DISCLOSURE

• Dr. Foster and Dr. Idrizi have no relationships with commercial companies to disclose.

“HOW I LEARNED TO STOP WORRYING AND LOVE INPATIENT PEDIATRICS”

ALEX FOSTER, MD, MPH
HANEME IDRIZI, MD

OBJECTIVES

• Describe the key components of effective and respectful communication.
• Understand the basic principles behind the triage of medical problems.
• Understand the resources available whenever a child decompensates on the floor.
• Understand the basic principles behind the management of respiratory distress.
• Be able to prescribe appropriate fluids for dehydration and appropriate antibiotics for infections.
• Understand the basic principles behind the selection of an appropriate pediatric diet.

1. HOW TO EFFECTIVELY COMMUNICATE WITH FAMILIES/CAREGIVERS AND FUNCTION EFFECTIVELY DURING FAMILY-CENTERED ROUNDS

“The most common element of an adversarial clinician-patient relationship is failed communication.”

Roadblocks

• Inherent stress of high acuity situation
• Lack of established relationship with patient and parents
• Potential for frequent interruptions
• Time constraints
• Fatigue
• Lack of knowledge
• And more…

COMPONENTS TO PHYSICIAN-PARENT-CHILD COMMUNICATION

• Informativeness: quantity and quality of health information provided by physician
• Interpersonal sensitivity: affective behaviors that reflect the physician’s attention to, and interest in, the parents’ and child’s feelings and concerns
• Partnership building: the extent to which the physician invites the parents (and child) to state their concerns, perspectives, and suggestions
“CHALLENGING” FAMILY

Paged to see an upset mother who is asking to speak to doctor ASAP!!

Patient is 4-month-old with bronchiolitis. Parents not present or reachable during day. Mother upset because son placed on oxygen and she was not notified.

You’ve been dreading this page. Mrs. S is a so-called “difficult parent”; always upset and demanding of the provider’s time. You decide to eat your dinner quickly, and then go to the bedside.

When you walk into the room, Mrs. S has her arms folded across her chest. You introduce yourself, and she responds by complaining about her son’s care and how no one is talking to her. You listen for a minute or two, and end up having to interrupt her to get a word in. You mention that your colleague called during the day but no one answered. Mrs. Smith just gets more upset, saying that there was no message and no one is keeping her informed.

"Mrs. Smith, I can see that you are upset and I can understand why. It must be difficult to arrive at the hospital and learn that your son is now requiring oxygen. You’ve been juggling a lot, with having to go to take care of your other children and be here at the hospital with J.S. What questions can I answer for you now?"

I am sorry that we were not able to communicate better during the day. What would be the best way to make sure this type of thing doesn’t happen again?"

National Nighttime Curriculum
Communicating with Patients and Families in the Nighttime Role
Author: Jennifer Montalbano MD, Children’s Hospital Los Angeles

EXAMPLE REVISITED

Using the NURS mnemonic:

“Mrs. S. I can see that you are upset and I can understand why. It must be difficult to arrive at the hospital and learn that your son is now requiring oxygen. You’ve been juggling a lot, with having to go to take care of your other children and be here at the hospital with J.S. What questions can I answer for you now?"

I am sorry that we were not able to communicate better during the day. What would be the best way to make sure this type of thing doesn’t happen again?"

National Nighttime Curriculum
Communicating with Patients and Families in the Nighttime Role
Author: Jennifer Montalbano MD, Children’s Hospital Los Angeles

NURS MNEMONIC

Goal: Elicit the patient’s (parent’s) emotions and address them:

- **Naming**: recognition of emotion
  - “You are angry.” or “That was sad for you.”
- **Understanding**: acceptance and validation of emotion
  - “I can understand why that was frustrating for you.”
- **Respecting**: respect their experience, praise their efforts
  - “You’ve been juggling a lot.” or “You did a great job recognizing that he was getting more sick.”
- **Supporting**: express support, create partnership
  - “Let’s work together to come up with a better way to address this.”

National Nighttime Curriculum
Communicating with Patients and Families in the Nighttime Role
Author: Jennifer Montalbano MD, Children’s Hospital Los Angeles

OTHER TIPS FOR IMPROVING COMMUNICATION

- Be family/patient-centered
- Use open-ended questions and active listening
- Echo and summarize what the patient says
- Demonstrate empathy
- Incorporate knowledge about the patient’s personality
- Acknowledge the problem
- Use problem-solving skills and participate in the solution
- Set appropriate boundaries
- Apologize when appropriate
- Be honest!!

