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1. Phenylephrine mcgs/mL $\frac{30\text{mg}}{500\text{mL}} \times \frac{1000\text{mcg}}{1\text{mg}} = \boxed{60\text{mcg/mL}}$

2. Drip rate $\frac{500\text{mL}}{30\text{mg}} \times \frac{100\text{mcg}}{1\text{min}} \times \frac{60\text{min}}{1\text{hr}} \times \frac{1\text{mg}}{1000\text{mcg}} = \boxed{100\text{mL/hr}}$

3. Norepinephrine $\frac{4\text{mg}}{500\text{mL}} \times \frac{1000\text{mcg}}{1\text{mg}} = \boxed{8\text{mcg/mL}}$

4. Drip rate $\frac{0.5\text{mcg}}{1\text{min}} \times \frac{1\text{mL}}{8\text{mcg}} \times \frac{60\text{min}}{1\text{hr}} = \boxed{4\text{mL/hr}}$

5. Heparin $12\text{ units} \times 90\text{kg} = \boxed{1{,}080\text{ units/hr}}$

6. $\frac{500\text{mL}}{25{,}000\text{units}} \times \frac{1{,}080\text{units}}{1\text{hr}} = \boxed{22\text{mL/hr}}$ $\boxed{\text{pTT due in 6 hours}}$

7. $\frac{10\text{mg}}{1\text{mL}} \times \frac{100\text{mL}}{1} = \boxed{1{,}000\text{ mg}}$

8. $5\text{mcg} \times 90\text{kg} = 450\text{ mcg/min}$ $50\text{ mcg} \times 90\text{kg} = 4{,}500\text{ mcg/min}$

$\frac{450\text{mcg}}{1\text{min}} \times \frac{60\text{min}}{1\text{hr}} \times \frac{1\text{mg}}{1000\text{mcg}} \times \frac{1\text{mL}}{10\text{mg}} = \boxed{3\text{mL/hr}}$ $\frac{4{,}500\text{mcg}}{1\text{min}} \times \frac{60\text{min}}{1\text{hr}} \times \frac{1\text{mg}}{1000\text{mcg}} \times \frac{1\text{mL}}{10\text{mg}} = \boxed{27\text{mL/hr}}$

$\boxed{3\text{-}27\text{ mL/hr}}$

Critical thinking

1. Doses may need changed because of the renal failure.

2. One vasopressor may not be enough to treat the condition.

3. The client is intubated, so the propofol keeps her comfortable.

4. Calcium channel blockers can treat atrial fibrillation, but the client is allergic.

5. The client is taking two vasopressors.

6. Some medications can have major side effects if given to quickly.