Medication Administration
  o Kim Baily RN, MSN, PhD

- Six Rights
  o Right patient
  o Right Medication
  o Right Dose
  o Right Route
  o Right Time
  o Right Documentation

- Nursing Process
  o Assessment
    - Review pt’s history
    - THINK: Does this medicine make sense?
    - Check allergies
    - Drug-drug interactions
    - Drug-food interactions
    - Swallowing ability
    - IV access
    - Patient knowledge of meds
    - NEVER GIVE MEDS YOU DID NOT PREPARE

- Medication Orders
  o Date and time
  o Usually one or more duplicate copies are made, one of which goes to pharmacy.
  o Page stamped with pts name and medical records number
  o Drug name
  o Route
  o Dose
  o Frequency or time of administration
  o Signature of person ordering drug
  o Must have all components
    - PRN may require parameters and reason for giving drug
  o Students may not take telephone orders

- Older Adult
  o Polypharmacy
  o Reduced liver, kidney function
    - How will this effect medication administration?
  o Care with drugs that effect CNS
  o Noncompliance??

- General Considerations
  o Give meds within ½ hour of time due
  o Gather physical assessment and lab values relevant for meds
  o Allow sufficient time to prepare meds
  o Check MAR against original order
  o Check the six rights
  o Allergies
  o Potential food interactions
  o Potential drug-drug interactions
  o Medication Pyxis
  o General Considerations cont.
  o Do not touch medication with fingers
  o Check expiration dates
- Calculate drug doses
- Concentrate and limit interruptions
- Place meds that need to be broken in a separate cup
- Place meds that need assessment before giving e.g. Blood pressure
- Do not remove wrappers

- Oral Medications
  - Easiest and most commonly used route (and cheapest)
  - PO meds cannot be given if?
  - Tablets are often scored
  - Give water, juice with medication
    - Fluid restrictions
  - Enteric coated tablets
  - Sustained-release – contain beads or pellets
  - Syrups, elixirs, suspensions,
    - Never pour excess back into bottle
    - Shake well
    - Measure smaller doses with syringe
    - Poor away from label

- Other Routes
  - Sublingual
  - Buccal
  - Parenteral – Injection into Body Tissue
  - Intradermal – into dermis or just under dermis
  - Subcutaneous – tissue just below dermis
  - Intramuscular
  - Intravenous
  - Intraosseous – into bone, most often in infants and toddlers who have poor IV access
  - Parenteral
    - Intraperitoneal – abdominal cavity
    - Intrapleural
    - Epidural – into epidural space – placed by anesthesiologist
    - Intrathecal – into subarachnoid space or ventricles of the brain
    - Intraarterial
    - Intra-cardiac
  - Topical
    - Skin
    - Eye drops
    - Ear
    - Suppositories
      - Vaginal
      - Rectal

- Inhaled Medications

- Parenteral Equipment cont
  - Syringes
  - Luer lock and non-luer lock
  - Sizes of syringe 0.5 to 60 mL
    - 1ml can measure to 0.01mL
    - 3mL to 10 mL can measure to 0.1mL
  - Containers
    - Ampules, Vials
<table>
<thead>
<tr>
<th>Type of Injection</th>
<th>Size of Syringe</th>
<th>Size of Needle</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID tuberculin</td>
<td>1mL (0.01 divisions)</td>
<td>25, 26, 27 gauge ½ to 5/8 inch</td>
</tr>
<tr>
<td>Sub-cutaneous</td>
<td>1, 2, or 3 mL (0.1 divisions)</td>
<td>23, 25, 26 gauge ½ to 5/8 inch</td>
</tr>
<tr>
<td>Insulin</td>
<td>0.5 or 1.0 ml Calibrated in units</td>
<td>25, 26, 27 gauge ½ to 5/8 inch</td>
</tr>
<tr>
<td>IM</td>
<td>3 or 5 mL Calibrated in 0.2 mL</td>
<td>21, 21, 22, 23, gauge 1½ to 2 inches</td>
</tr>
</tbody>
</table>

- **Subcutaneous**
  - Max 1 mL
  - Limited blood supply – absorption slower than IM
  - Does contain pain receptors
  - Sites – see text
    - If 2 inches can be pinched insert at 90’ angle
    - If 1 inch can be pinched, insert at 45’

- **IM – faster**
  - Greater risk
  - 90 degree angle
  - 3 ml in normal adult
    - Children, older adults and thin clients 2 mL
  - IM Injection Sites – see text
  - Z Track

- **Summary**
  - Read MAR for all pertinent information – Check MAR against MD’s orders.
  - Know the drug to be given: look up in reference book
  - Is drug appropriate for pt
  - Potential for drug-drug interaction
  - Potential for drug-food interaction
  - Nursing Considerations
  - Review labs or assessment relevant for drug e.g. K+ levels or BP, HR
  - Summary cont.
  - Accurately calculate drug dosages
  - Use aseptic technique
  - Follow six rights
  - Prepare drug
  - Administer drug
  - Document on MAR
  - Describe procedure for omitting drug
  - Explain procedure when client refuses drug
  - Assess client’s response to drug (desirable and undesirable)

- **Medication Error**
  - Remain calm
  - Check patient condition
  - Notify MD, report in chart whom you notified

- **Document MD orders and that you completed them**
- **Complete Incident Report**
- **Not part of chart – goes to Nurse Manager who forwards to Hospital Admin**