National Nighttime Curriculum
Communicating with Patients and Families in the Nighttime Role
Author: Jennifer Montalbano MD, Children’s Hospital Los Angeles

FAMILY CENTERED ROUNDS

- Conducting attending physician rounds in patients’ rooms with the family present should be standard practice.”
  
  American Academy of Pediatrics
  September 2003

- Family-centered rounds (FCR) is defined as a multidisciplinary (attending, residents, MG, nurses, pharmacists, SW, other staff) inpatient rounds that occur in the patient’s room in the presence of patient and family, integrating patient/family perspectives and preferences into clinical decision making.

- In pediatrics, FCR care is based on the understanding that the family is the child’s primary source of strength and support and that the child’s and family’s perspectives and information are important in clinical decision making.

- Growing consensus suggests that providing family-centered care improves parent satisfaction and outcomes.
KEY POINTS ABOUT FAMILY CENTERED ROUNDS

• Explain to patients how FCR will work and introduce everyone on the medical team.
• Avoid medical jargon.
• Encourage patient/family to interject with corrections.
• Families/patients with better understanding of plan and compliance.
• Several “steps” are completed at one time therefore saving time.
• Everyone’s comfort level will increase as they spend more time participating in FCR.
• Residents spend more time developing their communication skills with patients/families.

Facilitator Guide on Family-Centered Rounds
From Cincinnati Children’s Hospital Medical Center

2. Inpatient Triaging

“A process for sorting injured [or sick] people into groups based on their need for or likely benefit from immediate medical treatment. Triage is used in hospital emergency rooms, on battlefields and disaster sites, [and at night] when limited medical resources must be allocated.” American Heritage Dictionary

ESSENTIALS FOR GOOD TRIAGING

• A good sign-out
• Familiarize yourself early in the evening with the “sicker” patients and have a plan for each child.
• Pay attention to trends.
• Make “To Do” lists.
• Answer pages quickly (within 5 minutes).
• Set appropriate expectations.
• Check-in with each other.
• Ask your colleagues for tips.
• Communicate delays/concerns with attending and patients/families.
• Know your resources and ask for help.

3. WHEN A CHILD GOES BAD

SICK OR NOT SICK?

• Appearance
• Airway
• Breathing
• Circulatory status
RAPID RESPONSE

- **Rapid Response:** Process that allows a rapid (within 10 minutes) evaluation of patient. Slightly slower response time than blue alert.
- **When to call one:**
  - When concerned about patient’s status and potential for decline. Trying to avoid progression to code.
- **Who can activate:** Any health care professional, family
- **How to activate a rapid response:** 203-3273
- **Who responds:**
  1. Present: upper level resident paged and PICU charge nurse notified.
  2. Anticipated plan (August): A designated RRT mobilized via paging system consisting of PICU resource nurse, RT, and upper level.

BLUE ALERT

- **Code Blue:** Activation of an emergency response team when patient arrests or rapid decline in patient condition faster response time.
- **When to call one:**
  - Respiratory Arrest
  - Severe respiratory distress
  - Cardiovascular Arrest
  - Impending Cardiovascular Arrest
- **Who can activate:** Any healthcare professional, family
- **How to activate a code blue:**
  - Code panel in every room or 8-2222
- **Who responds:**
  1. Present: lever on floor only notifying personnel. Does not notify outside area and not connected to operators.
  2. Anticipated plan (Oct): Pulled tab or 8-2222 will generate overhead announcement and mobilize via paging system an established pediatric code team consisting of intensivist/fellow/mid-level, PICU resource nurse, RT, upper level, pediatric pharmacy, radiology tech, security, anesthesia, GSE+/

CODE BLUE RELEASE BUTTON

For use when **Calling Adult Code Blue Team (8-2222)**

- This button opens all fire doors leading to the pediatric floor for fast access for responders.

The **CODE BLUE RELEASE BUTTON** (located behind the nurses station in the PICU and in the PTU on the column near the Call light system) – This button only opens the doors to our unit and the stairwells to provide quick access to our unit during a HOSPITAL WIDE CODE BLUE. It does not connect to the PBX operators.

