Achievable

PTCE DUMP SHEET

Formulas

Percentage concentrations

- **Weight in volume (w/v):** grams of drug in 100 mL of solution
- **Volume in volume (v/v):** milliliters of drug in 100 mL of solution
- **Weight in weight (w/w):** grams of drug in 100 g of the total dosage form

Pediatric dosing

- **Clark's rule:** $\text{dose} = \frac{\text{weight (lb)}}{150} \times \text{adult dose}$
- **Young's rule:** $\text{dose} = \frac{\text{age}}{\text{age} + 12} \times \text{adult dose}$
- **Fried's rule:** $\text{dose} = \frac{\text{age (months)}}{150} \times \text{adult dose}$

Body surface area (BSA)

- $\text{BSA } (\text{m}^2) = \frac{1}{6}\sqrt{W \times H}$
- W is body weight in kilograms, H is height in meters

IV infusion rate

- $\frac{\text{total IV volume}}{\text{time}} = \text{mL per hour or minute}$
- $\frac{\text{total IV volume}}{\text{time (minutes)}} \times \text{drop factor} = \text{drops per minute}$

Dilution

- $M_1V_1 = M_2V_2$
- M is molarity (mol/L) and V is volume. For v/v or w/v concentrations, use the concentrations in place of M

Dose equations

- Days' supply $= \frac{\text{number of doses in the prescription}}{\text{number of doses per day}}$
- Number of tablets $= \frac{\text{desired dose}}{\text{stock strength}}$
- Amount of solution to give $= \frac{\text{desired dose}}{\text{stock strength}} \times \text{stock volume}$