Not Small Adults: Establishing Pediatric Medication Safety in Adult Hospital Settings

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Introduction
Disclosure

We have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this presentation.
Objectives

• Recognize the common challenges in introducing pediatric medication safety within an adult setting.

• Review various strategies on identifying and implementing pediatric medication safety within adult environments.

• Identify ways to improve pediatric medication safety in the areas of emergency medicine, pharmacy, floor and post-surgical settings.
“Make a habit of two things: to help; or at least to do no harm”

-Hippocrates
Background

Higher pediatric care in adult settings


March 4, 2015
Background


“Errors associated with medications are believed to be the most common type of medical error and...have the potential to cause harm within the pediatric population at a higher rate than in the adult population...”
Background

• Our Hospital
  – 437-bed Adult Community Hospital
  – 17 bed Level III B NICU
  – 10 bed Pediatric Unit
    • (Approx. 1,000 admissions per year)
  – Adult Emergency Department (Level II Trauma Center)
  – Approx. 3,000 deliveries per year
  – Approx. 24,000 pediatric ED visits per year
  – About sixty miles from pediatric tertiary centers
    ▲ Children’s National Health System, Washington, DC - 55 miles North
    ▼ VCU Children’s Hospital, Richmond, VA - 56 miles South

March 4, 2015
“Children are *not* small adults”
Case Examples

Use of non-standard weight measuring

9 year old patient receiving 3,000mg ceftriaxone for pneumonia based on patient weight transcribed as 60kg. (Patient actual weight: 60 lbs)
Case Examples

Contraindicated medications

11 month old with bronchiolitis receiving acetaminophen with codeine for cough.
Case Examples

Use of standard adult dosing

11 year old receiving 1,000mg Vancomycin for cellulitis. (Recommended dose is 500-750 mg for the patient’s weight of 50kg)
Case Examples

Multiple Issues

16 year old admitted for non-surgical abdominal pain found to be difficult to arouse for 20 hours during initial floor stay after receiving 2mg morphine x2, 1mg hydromorphone x2, 25mg diphenhydramine x1, and 25mg promethazine x2.
Challenges in Adult Settings

• Knowledge/Training of primarily adult based providers

• Limited understanding of current pediatric medication safety standards

• Lack of pediatric appropriate equipment to administer medication

• Sense of autonomy loss in medical decision making

• Feeling of being questioned or supervised
Key steps to take

IDENTIFY

STANDARDIZE

ADJUST

EDUCATE

March 4, 2015
Call To Action

What We Found

What We Did

What Resulted
What We Found

“The greatest obstacle to discovery is not ignorance— it is the illusion of knowledge”
-Daniel J. Boorstin
Hospital-wide Findings

Limited Pediatric Awareness

- Weight measured in pounds (even though dosing based on kg)
- Adult standard doses used for certain medications (e.g. Vancomycin, Hydromorphone)
- Lack of education or awareness of pediatric specific vital signs

Lack of Standards

- Lack of standard medication review process
- Lack of weight based dose verification by nursing staff
- Multiple systems used to check medication dosing

March 4, 2015
Unit Specific Findings

- **PEDIATRICS and PACU**
  - Vancomycin error rate: 42.1% (2009)
  - Morphine error rate: 3.4% (2009)
  - Hydromorphone error rate: 19% (2009)

- **EMERGENCY DEPARTMENT**
  - Orders submitted in dose/kg without final calculated dose
  - Unsafe medications or combinations (2009-2010 Review):
    - Promethazine + opiates, <18yo: **239 patients**
    - Donnatal (Atropine/Phenobarbital) for abdominal pain, < 18yo: **60 patients**
    - Acetaminophen with codeine for cough, < 6yo: **29 patients**

March 4, 2015
Unit Specific Findings

• **PHARMACY**
  – Lack of pediatric-specific knowledge/training of staff pharmacists
  
  – Lack of distinct visual cues in ordering systems to differentiate adult from pediatric patients
  
  – Lack of pediatric-specific references for pharmacists’ use
  
  – Lack of standard concentrations and preparation procedures specific to pediatric and neonatal population
What We Did