ALWAYS REMEMBER.....

4. MANAGEMENT OF A CHILD IN RESPIRATORY DISTRESS
RESPIRATORY DISTRESS

- Initial quick assessment (PAT):
  - Appearance
  - tone
  - interactiveness
  - cry
  - Breathing/Airway
    - airway sounds
    - accessory muscle use
  - Circulatory status
    - palor
    - cyanosis

You are called to assess a 5 month-old male admitted earlier in the day for RSV bronchiolitis. On physical exam, he is pale, weak and has a RR=72 breaths/min and oxygen saturation of 86% on room air. He is grunting with severe retractions and on auscultation has scattered crackles bilaterally and expiratory wheezes.

- Initial quick assessment:
  - Appearance – pale, weak
  - Breathing/Airway – tachypnea, hypoxemia, retractions, grunting, crackles, wheezes
  - Circulatory status – palor

- Intervene:
  - Airway: optimize position, suction airway
  - Breathing: oxygen, 3% saline
  - Circulation: establish IV/IO; bolus

The initial assessment of a patient in respiratory distress should be rapid and focused on quickly determining the severity of respiratory distress and need for emergent interventions.

5. ADMISSION PROCESS

- Current process:
  - Referring physician calls on-call Hospitalist (based on UHS schedule) to have patient admitted.
  - Accepting physician or resident calls UHS Bed Control (358-2184) to notify of accepted patient.
  - Following information must be provided to Bed Control:
    - Full name
    - DOB
    - Accepting Physician name
    - MRN – if patient is within Sunrise system
  - Bed control will create a "visit".
  - Accepting physician or resident then enters a BED REQUEST order that will then generate a bed assignment.
  - Once bed assigned, admit orders may be entered.
  - If patient is being transferred from another hospital rather than clinic, the referring hospital will initiate contact with bed control. Accepting physician should however inquire that proper orders are being entered on the proper visit.
ADMISSION PROCESS

- Coming soon:
  - Referring physician/hospital calls 1-877-kids-uhs transfer center and is connected with the appropriate physician.
  - Transfer center will contact bed control to create a visit.
  - Once a visit is created, bed request order entered that will generate a bed assignment.
  - Once bed assigned, admit orders may be entered.

6. REHYDRATION OF A DEHYDRATED CHILD

1. Estimate degree of dehydration
2. Calculate deficit, ongoing losses, maintenance needs
3. Develop plan for rehydration and reassessment

DEGREE OF DEHYDRATION

- Gold standard is weight loss
- Clinical assessment is second best:

<table>
<thead>
<tr>
<th>Degree of Dehydration</th>
<th>Weight Loss</th>
<th>Clinical Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>0%</td>
<td>Normal</td>
</tr>
<tr>
<td>Mild</td>
<td>2-3%</td>
<td>Tachycardia, tachypnea, mild irritability</td>
</tr>
<tr>
<td>Moderate</td>
<td>4-6%</td>
<td>Marked irritability, tachypnea, fever</td>
</tr>
<tr>
<td>Severe</td>
<td>7-10%</td>
<td>Shock, cyanosis, tachycardia, tachypnea</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deficit</th>
<th>Ongoing Losses</th>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>11kg child -&gt; 10kg weight when ill = 10% dehydrated</td>
<td>1L dehydrated</td>
<td>Holliday-Segar method: 100mL/kg first 10kg, 50mL/kg next 10kg, 20mL/kg every kg after that → 4-2-1 rule</td>
</tr>
<tr>
<td>1000mL deficit</td>
<td>500mL over 8hrs = 62.5mL/hr</td>
<td>Total rate of 104.5mL/hr for 1st 8hrs, 73mL/hr for next 16hrs</td>
</tr>
<tr>
<td>10kg child: 250-1000mL by mouth over 3-4hrs with ORS (Pedialyte most common)</td>
<td>10kg, 20mL/kg every kg after that</td>
<td>Maintenance = 100mL/kg *10kg = 1000mL / 24hrs = 42mL/hr</td>
</tr>
</tbody>
</table>

PLAN FOR REHYDRATION AND ASSESSMENT

- Plan if taking oral fluids:
  - 50-100mL/kg by mouth [5-10% down] over 3-4hrs with assessment of ongoing losses
  - 10kg child: 500-1000mL by mouth over 3-4hrs with ORS (Pedialyte most common)

