hours early in life
- **Breastmilk goals**: 8-12 feedings/day, 10-15 minutes each side at every feeding, 6-8 wet diapers/day, regular bowel movements
- **Types of formula**: Standard milk-based, Soy, Pre-thickened, Protein hydrolysate, Amino acid-based (see PICU nutrition guidelines for detailed descriptions)

Children

- **Pediasure**: For children ages 1-10, 30 kcal/oz, sole source of nutrition or supplemental
- **Pediatric Diets**: Baby food, Clear liquid, Full liquid, Regular, Mechanical Soft, Neutropenic, Diabetic

PICU Nutrition Guidelines

TPT

- Transpyloric tube. This is the type of feeding tube most widely used in the PICU. The nurses place it at bedside, and it feeds into the small intestine past the pyloric sphincter. This decreases risk for aspiration on the vent. It also allows for suction of gastric contents through an NG tube. An x-ray must be done to verify placement of TPT before feedings can begin. Feedings must be continuous with TPT feeds.

Initiation of feedings

Infant:

- Use formula infant is on at home if possible
- Begin with 1-2 cc/kg/hr increase by 0.5-1 cc/kg/h every 8 to 24 hrs depending on patient tolerance. Goal feeds are usually patient’s maintenance fluid needs.

Children/Adolescents:

- Begin with Peptamen Jr for all children ages 1-10 with TPT feedings.
- Usually begin with 5 cc/hr and increase as tolerated q 4 hours to goal feeds
- Goal feeds determined by nutritionist
- Decrease IVF as feeds increase, may need continuous supplemental free water to meet maintenance fluid needs
- Children >10 yrs old may use adult formulas (trauma-use Crucial)
Total Parenteral Nutrition (TPN)
- See “cheat sheet” for guideline calculations (page 40)
- Use TPN only when necessary, “if the gut works, use it”
- Guidelines:
  - Check dxt q 6 hours
  - Check Triglycerides q weekly at 6 am
  - Lipids run separately for 20 hours

Fluid needs

<table>
<thead>
<tr>
<th>Maintenance IVF</th>
<th>“Real” way</th>
<th>4, 2, 1 Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st 10 kg</td>
<td>100 cc/kg/day</td>
<td>Div by 24 hrs</td>
</tr>
<tr>
<td>2nd 10 kg</td>
<td>50 cc/kg/day</td>
<td>Div by 24 hrs</td>
</tr>
<tr>
<td>Rest of kg</td>
<td>20 cc/kg/day</td>
<td>Div by 24 hrs</td>
</tr>
</tbody>
</table>

The dietitian will be there to round with you when possible. There will be a nutrition consult automatically on any child started on feeds or TPN. Please call/page with any questions/concerns.
Pharmacy/Medications

- **Compounded Medications**

Contact Anne the day prior to discharge to obtain these medications for your patients.

- Acetazolamide (Diamox®) 25 mg/mL
- Amiodarone 5 mg/mL
- Amlodipine (Norvasc®) 1 mg/mL
- Atenolol (Tenormin®) 2 mg/mL
- Baclofen (Lioresal®) 1 mg/mL
- Captopril (Capoten®) 1 mg/mL
- Carvedilol 0.1 mg/mL
- Clonidine 0.1 mg/mL
- Enalapril (Vasotec®) 1 mg/mL
- Flecaïnide (Tambacor®) 20 mg/mL
- Flucytosine (Ancobon®) 10 mg/mL
- Folic Acid 1 mg/mL
- Hydralazine 1 mg/mL
- Hydrochlorothiazide 10 mg/mL
- Hydrocortisone (Cortef®) 2.5 mg/mL
- Labetalol (Trandate®) 10 mg/mL
- Lamotrigine 1 mg/mL
- Lansoprazole (Prevacid®) 3 mg/mL
- Levothyroxine (Synthroid®) 25 mcg/mL
- Mercaptopurine 50 mg/mL
- Metronidazole (Flagyl®) 50 mg/mL
- Mycophenolate (CellCept®) 50 mg/mL – Non-Formulary
- Oseltamivir 15 mg/mL – Only use if OUT of manufactured product
  - **Note Concentration**
- Propanolol (Inderal®) 1 mg/mL
- Pyrazinamide 100 mg/mL
- Rifabutin 20 mg/mL
- Rifampin 10 mg/mL
- Sildenafil 2.5 mg/mL – Non-Formulary
- Spironolactone (Aldactone®) 5 mg/mL
- Sulfadiazine 100 mg/mL
- Sulfasalizine 100 mg/mL
- Topiramate (Topamax®) 6 mg/mL
- Ursodiol (Actigall®) 60 mg/mL – Restricted to Pediatrics
- Ziprasidone (Geodon®) 2.5 mg/mL
- Ursodiol (Actigall®) 60 mg/mL – Restricted to Pediatrics
• Medications Brought into the Hospital by Patients

