Medication Safety

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LASA

- Look alike
- Sound alike
- Use extra care in handling
Avoid Look-A Likes

Read With Care

1. When distracted or hurried, you may think you have read the label when you have really only glanced at it.

2. Read the label 3 times
   - 1. When you obtain the drug
   - 2. When you are preparing the drug or it’s in your hand
   - 3. Immediately prior to administration
Read Medical Labels With Care

your mind can trick you

• With the phaonmneal pweor of the hmuan mnid, aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it dseno't mtaetr in waht ordr the ltteres in a wrod are, the olny iproamtnt tihng is taht the frsit and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it whotuit a pboerlm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Azanmig huh?
Similar Product Names Contribute to Errors

- **BICILLIN C-R** (penicillin G benzathine and penicillin G procaine)
- **BICILLIN L-A** (penicillin G benzathine)
  - Over 300 patients were treated for syphilis using Bicillin C-R which is **not** effective against syphilis
  - Bicillin L-A **is** effective for syphilis and should have been used.
Similar Packaging & Labeling Contribute to Error
Label Medications

• Do not administer any unlabeled **medications**, even medication solutions on & off the sterile field in perioperative and other procedural settings.
  – Ethyl alcohol from an unlabeled basin was drawn into a syringe and injected into a patient's face instead of lidocaine, which was also in an unlabeled basin. The patient suffered partial facial paralysis.

• Discard immediately all unlabeled medications or solutions
High Alert Drugs

- The majority of medication errors resulting in patient death or serious injury are caused by selected **high alert medications**.

- **High alert medications** because of a narrow therapeutic range or inherent toxic nature have a high risk of causing devastating injury or death.
Heparin is a High Alert Medication

- There is a bleeding risk with therapeutic use
- Risk is high in inadvertent overdose
- For safety **never** use U., always write out **unit**.
- A scripted U may be misinterpreted as zero, number four or cc
Duragesic is a High Alert Drug

Multiple strengths of Duragesic look alike
Duragesic is a High Alert Drug

Duragesic Patch (fentanyl) cannot be titrated, therefore it is contraindicated in
1. Management of acute pain
2. Management of inpatient post-op pain
3. Management of outpatient post-op pain
4. Management of mild or intermittent pain that can be managed by lesser means
Duragesic is a High Alert Drug

- Duragesic has a *S-l-o-w* Peak Effect - about 36 hours
- Duragesic may cause serious or life threatening hypoventilation
- Duragesic is ONLY to be used in patients who are already tolerant to opioid therapy of comparable potency.
Phenergan Safety

- Phenergan (promethazine) is very effective in treating nausea & vomiting

- Phenergan is contraindicated in:
  - Elderly >65 years of age
  - Children < 2 years of age
  - Debilitated patients (signs of dehydration and weakness)
  - Trauma
  - Altered level of consciousness
IV Phenergan Safety

• Be prepared for rare reactions
  – involuntary muscle movement
  – muscle tone (dystonic and extra-pyramidal reactions)

• Order small doses of 6.25 to 12.5 mg for the starting IV doses
  – may produce profound sedation and respiratory depression
IV Phenergan Hazards

- **Order** to be administered diluted in 10 to 20 mL of normal saline.
  - Extravasation can be recognized more quickly when the drug is in a larger volume.
- **Order** to be administered slowly (over 10-15 minutes)—rapid administration can cause vein irritation, phlebitis and sclerosis
- **Consider alternatives** such as an alternative route (IM) or a newer medication such as Zofran®.
Constant Infusion Drips

• Double check calculations between the ordered dose (mg/hr) and the flow rate (mL/hr)
  – This is one of the most frequent errors in therapy via IV PUMP or PCA PUMP
Safe Insulin Use

- For human insulin, always specify type
  - “regular” or “NPH”
- Differentiate between analogs
  - long-acting LANTUS
  - the prompt-acting HUMALOG or NOVOLOG
Safe Insulin Use

- Regular insulin doses should always be preceded by a blood glucose check with orders to hold if BS <100.
- Insulin mixes such as 70/30 contain “full” doses of regular insulin, and should always be preceded by a blood glucose check with orders to hold if BS <100.
Appropriate Dosing

• Adjust for body size
  – Phenergan 25 mg IV may be too much for a small elderly patient

• Recognize opioid “equivalence”
  – 2 mg Dilaudid® dose is generally equivalent to about 12-15 mg of morphine
  – 0.5-1 mg Dilaudid® dose may be more appropriate
Contraindications in Pregnancy

**Category X** Studies, adequate well controlled or observation, in animals or pregnant women have demonstrated positive evidence of fetal abnormalities. The use of the product is contraindicated in women who are or may become pregnant.

- Statins
- Methotrexate and other antineoplastic antimetabolites
- Cyclophosphamide and other alkylating agents
- Ergots (migraine)
- Coumadin (warfarin)
Contraindications in Pregnancy

- **Category D** Studies, adequate well controlled or observational, in pregnant women have demonstrated a risk to the fetus. However potential benefits may warrant use of the drug in pregnant women despite potential risks.
  - ACE inhibitors
  - ARBs
  - Phenytoin
  - Tetracycline
Do not write Unclear Orders

• New subcutaneous insulin above 50 units should be ordered cautiously and perhaps with consult.
• IV insulin above 25 units should be ordered cautiously and perhaps with consult.
• Do not be rude or intimidating if the safety of your order is questioned.
Assess Patient’s Medication Allergies

• Allergic reactions can be immediate or delayed.
• Type 1 allergic reactions are life threatening:
  – Facial swelling
  – Difficulty breathing
  – Anaphylaxis
• Patients with immediate anaphylactic reactions to certain drugs may also have cross-reactions to drugs in the same family. Clearly document allergies.
The End

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Notification that you have completed the program