- Plan if not taking oral fluids:
  - Replace 1st half of deficit over 8hrs
  - 2nd half over next 16hrs

- Type of fluid:
  - Debate exists: D5 NS arguably safest, D5 ½ NS ok if checking electrolytes

- Reassess clinical status!!!
7. RATIONAL SELECTION OF ANTIBIOTICS

• Why be rational? Aren’t these kids really sick?
  • Increasing antibiotic resistance
  • Individual untoward effects of antibiotics (diarrhea, rash)
  • Increased risk of super-infection
  • MRSA
  • C. difficile
  • Antibiotic stewardship a goal of multiple organizations
  • Primum non nocere


RATIONAL SELECTION OF ANTIBIOTICS

• Three essential indications:
  • Definitive therapy:
    • Know bacterium, know infection
    • Examples: large abscess with isolate, UTI
  • Empiric therapy:
    • Best guess at bacterium, know infection
    • Examples: pneumonia, otitis media
  • Prophylactic therapy:
    • Don’t know bacterium, don’t know infection
    • Example: fever and neutropenia in a leukemia patient

1. Identify probable bacterial etiologies of illness
   • Abscess with cellulitis in a 4 y/o F: S. aureus (MSSA and MRSA), Group A (C,G) Streptococcus

2. Identify current antibiotic coverage and gaps
   • Clindamycin: good for Streptococcus, ok for MSSA (79% and 80% at CHoSA and UH), ?ok for MRSA (78% and 63% at CHoSA and UH)

3. Set treatment goals for reassessment and change therapy as needed
   • Child in hospital started on clindamycin → not improving by CRP and clinically day 2 → switch to TMP/SMX/vancomycin AND address abscess

• Resources:
  • IDSA: www.idsociety.org - phone apps, guidelines
  • Antibiograms (for UH, have in micro lab)
ANTIBIOTICS – CLINICAL FAILURE

• The choice of antibiotic is incorrect
• The diagnosis is incorrect
• The antibiotic cannot reach the site of infection
• The etiological agent is resistant to the antibiotic
• There is a secondary infection
• Non-compliance of the host
• Drug fever

8. WORKING WITH SUB-SPECIALISTS

• Initiating a consult:
  • Ask a specific question
  • Change of therapy for child with recurrent seizures
  • Have relevant data at hand/know your patient
  • Current and past dose of AEDs, frequency of seizures
  • Comes with ideas of answer to your question
  • Think lack of compliance – do not think needs change
  • Group or coordinate calls to specialist
  • 5 neurology patients ≠ 5 phone calls

WORKING WITH SUB-SPECIALISTS CONT...

• Following up a consult:
  • Read their notes
  • Often valuable information
  • Discuss with senior whether or not to implement recommendations
  • Information changed
  • Circumstances changed
  • Feedback to consult on intervention/plan
  • Seizure frequency decreased with magic pill

9. BASICS OF NUTRITIONAL SUPPORT

1. Type of diet
   • Caloric needs tailored to individual situation (obese, bed rest, neurologic impairment)
   • Age and allergy appropriate
   • Consistency appropriate

2. Route of diet
   • Parenteral vs enteral
   • NG/ND/NJ/oral

3. Assessment of diet
   • Weight, I/Os, pre-albumin
   • Speech consult

4. Resources
   • Nutrition consult, Harriet’s and other handbooks

EXAMPLE FEEDING RX

• 4 y/o M with cerebral palsy, severe neurologic impairment admitted with failure to thrive
• 20kg child: per references = 70-74kcal/kg/day
• Therefore energy needs = 1400kcal/day
• Pediasure = 1kcal/mL
• Water needs (H&S) = 1500mL/day
• Reasonable start for NG feeds would be goal of 1400mL of Pediasure with 100mL water added
• 1500mL/24hrs = 62.5mL/hr over 24hrs
• Assess (weight, I/Os, Na), nutrition consult
TAKE HOME POINTS

- Inpatient pediatrics can be complex, chaotic and confusing
- What will help:
  - Clear and respectful communication
  - Rational assessment of problem, targeted intervention and ensuring follow-up of endpoint
  - Utilize your resources (after utilizing yourself)

AND ALWAYS REMEMBER TO HAVE FUN!