“There are risks and costs to action. But they are far less than the long range risks of comfortable inaction”
- John F. Kennedy
Hospital-wide

IDENTIFY

Peds Safety Committee

STANDARDIZE

ADJUST

EDUCATE
Hospital-wide

IDENTIFY

STANDARDIZE

EDUCATE

ADJUST

Metric weight measurements

Medication order requirements

Restriction of meds

Double check meds

March 4, 2015
Hospital-wide

- IDENTIFY
- ADJUST
- EDUCATE

STANDARDIZE

- Peds RSI kit
- Peds code carts
- Concentrations

March 4, 2015
# Medication Dosing Guide for Pediatric Rapid Sequence Intubation

<table>
<thead>
<tr>
<th>Medication</th>
<th>Recommended Dosages</th>
<th>Grey (3-5 kg)</th>
<th>Pink (6-7 kg)</th>
<th>Red (8-9 kg)</th>
<th>Purple (10-11 kg)</th>
<th>Yellow (12-14 kg)</th>
<th>White (15-18 kg)</th>
<th>Blue (15-23 kg)</th>
<th>Orange (24-39 kg)</th>
<th>Green (30-35 kg)</th>
<th>Adolescent (37-49 kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-medications/Adjuvants</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Atropine*</td>
<td>0.02 mg/kg IV/IO</td>
<td>0.1 mg (1mL)</td>
<td>0.15 mg (1.5mL)</td>
<td>0.15 mg (1.5mL)</td>
<td>0.2 mg (2mL)</td>
<td>0.25 mg (2.5mL)</td>
<td>0.3 mg (3mL)</td>
<td>0.4 mg (4mL)</td>
<td>0.5 mg (5mL)</td>
<td>0.5 mg (5mL)</td>
<td>0.5 mg (5mL)</td>
</tr>
<tr>
<td>Epinephrine†</td>
<td>1.10/000 (100 µg/mL)</td>
<td>0.05 mg (0.5mL)</td>
<td>0.05 mg (0.5mL)</td>
<td>0.1 mg (1mL)</td>
<td>0.15 mg (1.5mL)</td>
<td>0.3 mg (3mL)</td>
<td>0.25 mg (2.5mL)</td>
<td>0.35 mg (3.5mL)</td>
<td>0.45 mg (4.5mL)</td>
<td></td>
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</tr>
<tr>
<td><strong>Induction Agents</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Etomidate*</td>
<td>0.3 mg/kg IV/IO</td>
<td>1.2 mg (1mL)</td>
<td>2 mg (2mL)</td>
<td>3.5 mg (3.5mL rounded)</td>
<td>3.3 mg (3.3mL roundend)</td>
<td>4 mg (4mL)</td>
<td>5 mg (5mL)</td>
<td>6.3 mg (6.3 mL rounded)</td>
<td>8 mg (8mL)</td>
<td>10 mg (10mL)</td>
<td>13 mg (13 mL)</td>
</tr>
<tr>
<td>Fentanyl* (50 µg/mL)</td>
<td>see dilution info below*</td>
<td>12 micrograms (0.24 mL)</td>
<td>20 micrograms (0.4 mL)</td>
<td>25 micrograms (0.5 mL)</td>
<td>32 micrograms (0.64 mL)</td>
<td>40 micrograms (0.8 mL)</td>
<td>50 micrograms (1 mL)</td>
<td>63 micrograms (1.26 mL)</td>
<td>80 micrograms (1.6 mL)</td>
<td>100 micrograms (2 mL)</td>
<td>100 micrograms (2 mL)</td>
</tr>
<tr>
<td>Ketamine*</td>
<td>3 mg/kg IV/IO</td>
<td>13 mg (1.3 mL)</td>
<td>17 mg (1.7 mL)</td>
<td>20 mg (2 mL)</td>
<td>26 mg (2.6 mL)</td>
<td>33 mg (3.3 mL)</td>
<td>42 mg (4.2 mL)</td>
<td>50 mg (5 mL)</td>
<td>60 mg (6 mL)</td>
<td>80 mg (8 mL)</td>
<td></td>
</tr>
<tr>
<td>Midazolam*</td>
<td>0.3 mg/kg IV/IO Max: 10 mg/dose</td>
<td>1.2 mg (1.2 mL)</td>
<td>2 mg (2mL)</td>
<td>2.7 mg (2.7mL)</td>
<td>3.2 mg (3.2 mL)</td>
<td>4 mg (4mL)</td>
<td>5 mg (5mL)</td>
<td>6.3 mg (6.3 mL)</td>
<td>8 mg (8 mL)</td>
<td>10 mg (10 mL)</td>
<td>10 mg (10 mL)</td>
</tr>
<tr>
<td><strong>Neuromuscular Blocking Agents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Succinylcholine*</td>
<td>0.3 mg/kg IV/IO</td>
<td>8 mg (0.8 mL)</td>
<td>13 mg (1.3 mL)</td>
<td>17 mg (1.7 mL)</td>
<td>20 mg (2 mL)</td>
<td>25 mg (2.5 mL)</td>
<td>31 mg (3.1 mL)</td>
<td>40 mg (4 mL)</td>
<td>53 mg (5.3 mL)</td>
<td>64 mg (6.4 mL)</td>
<td>88 mg (8.8 mL)</td>
</tr>
<tr>
<td>Vecuronium* (1 mg/mL)</td>
<td>Reconstitute vial with 10 mL SW</td>
<td>0.2 mg (0.2 mL)</td>
<td>0.8 mg (0.8 mL)</td>
<td>1.3 mg (1.3 mL)</td>
<td>1.7 mg (1.7 mL)</td>
<td>2.6 mg (2.6 mL)</td>
<td>3.3 mg (3.3 mL)</td>
<td>4.2 mg (4.2 mL)</td>
<td>5.5 mg (5.5 mL)</td>
<td>6.8 mg (6.8 mL)</td>
<td>8.8 mg (8.8 mL)</td>
</tr>
</tbody>
</table>