If it is necessary for a patient to continue therapy on a medication that is not normally available from the pharmacy (i.e., a non-formulary drug), the patient’s own supply may be used provided the conditions below are met. Herbal remedies and alternative medications WILL NOT be allowed.

1. A physician writes an order in the patient’s chart. The order must include the name, strength, dose, frequency and route to be administered. Writing “Patient may take own med” without the name, strength, and dose of the medication is not considered a legitimate order.

2. The patient’s own medication is identified by a pharmacist. A physician must complete a consult form to be given to pharmacy at the time they identify patient’s home medications.
   a. Since intravenous admixtures and total parenteral nutrition solutions cannot be positively identified, the patient’s supply of these medications may not be used.
   b. The patient’s home controlled substance may not be used. Exception: The pharmacy director/designee may allow us of:
      i. The patient’s own medications for treating ADD/ADHD/narcolepsy when deemed appropriate
      ii. Pregabalin (Lyrica®)
   c. Any medication whose contents or integrity cannot be verified (e.g. opened oral liquids, ophthalmic solutions) may not be used.
   d. If the medication cannot be identified, is adulterated, or otherwise unsuitable for use, the pharmacist will notify the patient’s own med may not be used.

3. If the prescriber indicated that a patient may use their own medication, the drug order must be entered into the pharmacy computer system patient profile so that drug interactions, incompatibilities and patient allergies can be checked.

4. The nursing staff will send the patient’s home medication, along with a consult form (S/N 1186) to the pharmacy department for identification.

5. The medication is then returned to the patient care area to be stored with other medications and administered by a nurse. The completed consult form is added to the medical record and faxed into the pharmacy system.

6. Medications administered that are brought in by the patient must be recorded on the Medication Administration Record (MAR).

7. All existing IV’s shall be changed out upon admission to the hospital.
Vancomycin Guidelines

Dose & Interval – Vancomycin (IV)

**Neonates** –

<table>
<thead>
<tr>
<th>Gestational Age</th>
<th>Dose &amp; Interval</th>
<th>&lt;7 days</th>
<th>72 hours</th>
<th>&gt;7 days</th>
<th>18 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30 weeks</td>
<td>20 mg/kg/dose</td>
<td>20 mg/kg/dose</td>
<td>q24 hours</td>
<td>20 mg/kg/dose</td>
<td>q18 hours</td>
</tr>
<tr>
<td>&gt;30-37 weeks</td>
<td>20 mg/kg/dose</td>
<td>15 mg/kg/dose</td>
<td>q18 hours</td>
<td>15 mg/kg/dose</td>
<td>q12 hours</td>
</tr>
<tr>
<td>&gt;37 weeks</td>
<td>15 mg/kg/dose</td>
<td>15 mg/kg/dose</td>
<td>q12 hours</td>
<td>15 mg/kg/dose</td>
<td>q8 hours</td>
</tr>
</tbody>
</table>

**Infants (>1 month) and Children to age 16 years** –

Non-CNS infections: 15 mg/kg/dose q8 hours
CNS and severe infections: 20 mg/kg/dose q8hrs

(MAX dose: 2 g/day – discuss with ID or pharmacy if a higher dose is needed)

**Children > 16 years of age** – 15 mg/kg q12 hours

(MAX dose: 4 g/day – discuss with ID or pharmacy if a higher dose is needed)

NOTE: Children with chronic diseases, such as Cystic Fibrosis, may need higher doses and shorter intervals.

