

# EM Pharm Dogma

## Grand Rounds Summary

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### Dogma #1

*Always adjust antibiotic doses for renal dysfunction*

- Dosage adjustment recommendations are based on CKD data<sup>1</sup>
- Physiologic changes associated with AKI and sepsis result in increased volume of distribution so dose reductions mean lower likelihood of achieving adequate antibiotic concentrations<sup>1-3</sup>
  - Hydrophilic drugs are affected the most (eg. Beta-lactams, cephalosporins, carbapenems, vancomycin)
- **Recommendation:**
  - Consider giving full dose of antibiotic for at least the first dose
  - Can consider full dose for first 24h.

### Dogma #2

*Hyperkalemia treatment is one-size-fits-all*

- Differing duration of action for insulin R 10 units and D50 1 amp (25g) results in 10-20% incidence of hypoglycemia (5-8% severe hypoglycemia)<sup>4-7</sup>
- Risk factors for hypoglycemia (but can happen to anyone):<sup>8</sup>
  - Major: low eGFR, normal CBG prior to treatment
  - Minor: no DM, female, low BMI
- Strategies to reduce risk of hypoglycemia: lower insulin dose (insulin R 5 units or 0.1 unit/kg, max 10 units), more dextrose (D50 2 amps or D10 infusion), more frequent CBG checks<sup>8-13</sup>
- **Recommendation:**
  - Consider risk factors for hypoglycemia and adjust shifting regimen:
    - Insulin R 5 units (similar efficacy, less risk of hypoglycemia)
    - D50 2 amps empirically
  - Order regular CBG checks (q1h x 5 hours) for all patients

### Dogma #3

*1<sup>st</sup> generation antihistamines for allergic reactions*

- 1<sup>st</sup> generation antihistamines (eg. Benadryl<sup>®</sup>) are still commonly used for inpatients and outpatients, despite 2<sup>nd</sup>/3<sup>rd</sup> generation antihistamines having similar efficacy and a better safety profile (non-sedating, no antimuscarinic effects, no effects on CVS)<sup>14</sup>
  - Newer agents have faster onset and longer duration of action
- Canadian Society of Allergy and Clinical Immunology strongly recommends against the use of 1<sup>st</sup> generation antihistamines when newer agents can be used, which is essentially whenever a PO antihistamine is required<sup>15</sup>
- **Recommendation:**
  - Consider loratidine 10 mg daily as an oral antihistamine (formulary item)
    - Cetirizine rapid dissolve tablets available for pediatrics (formulary item)

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