ORTHOPEDIC SPINE SURGERY
FLOOR GUIDELINES

1. **General**
    a. Discuss dressings, drains, weight bearing, and neurovascular/compartment checks with the spine team for each patient admitted.
    b. Notify service of changes in neuromuscular exam, transfusions, elevated drain outputs, and clinical deterioration (hypotension, sepsis, respiratory failure, vasopressors, acute coronary syndrome, arrhythmia)
    c. Be sure patient has postop antibiotics ordered.
    d. Check with team for MAP goals and steroid protocol on cervical/thoracic trauma and defense cases
    e. If swallowing issues in C-spine patient, consider decadron 8mg Q8H x 24 hours or one push of decadron 10mg, confirm with Attending
2. **Positioning**
    a. Cervical - HOB at 45° or greater for 72 hours (all Attendings)
    b. Lumbar - OK to raise the HOB as long as the patient is bending at the waist and the lumbar spine is kept straight.
        i. Limit "slouching" in bed (pillows under knees, bed in slight chair)
    c. Dural Leak - If leak is noted during surgery, the spine team to indicate the patient is to be kept flat in bed. This includes no raising HOB and no reverse Trendelenburg. Log roll side to side is ok in these patients. Keep flat as directed by Attending ~24 hours: Place order and communicate with nurse for increasing HOB Q1H 15-30 degrees to 60 degrees, then upright w/o restrictions. Lay flat if (H/A, N/V, photophobia, etc) and try again ~2 hours. –Monitor drain output (clear indicating persistent dural leak), especially with Wvacs!
3. **Incision/KleckVac**
    a. Incision: Leave dressing 5 days, change if saturated. Leave steri-strips/hypafix for 2 weeks or until they fall off (if used).
    b. KleckVac: Leave in place, reinforce as necessary. If drain output decreases (<30 per 8 hour shift), discuss removal with Attending. If high output, consider discussing lowering WVac suction pressure. Strict guidelines in pink sheet for SNF: May reinforce, do not change or remove Vac, SNF to call clinic with questions. Be sure patient has 2-3 week (since Vac was placed) follow up.
4. **Hemovac Drain**
    a. Call HO or attending for drainage of greater than 200cc in any 4-hour period. May clamp/uncork for ~2 hours.
    b. Discontinue when less than 30 ml in Q8H shift.
5. **Foley**
    a. D/C POD#1. D/C no later than 48 hours, unless order by provider. If in longer than 24 hours, add nitrofurantoin 100mg BID or cephalexin 500mg BID for UTI prophylaxis
    b. Silicon Foley if latex free needed
    c. If urinary retention, be sure to rule out cauda equina
6. **Pain**
    a. Most patients who have had larger surgeries will have PCA pump with no basal rate or loading dose. Post op orders for PRN opioids will be placed by NP/PA/resident. Try to DC PCA POD#1. Be sure bowel regimen is ordered
    b. New Narcotic Free Plan (for naïve patients): NSAIDs, APAP, Muscle Relaxers, Topical analgesics, other non medication therapies (cold therapy)
    c. Decreased Opioid Plan (for naïve patients): Opioid minimization Program available for Patel patients: ACDF, Cervical ADR, Lumbar ADR, Coflex, Microdiscectomies, SI Joint Fusion, Lumbar Laminectomy
    d. Kleck/Wessell: up to 3 doses of Toradol is ok. Otherwise check with Kleck. If NSAIDs necessary, prefer Celebrex.
7. **Mobilization**
    a. Most patients can mobilize POD1, or sooner if able to tolerate.

b. **Restrictions:** No bending, lifting >10 pounds, or twisting for 6 weeks. For ACDF patients, keep HOB elevated to help swelling
c. PT and OT will be consulted on all cases, most patients must clear PT/OT prior to discharge
d. Spine patients do NOT use overhead trapeze

8. Diet

a. Anterior approach - NPO until BM or flatulence.
    a. For Patel's ALIF patients: POD1 start caffeinated beverages, potato chips, and chewing gum when awake, then ADAT very slowly when bowel sounds are active
b. Posterior - most patients can advance as tolerated.
c. Major reconstruction – NPO until BM or flatulence.

9. Imaging

a. Prior to discharge if instrumentation, taken standing. EOS films (in clinic during business hours) for large T/L cases. If patient unable to stand, please take sitting.