Monitoring –

- No levels before 72 hours of therapy unless,
  1. Pre-term or Term Neonates (<45 weeks corrected gestational age) levels with the 3rd dose always, or
  2. Proven infection requiring Vancomycin, or
  3. Septic Shock/ Perinatal asphyxia, or
  4. Renal insufficiency – SCr >1.5 mg/dl or if SCr doubles, or
  5. Requested by ID or Pharmacy.

- Levels are needed if Vancomycin is to be continued for greater than 72 hours
- If patient requires Vancomycin for an extended period of time, a trough, BUN and SCr should be obtained every 7 days if patient is stable.

**Appropriate Levels:**

- Peak – 20–40 mg/L; Trough – 10 – 15 mg/L

**Infusion** –

- Infuse over 60 minutes
- Red man’s syndrome – infuse over 2 hours (NOT an allergic reaction)

**When to draw levels** – Make sure you are at Steady State – at least 3 doses
- Trough – draw 30 minutes prior to dose
- Peak – draw 1 hour after the infusion
Louisiana State University Health Sciences Center – Shreveport Standard Concentrations for Pediatric Patients

<table>
<thead>
<tr>
<th>DRUG</th>
<th>STD CONCENTRATION &lt; 1 kg</th>
<th>STD CONCENTRATION &lt; 5 kg</th>
<th>STD CONCENTRATION 5 – 20 kg</th>
<th>STD CONCENTRATION &gt; 20 kg</th>
<th>FLUID RESTRICTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dobutamine (Dobutrex)</td>
<td>1 mg/mL</td>
<td>2 mg/mL</td>
<td>2 mg/mL</td>
<td>5 mg/mL</td>
<td>10 mg/mL</td>
</tr>
<tr>
<td>Dopamine (Intropin)</td>
<td>0.8 mg/mL</td>
<td>1.6 mg/mL</td>
<td>1.6 mg/mL</td>
<td>5 mg/mL</td>
<td>10 mg/mL</td>
</tr>
<tr>
<td>Epinephrine (Adrenalin)</td>
<td>0.01 mg/mL</td>
<td>0.01 mg/mL</td>
<td>0.05 mg/mL</td>
<td>0.1 mg/mL</td>
<td>1 mg/mL</td>
</tr>
<tr>
<td>Fentanyl (Sublimaze)</td>
<td>5 mcg/ml</td>
<td>10 mcg/ml</td>
<td>25 mcg/ml</td>
<td>50 mcg/ml</td>
<td>50 mcg/ml</td>
</tr>
<tr>
<td>Furosemide (Lasix)</td>
<td>1 mg/mL</td>
<td>1 mg/mL</td>
<td>1 mg/mL</td>
<td>1 mg/mL</td>
<td>10 mg/mL</td>
</tr>
<tr>
<td>Insulin</td>
<td>0.1 unit/mL</td>
<td>0.1 unit/mL</td>
<td>1 unit/mL</td>
<td>1 unit/mL</td>
<td>10 units/mL</td>
</tr>
<tr>
<td>Midazolam (Versed)</td>
<td>0.5 mg/mL</td>
<td>0.5 mg/mL</td>
<td>1 mg/mL</td>
<td>1 mg/mL</td>
<td>5 mg/mL</td>
</tr>
<tr>
<td>Milrinone (Primacor)</td>
<td>0.2 mg/mL</td>
<td>0.2 mg/mL</td>
<td>0.2 mg/mL</td>
<td>0.2 mg/mL</td>
<td>5 mg/mL</td>
</tr>
<tr>
<td>Morphine</td>
<td>0.5 mg/mL</td>
<td>0.5 mg/mL</td>
<td>1 mg/mL</td>
<td>1 mg/mL</td>
<td>5 mg/mL</td>
</tr>
<tr>
<td>Norepinephrine (Levophed)</td>
<td>0.01 mg/mL</td>
<td>0.01 mg/mL</td>
<td>0.05 mg/mL</td>
<td>0.1 mg/mL</td>
<td>1 mg/mL</td>
</tr>
<tr>
<td>Propofol (Diprivan)</td>
<td>10 mg/mL</td>
<td>10 mg/mL</td>
<td>10 mg/mL</td>
<td>10 mg/mL</td>
<td>10 mg/mL</td>
</tr>
<tr>
<td>Vecuronium (Norcuron)</td>
<td>0.5 mg/mL</td>
<td>0.5 mg/mL</td>
<td>1 mg/mL</td>
<td>1 mg/mL</td>
<td>2 mg/mL</td>
</tr>
</tbody>
</table>

