Module 2 Worksheet

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1. **The patient is receiving Nitroprusside, currently infusing at 142 mL/hr. The IV bag of Nitroprusside reads 50 mg in 500 mL D5W. The patient weighs 175 lbs. How many mcg/kg/min are infusing? Round to the nearest tenth.**
   50000mcg ÷ 500 ml = 100 mcg/ml   175 lbs. ÷ 2.2 = 79.5 kgs
   100 mcg/ml X 79.5 kg = 7,950 ÷ 60 min = 132.5 mcg/kg/min

2. **The physician has ordered Dobutamine for a patient. The order states to start the Dobutamine at 1 mcg/kg/min and titrate as needed. The IV bag of Dobutamine contains 250 mg in 500 mL D5W. The patient weighs 70 kg. How many mL/hr should the IV pump be set at to achieve the starting dose? Round to the nearest whole number.**
   250mg X 1000 = 250,000 mcg ÷ 500 ml = 500 mcg/ml
   1 mcg X 70 kg X 60 = 300 ÷ 500mcg/ml = 0.6 ml/hr or 1 ml/hr

3. **The patient is currently receiving Nitroglycerine at 12 mL/hr. The bottle reads 100 mg Nitroglycerine in 250 mL D5W. How many mcg/min is the patient receiving?**
   100 mg x 1000 = 100,000 mcg ÷ 250 ml = 400 mcg/ml
   400mcg/ml X 12 ml = 4,800 mcg ÷ 60 = 80mcg/min

4. **The physician orders Heparin infusion at 500 units/hr. The bag of Heparin reads 25,000 units in 250 mL D5W. How many mL/hr should be showing on the IV pump?**

   25,000 units ÷ 250 ml = 100 units/ml
   500 units ÷ 60 min = 8ml/hr

5. **The physician has ordered Dopamine to start at 2 mcg/kg/min. The patient weighs 165 lbs. The bag of Dopamine reads 800 mg in 500 mL D5W. What rate would the nurse set on the infusion pump? Round to the nearest tenth.**
   165 lbs ÷ 2.2 = 75 kg   800mg X 1000 = 800, 000 mcg ÷ 500 ml = 16,000 mcg/ml
   2mcg X 75kg X 60min = 9,000 ÷ 16,000 mcg/ml= 0.6 ml/hr

6. **The physician in the previous questions has now written an order to increase the Dopamine to 4 mcg/kg/min. Using the information in the previous question, what rate would the nurse set on the IV pump? Round to the nearest tenth.**
   4mcg X 75kg X 60min = 18,000 ÷ 16,000mcg/ml = 1.1 ml/hr

7. **The patient is on an Insulin drip infusing at 5 units/hr. The bag is labeled 100 units insulin in 250 mL NS. At what rate should the pump be infusing? Round to the nearest whole number.**
   100 units ÷ 250 ml = 0.4 units/ml
   5 units ÷ 0.4 units/ml = 13 ml/hr

8. The patient is on a Dopamine drip infusing at 35 mL/hr. The label reads 400 mg dopamine in 500 mL D5W. The patient weighs 62 kg. How many mcg/kg/min is the patient receiving? Round to the nearest tenth.

400 mg x 1000 = 400,000 mcg ÷ 500 ml = 800 mcg/ml
35ml X 800 mcg/ml = 28,000 mcg/ml
28,000 ÷ 60 min = 467mcg/ml/min ÷ 62 kg = 7.5 mcg/kg/min

9. The physician has ordered Ceftriaxone 1 gram IV over 30 minutes. Pharmacy has sent a bag labeled Ceftriaxone 1 gram in 50 mL/ D5W. The IV tubing delivers 15 gtt/mL. How many drops per minute (gtt/min) will the nurse deliver?
50 ml X 15 gtt factor = 750 ÷ 60 min = 13 gtt/min

10. The patient is to receive ciprofloxacin 400 mg IV over 1 hour. You receive a bag from the pharmacy labeled ciprofloxacin 400 mg in 100 mL D5W. The IV tubing delivers 12 gtt/mL. How many drops per minute (gtt/min) will the nurse deliver?
12 gtt/ml X 100 ml = 1200 ÷ 60 min. = 20 gtt/min