10. Antibiotics

a. Most patients 24 hours of antibiotics starting at end of surgery

11. Brace (Postop LSO/TLSO Ottobock. Eclipse C collar. Custom Clamshell. All ordered from Hanger- p. 303-283-0178 f. 303-283-0181)

a. Dr. Burger: (ordered as inpatient)
    a. C-spine: at all times, shower brace
    b. T/L-spine: Brace when OOB, Ok to remove when in bed or in a chair
    c. Ok to mobilize patient postop while awaiting brace unless otherwise specified
b. Dr. Patel: At all times if ordered, patients will bring to surgery. In ICU, ok to remove thoracic and lumbar braces when in bed laying flat and for hygiene. Rigid C collar at all times, shower collar with hygiene
c. Dr. Cain: C-spine: soft cervical for comfort. No braces otherwise.
d. Dr. Kleck: (patient should bring brace to surgery)
    a. C-spine: at all times, shower brace
    b. T/L-spine: Brace when OOB, Ok to remove when in bed or in a chair
    c. Ok to mobilize patient postop while awaiting brace unless otherwise specified
e. Dr. Ou-Yang:
    a. C-spine: at all times, except for hygiene
    b. "On at all times" don brace rolling flat in bed, if "On when OOB" don either sitting at edge of bed or standing bedside.
f. Dr. Wessell: (patient should bring brace to surgery)
    a. C-spine: at all times, shower brace
    b. T/L-spine: Brace when OOB, Ok to remove when in bed or in a chair
    c. Ok to mobilize patient postop while awaiting brace unless otherwise specified
g. Dr. Smith:
    a. C-spine: One Level: Soft collar for comfort. Multilevel/FrontBack cases- rigid C-collar
    b. T/L-spine: Often no braces
        i. Braces may be required for patients w/ bad bone or poor adherence to precautions.

12. Vitamin D/Calcium

a. Vit D: Levels ordered for all patients.
        i. 20-30, then 2000 IU daily x 6 weeks
        ii. If < 20, then as above plus 50,000 IU once weekly x 6 weeks (ergocalciferol is RX strength)
b. Calcium: 500mg BID x 6 weeks (oyster clam shell)
c. Emily Senn (Nurse w/ spine center: 720-848-9747) will order/refill appropriate dosing for supplementation post op.

13. DVT prophylaxis

a. For all patients: Starting POD1, 325 mg aspirin daily, x 2 weeks, unless on ASA 81 at home, then resume home med

b. For Trauma/Anticoag/DVT patients, likely restart anticoagulation at 24 hours postop, confirm with Attending.

14. Bone Stimulator (if used)

a. 6 months, 4 hours per day (at least 1 hour at a time). They will be instructed by the Orthofix team

15. Acute Pain Service (pain management consult)

a. Consider for long acting opiate dependent patients. Consider for patients who are having difficulty managing their pain. Discuss with Attending. Discuss lidocaine/ketamine gtt's with Attending.

16. Discharge Instructions - Please include in all discharge summaries (AVS) – in dot phrases

a. Call clinic if you experience signs of wound infection:
   i. Temperature over 101.5
   ii. Redness and warmth around surgical incision
   iii. Excessive drainage from surgical incision.
b. Activity: No bending, twisting, lifting more than 10 lb. Most patients walking encouraged.
c. Dressing: Remove bandages in 5 days. Leave steri-strips/hypafix for 2 weeks or until they fall off.
d. Shower: OK to shower with dressing, but do not soak until cleared by your physician, likely after 6 weeks.
e. For all fusion patients:
   i. Calcium 500 mg BID, Vitamin D 1200 IU BID for 6 weeks, if low, Emily Senn will prescribe appropriate dosing (see above)
   ii. No NSAIDS for at least 6 months, unless prescribed
   iii. Brace instructions, if ordered
f. Medications:
   a. Continue inpatient opioid regimen. Not just oxy 5-10 #60.
   b. 325/81 mg aspirin daily for 2 weeks, for DVT prophylaxis
g. Driving:
   a. OK to drive when you can drive safely, maintain specific bending and twisting precautions and are off opioid pain medications.
      i. Cervical procedures: No driving if you need to wear a brace. (Do not include this precaution for Patel patients as he does not require them to be out of brace, only to be able to drive safely)
      ii. Lumbar procedures: You need to be able to sit in the car comfortably, have good reaction time, be able to break in an emergency and check your blind spots either by twisting in chair or using mirrors.
   b. "Your reflexes are slowed due to both the anesthesia used in surgery and the surgery on your spine. Additionally, if you are driving while on narcotics, you can be given a DUI citation."
h. Follow up: F/U in clinic
   iv. Burger, Smith, Wessell 2 weeks post op. Kleckvac/staples 2 week post op.
   v. Patel, Cain, Kleck, Ou-Yang 6 weeks (unless otherwise specified)
   vi. Clinic phone is 720-848-1980

17. Home Medications

a. If medicine team consulted, please discuss patient verbally with them. Please follow their recommendations upon discharge. Place Recs/Note in Pink Sheet for SNF!
b. If home medications are adjusted, patient should have PCP f/u. Patient Resident Liaison (PRL) Greg Kirchoff (83781) can make any f/u appt (PCP, ortho surgeron, INR check, etc), as well as track down records
c. Consider stopping Hormone Replacement Therapy (females only, testosterone okay to continue in men) as there is an increased risk of VTE development as baseline, unknown risk postoperatively. Stop to be safe.
d. Rheumatoid meds (Plaquenil, Enbrel, MTX), likely hold for at least 2 weeks postoperatively, verify with Attending.

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Has been reviewed by: All Attendings
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