Note: Whenever possible, pre-made concentrations should be used to minimize the chance of infection or errors due to compounding.

Dopamine is available as pre-made bags of 0.8 mg/mL (800 mcg/mL) and 1.6 mg/mL (1600 mcg/mL).
Dobutamine is available as pre-made bags of 1 mg/mL (1000 mcg/mL) and 2 mg/mL (2000 mcg/mL).
Morphine is available as pre-made 1 mg/mL and 5 mg/mL.
Milrinone is available as 0.2 mg/mL.
Propofol is available as 10 mg/mL.
# Louisiana State University Health Sciences Center – Shreveport Standard Concentrations for Adult Patients

<table>
<thead>
<tr>
<th>DRUG</th>
<th>STD CONC</th>
<th>STD DILUTION</th>
<th>STD FLUID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminophylline</td>
<td>4 mg/mL</td>
<td>1000 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Amiodarone (Cordarone)</td>
<td>1.8 mg/mL</td>
<td>900 mg / 500 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Bumetanide (Bumex)</td>
<td>0.03 mg/mL</td>
<td>3 mg / 100 mL</td>
<td>NS</td>
</tr>
<tr>
<td>Dobutamine (Dobutrex)</td>
<td>2000 mcg/mL 4000 mcg/mL</td>
<td>500 mg / 250 mL 1000 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Dopamine (Intropin)</td>
<td>1600 mcg/mL</td>
<td>400 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Epinephrine (Adrenalin)</td>
<td>16 mcg/mL 32 mcg/mL</td>
<td>4 mg / 250 mL 8 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Esmolol (Brevibloc)</td>
<td>10 mg/mL</td>
<td>2500 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Fentanyl (Sublimaze)</td>
<td>10 mcg/mL</td>
<td>1000 mcg / 100 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Heparin</td>
<td>100 units/mL</td>
<td>25,000 units / 250 mL</td>
<td>½ NS</td>
</tr>
<tr>
<td>Heparin (CRRT)</td>
<td>100 units/mL</td>
<td></td>
<td>½ NS</td>
</tr>
<tr>
<td>Inamrinone (Inocor)</td>
<td>2500 mcg/mL</td>
<td>500 mg / 200 mL</td>
<td>NS</td>
</tr>
<tr>
<td>Insulin</td>
<td>1 unit/mL</td>
<td>100 units / 100 mL</td>
<td>NS</td>
</tr>
<tr>
<td>Isoproterenol (Isuprel)</td>
<td>8 mcg/mL</td>
<td>2 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Lidocaine (Xylocaine)</td>
<td>4 mg/mL</td>
<td>2000 mg / 500 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Lorazepam (Ativan)</td>
<td>0.4 mg/mL</td>
<td>40 mg / 100 mL</td>
<td>NS</td>
</tr>
<tr>
<td>Milrinone (Primacor)</td>
<td>200 mcg/mL</td>
<td>20 mg / 100 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Nesiritide (Natrecor)</td>
<td>6 mcg/mL</td>
<td>1.5 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Nicardipine (Cardene)</td>
<td>0.1 mg/mL</td>
<td>25 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Nitroglycerin (Nitro-Bid)</td>
<td>400 mcg/mL</td>
<td>100 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Nitropusside (Nitropress)</td>
<td>200 mcg/mL</td>
<td>50 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Norepinephrine (Levophed)</td>
<td>64 mcg/mL</td>
<td>16 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Phenylephrine (Neo-Synephrine)</td>
<td>100 mcg/mL</td>
<td>25 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Procaimamide (Procanbid)</td>
<td>4 mg/mL</td>
<td>1000 mg / 250 mL</td>
<td>D5W</td>
</tr>
<tr>
<td>Vasopressin (Pitressin)</td>
<td>1 unit/mL</td>
<td>100 units / 100 mL</td>
<td>D5W</td>
</tr>
</tbody>
</table>
**Survival Tips**