* Atropine and Epinephrine are supplied as Abbotject syringes with dosing marked in 0.5 mL increments. Dosing for these medications are rounded to the nearest 0.5mL dose.
† Medication doses based on mean weight of 4 kg
† Fentanyl should be diluted with D5W or NS to final conc. of 10 mcg/mL prior to administration.
Hospital-wide

- IDENTIFY
- STANDARDIZE
- Multidisciplinary Education
- ADJUST

EDUCATE

March 4, 2015
Pediatrics Unit and PACU

- **Pediatricians**
- **Nurses**
- **Surgeons**
- **Anesthesiologists**
- **Pharmacist**

**Stages:**
- **IDENTIFY**
- **STANDARDIZE**
- **EDUCATE**
- **ADJUST**
Pediatrics Unit and PACU

IDENTIFY

Included in Hospital-Wide Changes

ADJUST

STANDARDIZE

EDUCATE

March 4, 2015
Pediatrics Unit and PACU

- Identify
- Dosing
- Order Sets
- Med List/Calculators
- Standardize
- Adjust
- Educate
Pediatrics Unit and PACU

Ibuprofen for pain or fever:
- Ibuprofen (Motrin) (10 mg/Kg/dose; MAX 400 mg/dose) po ___ mg every 6 hours
- PRN Pain or Fever
- Around the clock. (may alternate with acetaminophen if ordered).

<table>
<thead>
<tr>
<th>0-6 weeks</th>
<th>6 weeks-6 yrs</th>
<th>6 yrs-20 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBS</td>
<td>S. pneumoniae</td>
<td>N. meningitidis</td>
</tr>
<tr>
<td>E. coli</td>
<td>N. meningitidis</td>
<td>S. pneumoniae</td>
</tr>
<tr>
<td>Listeria</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ampicillin+  Ceftriaxone+  Ceftriaxone+
Cefotaxime    Vancomycin*    Vancomycin*
*(Only use Vancomycin if DEFINITE concern for meningitis otherwise just Ceftriaxone)*

