1. Consider consultation with PMR as soon as patient stable (on transfer out of the ICU)
2. On transfer out of the ICU:
    a. Bladder training
        i. Can begin when:
            1. Patient can control their own intake (no IVF)
            2. Strict I&O no longer needed
            3. Output volumes are not high
        ii. If foley has been in > 3 weeks:
            1. Clamp foley x 24-48 hours
            2. Bladder scan at 2 hours, 3 hours and 4 hours.
            3. Unclamp when > 400 mo or at 4 hours
            4. If > 900 ml in 4 hours, do not clamp and leave to gravity drainage
        iii. If foley has been in < 3 weeks
            1. DC foley
            2. Trial void at 3 and 4 hours
                a. Bladder scan after each void
                    i. If residual > 400 ml straight cath
                    ii. If residual > 900 ml replace foley
            3. If no UO with void trial, at 3-4 hours bladder scan
                a. If > 400 ml straight cath
                b. If > 900 ml replace foley
            4. Plan for void or cath every 3-4 hours if UO significant
            5. Plan for void or cath every 4-5 hours if not
            6. Transition from nurse cath to patient cath when:
                a. Pt seems mentally ready
                b. Pt can physically manage catheters and procedure
3. Bowel training
    a. Determine if injury affects upper or lower motor neuron function

    *Upper Motor Neuron:*

    - *Extremities - typically with hyperreflexia, eventually will develop muscle tone / spasticity for extremities, and will have hoffman and babinski*

- *Bladder - eventually can be spastic bladder with frequent and low volume urination*
- *Bowel - can be full of stools, without much leakage unless too high volume possibly, typically will respond well with suppository and digital stimulation use*

*Lower Motor Neuron:*

- *Extremities - typically with hyporeflexia, flaccid on ROM, will not have hoffman and Babinski*
- *Bladder - will present with high urine retention, and overflow incontinence d/t high volume in bladder*
- *Bowel - can be full of stools, stool leakage frequently and usually associated with movement / transfers etc, does not respond well with suppository and digital stimulation - will need tx from above (PO) and below (rectally) to help with evacuation and also may need manual evacuation from below*

*Very early on it may be difficult to see the above typical picture d/t spinal shock and other meds used for sedation and pain. Also may be challenging to discern if there's a more complex injury (UMN and LMN injury at the same time).*

i. Upper motor neuron:
    1. Primary goal is regular BM with no accidents
    2. Daily suppository with digital stimulation
    3. Do bowel cares after a meal, often preferred after supper
    4. Use gravity on commode as much as possible vs bedpan
    5. Assess stools frequently to keep softer, not hard
        a. Utilize fluids, fiber, or laxatives to keep stools appropriate consistency
    6. Watch for signs of impaction and abdominal distention if any concerns do KUB to evaluate.
    7. If pt having accidents determine cause
        a. Is there lower neuron involvement?
        b. Are there too many laxatives?

c. Is q 48 hours bowel cares more appropriate for this pt?

ii. Lower motor neuron:

1. No tone, no sphincter and will often leak
2. Needs stool bulkage with fiber and assure adequate hydration

4. Autonomic Instability
   a. Found in T6 injuries and above
      i. FIND TRIGGER and sit patient UPRIGHT
         1. Pain
         2. Needs bowel movement
            a. Digital check, manual evacuation
         3. Needs urination
            a. Check catheter patency
            b. Bladder scan or I&O cath
         4. Pain with wounds
            a. Treat for pain even if injury is below level of sensation
         5. Compression of body part in position or wrapped in something
            a. Loosen clothing, blankets
      ii. HR
         1. No specific treatment recommended. Careful with medical intervention that can affect hemodynamics after episode ends
      iii. Blood pressure
         1. Again, nitro paste is good option as it can be removed when episode is over.
            a. Place paste ABOVE level of injury.
            b. Start with 1 inch
   b. If prone to this, may need preventative measures regarding triggers
      i. e.g. lidocaine gel on rectum or urethra prior to elimination
      ii. e.g. pre-med with nitropaste, remove paste after trigger is finished
5. Respiratory cares

   a. Aggressive pulmonary toilet with possible diaphragm and other chest/abd coordinating muscle involvement.
      i. Prevent atelectisis: Incentive spriometry
      ii. Mobilize secretions: CDB, flutter valve
6. Other general cares
   a. Get Rooke boots early
      i. Check foot placement often
      ii. Wear at all times except 30 min rest q 8 hours.
   b. Start ROM therapy early
   c. DVT prophylaxis as pt is at increased risk for the first 8-12 weeks.