NEVER tell someone on the phone you are not the one (s)he needs to talk with or ask him/her to call someone else. Take his/her name and number, get in touch with the correct person and ask him/her to call back.

The Platinum Rule: Treat others the way they want to be treated!

Do NOT yell at others if you don’t want to get yelled at.

Understand early that the nurses will make or break you. And you don’t have a job without them.

Don’t ask someone to do something you are not willing to do yourself.

Most of the nurses have been doing this longer than you. Listen to them!

If the nurses tell you to go see a patient, get up and go.

“What do we normally do when [that] happens?” is still my favorite question.

Eat when you can, sleep when you can, exercise when you can, read when you can. If you don’t take care of yourself or read about your patients, how are you going to take care of sick children?

If you don’t know the answer, say so. But also say you will find out and be right back. If you can’t find it in a book or on the internet, call someone.

“That’s not my job!” will get you nowhere. We are a team; act as a proud member of that team.

Fever is not a bad thing. Read about it.

Become very familiar with your Harriet Lane. She is the most valuable friend you have right now.

Put the charts back on the chart rack. If the nurses can’t find your orders, how do you expect them to care for your patients?
• Basic IVF and Isonatremic Dehydration

### Composition of common IVF

<table>
<thead>
<tr>
<th>IVF</th>
<th>CHO gm/100cc</th>
<th>Na meq/L</th>
<th>K meq/L</th>
<th>Cl meq/L</th>
<th>HCO3 meq/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>D5W</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS</td>
<td>154</td>
<td>154</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>½ NS</td>
<td>77</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D5 ¼ NS</td>
<td>5</td>
<td>34</td>
<td>34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>0-10</td>
<td>130</td>
<td>4</td>
<td>109</td>
<td>28</td>
</tr>
<tr>
<td>Normosol</td>
<td>140</td>
<td>5</td>
<td>98</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

### Estimation of dehydration

<table>
<thead>
<tr>
<th>Findings</th>
<th>Mild (&lt;5%)</th>
<th>Moderate (5-10%)</th>
<th>Severe (&gt;10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Alert</td>
<td>Restless</td>
<td>Limp, cold, acrocyanosis</td>
</tr>
<tr>
<td>Heart rate</td>
<td>Normal</td>
<td>Rapid, weak</td>
<td>Thready</td>
</tr>
<tr>
<td>Respiration</td>
<td>Normal</td>
<td>Deep, increased</td>
<td>Deep, rapid</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>Normal</td>
<td>Normal or low</td>
<td>Low</td>
</tr>
<tr>
<td>Skin turgor</td>
<td>Normal</td>
<td>Slow retraction</td>
<td>Retraction &gt;2 sec</td>
</tr>
<tr>
<td>Eyes</td>
<td>Normal</td>
<td>Sunken</td>
<td>Grossly sunken</td>
</tr>
<tr>
<td>Tears</td>
<td>Normal</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>Mucous membranes</td>
<td>Moist</td>
<td>Dry</td>
<td>Very dry</td>
</tr>
<tr>
<td>Urine output</td>
<td>Normal</td>
<td>Reduced, dark</td>
<td>Minimal</td>
</tr>
</tbody>
</table>