- Ampicillin ______ mg IV every 6 hours (100 mg/Kg/dose) (MAX: 3,000 mg/dose)
- CefOTAXime ______ mg IV every 6 hours (50 mg/Kg/dose) (MAX: 4,000 mg/dose)
- CefTRIAxone ______ mg IV every 6 hours (50 mg/Kg/dose) (MAX: 2,000 mg/dose) [IF GREATER THAN 1 MONTH]
- VancoMYCIN ______ mg IV every 6 hours (15 mg/Kg/dose) (MAX: 1,000 mg/dose) [IF GREATER THAN 1 MONTH]
- Other: ______ mg IV (____ mg/kg/dose) ___ mg IV every ______ hours

**Flu vaccine if greater than 6 months of age and not egg allergic (Oct – May)**
- 6 – 35 months 0.25 mL IM x 1
- 3 years or older 0.5 mL IM x 1
Pediatrics Unit and PACU

FOR THOSE ORDERS WITH OPTIONS, ITEMS MUST BE MARKED OR THE ORDER IS NOT IN EFFECT.

Moderate Pain: Pain scale 4 - 5 per Wong-Baker Pain Assessment
- FentaNYL (Sublimaze) per weight based protocol. May repeat IV every 5 minutes up to 3 doses
- Call Anesthesiologist for possible Ketorolac (Toradol) order as adjunctive therapy
- If ineffective, call Anesthesiologist

Nausea/Emesis:
- Ondansetron (Zofran) IV per weight based protocol if not previously given.
- If ineffective, call Anesthesiologist

<table>
<thead>
<tr>
<th>Weight (Kg)</th>
<th>FentaNYL 50 mcg/ml (mcg)</th>
<th>Moderate Pain (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - 9</td>
<td>2.5</td>
<td>0.05 ml</td>
</tr>
<tr>
<td>10 - 15</td>
<td>5</td>
<td>0.1 ml</td>
</tr>
<tr>
<td>16 - 20</td>
<td>10</td>
<td>0.2 ml</td>
</tr>
<tr>
<td>21 - 30</td>
<td>15</td>
<td>0.3 ml</td>
</tr>
<tr>
<td>31 - 36</td>
<td>15</td>
<td>0.3 ml</td>
</tr>
<tr>
<td>37 - 45</td>
<td>20</td>
<td>0.4 ml</td>
</tr>
<tr>
<td>Greater than 45</td>
<td>25</td>
<td>0.5 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight (Kg)</th>
<th>Ondansetron 2 mg/ml (mg)</th>
<th>(ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - 13</td>
<td>1</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>14 - 17</td>
<td>1.5</td>
<td>0.75 ml</td>
</tr>
<tr>
<td>18 - 22</td>
<td>2</td>
<td>1 ml</td>
</tr>
<tr>
<td>23 - 27</td>
<td>2.5</td>
<td>1.25 ml</td>
</tr>
<tr>
<td>28 - 32</td>
<td>3</td>
<td>1.5 ml</td>
</tr>
<tr>
<td>33 - 37</td>
<td>3.5</td>
<td>1.75 ml</td>
</tr>
<tr>
<td>Greater than 37</td>
<td>4</td>
<td>2 ml</td>
</tr>
</tbody>
</table>

Children’s National™

March 4, 2015
Pediatriecs Unit and PACU

**EDUCATE**

- Code Simulations
- Nursing Education Modules
- Pediatric Nurse Educator

**IDENTIFY**

**STANDARDIZE**

**ADJUST**

March 4, 2015
Emergency Department

IDENTIFY

- ED Physicians
- ED Nurses
- Paramedics
- Pharmacist

STANDARDIZE

ADJUST

EDUCATE
Emergency Department

- IDENTIFY
- STANDARDIZE
- High Risk Meds
- Dose Verification
- ADJUST
- EDUCATE
Emergency Department