### Calculation of Maintenance IVF*

(*Modification from caloric calculation assuming no fever, no metabolic abnormalities and normal renal function.*

<table>
<thead>
<tr>
<th></th>
<th>&quot;Real&quot; way</th>
<th>4, 2, 1 Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st 10 kg</td>
<td>100cc/kg/day</td>
<td>Div by 24 hrs</td>
</tr>
<tr>
<td>2nd 10 kg</td>
<td>50cc/kg/day</td>
<td>Div by 24 hrs</td>
</tr>
<tr>
<td>Rest of kg</td>
<td>20cc/kg/day</td>
<td>Div by 24 hrs</td>
</tr>
</tbody>
</table>

### Important Facts and Formulas

1. Well weight = Sick weight ÷ (100% - % dehydration)
2. 1 liter of fluid = 1 kg
3. Maintenance Na = 3.2 meq/100 cc = 32 meq/L = ¼ NS
4. Isonatremic dehydration Na requirement = Na in ECF x 0.6 x Liters deficit
5. Maintenance K = 2.4 meq/100 cc = 24 meq/L = 20 meq/L KCl
6. Isonatremic dehydration K requirement = K in ICF x 0.4 x Liters deficit
7. If dehydration is acute and not too severe, usually replace ½ of deficit in 1st 8 hrs and other ½ of deficit in next 16 hrs.
8. Remember to correct maintenance for fever and metabolic activity.
9. Remember to consider renal needs, i.e. osmolar diuresis, SIADH, diabetes insipidus.

---

**SURVIVAL TIPS**
**Clinical scenario**

6 yr old with sore throat and minimal PO intake for 3 days. Now refuses to take PO. Very restless, eyes sunken, dry mucous membranes. Weight = 24 kg.

HR 160, CR 3 sec, no UOP → given 500cc NS bolus (20 cc/kg)

HR 140, CR 2 sec, no UOP → given 500cc NS bolus (20 cc/kg)

HR 110, CR 1 sec, + UOP

Well weight = \[
\frac{\text{Sick weight}}{100\% - \% \text{ dehydration}} = \frac{24 \text{ kg}}{100\% - 10\%} = 27 \text{ kg}
\]

<table>
<thead>
<tr>
<th>Calculation of Maintenance IVF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>“Real” way</strong></td>
</tr>
<tr>
<td>1st 10 kg (10 kg)</td>
</tr>
<tr>
<td>2nd 10 kg (10kg)</td>
</tr>
<tr>
<td>Rest of kg (7 kg)</td>
</tr>
<tr>
<td>27 kg</td>
</tr>
</tbody>
</table>

Maintainance Na = 3.2 meq/100 cc = 52 meq Na

Maintenance K = 2.4 meq/100 cc = 39 meq K

<table>
<thead>
<tr>
<th>Calculation of Deficit IVF</th>
</tr>
</thead>
</table>

Well weight (27kg) - sick weight (24 kg) = 3kg = 3 liters deficit
Subtract boluses: 3 liters – 500 cc – 500 cc → 2 liters deficit left to replace

**1st 8 hrs** → ½ of 2 liters → 1000 cc divided by 8 hrs → 125 cc/hr

**Next 16 hrs** → ½ of 2 liters → 1000 cc divided by 16 hrs → 63 cc/hr

- Isonatremic dehydration Na requirement = Na in ECF x 0.6 x Liters deficit initially
  \[(145) \times 0.6 \times (3L) = 261 \text{ meq Na} – \text{Bolus Na (154)} = 107 \text{ meq Na}\]

- Isonatremic dehydration K requirement = K in ICF x 0.4 x Liters deficit initially
  \[(150) \times 0.4 \times (3L) = 180 \text{ meq K}\]

<table>
<thead>
<tr>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st 8 hrs</strong></td>
</tr>
<tr>
<td>½ of maintenance</td>
</tr>
<tr>
<td>½ of deficit</td>
</tr>
<tr>
<td>Totals</td>
</tr>
</tbody>
</table>

- D5 1/3 NS with 67* meq KCl/liter @ 193 cc/hr

<table>
<thead>
<tr>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Next 16 hrs</strong></td>
</tr>
<tr>
<td>½ of maintenance</td>
</tr>
<tr>
<td>½ of deficit</td>
</tr>
<tr>
<td>Totals</td>
</tr>
</tbody>
</table>

- D5 1/3 NS with 55* meq KCl/liter @ 131 cc/hr

(* Limited to 40 meq/liter with a patient on the ward and generally 60 meq/liter with a patient in the Intensive Care Unit)
<table>
<thead>
<tr>
<th>Location</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Cooper</td>
<td>Office 7856, Pager 1264</td>
<td>7582</td>
</tr>
<tr>
<td>Heather</td>
<td>7869</td>
<td>7582</td>
</tr>
<tr>
<td>5Peds Nurses’ Station</td>
<td>6143, 6144, 8509, 8510, 8511</td>
<td>8535</td>
</tr>
<tr>
<td>6J Nurses’ Station</td>
<td>8136, 8137, 8174</td>
<td>8474</td>
</tr>
<tr>
<td>Ward Nurse Manager</td>
<td>7394 (Karen), 6459 (Monica)</td>
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</tr>
<tr>
<td>Clinic MD Room</td>
<td>8639, 8640, 8641, 8642</td>
<td>8638</td>
</tr>
<tr>
<td>Tiger Clnic MD Room</td>
<td>8668, 8627</td>
<td></td>
</tr>
<tr>
<td>Hospitalist On Call</td>
<td>1-877-962-4831</td>
<td></td>
</tr>
<tr>
<td>NICU</td>
<td>7240</td>
<td>8080, 5414</td>
</tr>
<tr>
<td>Nursery</td>
<td>6988</td>
<td>8000 (Nursery), 8294 (Dr. B’s office)</td>
</tr>
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<td>Peds Office</td>
<td>6076, 6081, 6073</td>
<td>6059</td>
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<tr>
<td>Peds ED</td>
<td>8252, 6408, Main ED 4589</td>
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<tr>
<td>PICU</td>
<td>7221, 7225</td>
<td>7208</td>
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<tr>
<td>Ward MD</td>
<td>8512, 8515, 8516, 8517, 8518</td>
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<tr>
<td>Service</td>
<td>Name</td>
<td>Pager</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------</td>
<td>-----------</td>
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<tr>
<td>Allergy/Immunology</td>
<td>Bridget</td>
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</tr>
<tr>
<td>Cardiology</td>
<td>Dr. Jackson</td>
<td>682-0184</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Dr. Kiel</td>
<td>1705</td>
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<tr>
<td>Cardiology</td>
<td>Debbie, RN</td>
<td>1550</td>
</tr>
<tr>
<td>Case Mgmt: Inpatient</td>
<td>Anne, RN</td>
<td>0770</td>
</tr>
<tr>
<td>• Outpatient</td>
<td>Rena</td>
<td>1669</td>
</tr>
<tr>
<td>• Social Services</td>
<td>Beth</td>
<td>2912</td>
</tr>
<tr>
<td>Certification Office</td>
<td>Christi</td>
<td></td>
</tr>
<tr>
<td>Child Life</td>
<td>Amanda Hays</td>
<td>1618</td>
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<tr>
<td>Child Life</td>
<td>Lacey Lyle</td>
<td>1661</td>
</tr>
<tr>
<td>Child Life</td>
<td>Vanessa Anderson</td>
<td>1816</td>
</tr>
<tr>
<td>CPA</td>
<td></td>
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<tr>
<td>CPR Lab</td>
<td></td>
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</tr>
<tr>
<td>Dietician</td>
<td>Julie Richardson</td>
<td>1821</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>Dr. McVie</td>
<td>0118</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>Cynthia, RN</td>
<td>1455</td>
</tr>
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*Accepts text messages