IDENTIFY

Disease specific guidelines

Nursing reference book

High use/high risk medications

“Broselow” style dosing

STANDARDIZE

ADJUST

EDUCATE
# Emergency Department

**Weight-Based Medication Dosing Guide for Oral Steroids for Asthma/Allergies**

(Prednisolone and Prednisone)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Recommended Dosages</th>
<th>Grey (3-5 kg)</th>
<th>Pink (6-7 kg)</th>
<th>Red (8-9.5 kg)</th>
<th>Purple (10-11 kg)</th>
<th>Yellow (12-14 kg)</th>
<th>White (15-18 kg)</th>
<th>Blue (19-23 kg)</th>
<th>Orange (24-25 kg)</th>
<th>Green (30+ kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prednisolone (Orapred) 15mg/5mL liquid</td>
<td>2mg/kg/dose Max: 60mg/day</td>
<td>6mg (2mL)</td>
<td>12mg (4mL)</td>
<td>18mg (6mL)</td>
<td>21mg (7mL)</td>
<td>24mg (8mL)</td>
<td>30mg (10mL)</td>
<td>42mg (14mL)</td>
<td>54mg (18mL)</td>
<td>60mg (20mL)</td>
</tr>
<tr>
<td>Prednisolone tablets</td>
<td>2mg/kg/dose Max: 60mg/day</td>
<td>Use liquid Prednisolone (see dosing above)</td>
<td>40mg</td>
<td>50mg</td>
<td>60mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Last updated 3/5/14
## Emergency Department

### Dilaudid (Hydromorphone) Standardized Dosing for ER T-system

<table>
<thead>
<tr>
<th>Medication</th>
<th>Recommended Dosage</th>
<th>10-12kg</th>
<th>13-15kg</th>
<th>16-18kg</th>
<th>19-21kg</th>
<th>22-24kg</th>
<th>25+ kg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydromorphone injection</strong></td>
<td>0.015mg/kg/dose IV (initial dose)</td>
<td>0.15mg</td>
<td>0.2mg</td>
<td>0.25mg</td>
<td>0.3mg</td>
<td>0.35mg</td>
<td>0.4mg</td>
</tr>
<tr>
<td><strong>Preferred Pediatric Concentration</strong></td>
<td>Using 1mg/ml concentration</td>
<td>0.15ml</td>
<td>0.2ml</td>
<td>0.25ml</td>
<td>0.3ml</td>
<td>0.35ml</td>
<td>0.4ml</td>
</tr>
<tr>
<td><strong>Alternative Concentration</strong></td>
<td>Using 2mg/ml (rounded) concentration</td>
<td>0.08ml</td>
<td>0.1ml</td>
<td>0.13ml</td>
<td>0.15ml</td>
<td>0.18ml</td>
<td>0.2ml</td>
</tr>
</tbody>
</table>
# Emergency Department

## Weight-Based Medication Dosing Guide for Intravenous Clindamycin

<table>
<thead>
<tr>
<th>Medication</th>
<th>Recommended Dosages¹</th>
<th>5-7kg</th>
<th>8-10kg</th>
<th>11-15kg</th>
<th>16-25kg</th>
<th>26-35kg</th>
<th>36-46kg</th>
<th>47-59kg</th>
<th>60+kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clindamycin (Cleocin)</td>
<td>10 mg/kg/dose IV Q8H (std doses range from 8-14 mg/kg/dose q8h) (Max: 600mg/dose q8h)</td>
<td>75mg</td>
<td>100mg</td>
<td>150mg</td>
<td>225mg</td>
<td>375mg</td>
<td>450mg</td>
<td>525mg</td>
<td>600mg</td>
</tr>
</tbody>
</table>

**Administration information¹:**
- MWH pediatric standard concentration: 6mg/mL
- Max pediatric concentration: 18mg/mL
- Stable in D₃W, NS, D₅NS, D₅-1/2NS, LR, D₁₀W
- Administer over 10-60 minutes (max rate: 30mg/min)
- Rapid administration can lead to hypotension and cardiopulmonary arrest


Updated 12/13/13
Emergency Department

IDENTIFY

STANDARDIZE

EDUCATE

In-services

Computer Based Learning

Skills Fair

Nursing Study Guide

March 4, 2015
Pharmacy

IDENTIFY

Dose Verification

NICU TPN Policy

ADJUST

STANDARDIZE

EDUCATE

March 4, 2015
Pharmacy

STANDARDIZE

Concentrations

Distinguish Pediatric Orders

NICU Rounds

TPN Orders

IDENTIFY

EDUCATE

ADJUST
Pharmacy

- Identify
- Standardize
- Staff Training
- Reference Notebook
- Adjust

EDUCATE
“However beautiful the strategy, you should occasionally look at the results”
-Winston Churchill
Pediatrics Unit, PACU, and ED

- Higher awareness of medication errors
- Improved nursing-physician communication of safety events and collaboration on process improvements
- Eliminated wait time for Pediatric RSI medication acquirement (previously was 20-40 minutes)
- Requirement of standard weight-based dosing orders for pediatric population
Pediatrics Unit and PACU

Vancomycin, Morphine, & Hydromorphone Error Rates

- 2009
- 2011

- Vancomycin: 42.1% (5.5%), 2009; 29%, 2011
- Morphine: 3.4% (2.5%), 2009; 2.5%, 2011
- Hydromorphone: 19%, 2009; 29%, 2011
Emergency Department

Number of Children Receiving Harmful Medications

- Promethazine with opiates: 239 (2009), 23 (2011-12)
- Donnatal: 60 (2009), 14 (2011-12)
- Tylenol with codeine: 29 (2009), 0 (2011-12)
Pharmacy

**Standardized Processes**
- Electronic orders built with mg/kg/dose calculation
- Specific concentrations required for weight/age

**Separate Pediatric Area of Pharmacy**
- Higher scrutiny on pediatric dosage verification by pharmacy staff

**Pediatric Trained Pharmacist**
- Serving as pediatric educator and identifying further areas for improvement
Take Home Points & Lessons Learned

“If there is any one secret of success, it lies in the ability to get the other person’s point of view and see things from that person’s angle as well as from your own”

-Henry Ford
Take Home Points

• **Identify primary stakeholders**
  – Acquire administration support
  – Establish a system of checks and balances

• **Empower stakeholders to critically appraise the system**
  – If no urgent issues, then start with “low hanging fruit”
  – Feeling of collaboration versus intrusion

• **Research established processes that can be built upon**
  – Utilize order sets from affiliated children’s hospitals or review other online hospital standards

• **Educate key players**
  – Identify primary educator to disseminate changes in the system

• **Reinforce**
  – Demonstrate effectiveness of process
  – Continue clear channels of communication
  – Accountability

= Ongoing Challenge
Future Steps
Future steps

• Make it easier for adult providers to buy into safe practices (ex. include pediatric doses in adult ordersets)

• Collaboration with outpatient settings (i.e. Psychiatry units)

• Expansion of standardized medication sets for adult providers

• National review of pediatric medication safety structures

• Pre and post study of specific safety practices
Questions?
Standardized Dosing Charts To Date

- Acetaminophen (oral and rectal)
- Ampicillin
- Ceftriaxone
- Clindamycin
- Dexamethasone
- Diphenhydramine
- Hydrocodone/acetaminophen elixir
- Hydromorphone
- Ibuprofen
- Methylprednisolone
- Oseltamivir
- Prednisone/Prednisolone
- RSI Medication Chart
- (multiple meds)
- Non-RSI Emergency Meds (multiple meds)
- Versed Drip Chart
What meds to start with?

**High volume**
- Acetaminophen
- Ibuprofen
- Ondansetron
- Ceftriaxone
- Prednisolone/Prednisone
- Diphenhydramine
- Dexamethasone
- Amoxicillin
- Ketorolac
- Cefazolin
- Co-trimoxazole
- Azithromycin
- Amoxicillin and Clavulanate

**High risk**
- Acetaminophen/Codeine
- Acetaminophen/Oxycodone
- Promethazine
- Acetaminophen/Hydrocodone
- Acetaminophen/Propoxyphene
- Hydromorphone
- “GI cocktail” - (Atropine/Phenobarbital, Mylanta, Lidocaine)
- Lorazepam
- Atropine
- Morphine
- Ketamine