Post Travel & Post Op Care
Post Op Care Issues

1. Length of stay
2. Medications
   • Continuation of pre op medications
   • Adjustments in pre op medications
   • New post-op medications (short term & long term)
3. Treatment Plans
   • Wound Care
   • Dietary (progression)
   • Ambulatory/Physical Rehab
   • Cardio-Respiratory Care

Post Op Care Complications

1. Acute Complications
   • Occurs during or immediately following surgery, typically during recovery room stay
   • Anesthesia complications
   • Primary hemorrhage
   • Basal atelectasis
   • Shock
     – Cardiogenic
     – Hypovolemic
     – Septic
   • Acute MI
   • PE
   • Surgical Injury
     – Unavoidable tissue or nerve damage may happen during the surgery. Example: facial nerve damage during cosmetic procedures and prostate damage during the prostate surgery.
     – Diathermy burns
     – Intra operative positioning damage to nerves and joints
     – Transport injury from fall
2. Early Complications: Occurs typically day 1-3 post op, highest incidence of post op complications
   • Confusion; exclude dehydration and sepsis
   • Nausea and vomiting. Analgesia or anesthetice feeling
• Paralytic ileus
• Secondary hemorrhage; often as a result of infection
• Fever
• Wound or anastomosis dehiscence (beak down of healing tissue)
• Deep Vein Thrombosis (DVT)
• Acute Urinary Tract Infection (UTI)
• Respiratory complications
• Fever day 0-2 post op
  – Mild fever (T <38° C) is common
  – Tissue damage and necrosis at operation site
  – Hematoma
  – Persistent fever (T >38° C)
  – Atelectasis: the collapsed alveolar may get infected
  – Specific infections related to the surgery like biliary infection post-surgery or UTI post-urological surgery
  – Blood transfusion or drug reaction
• Fever day 3-5 post op
  – Bronchopneumonia
  – Sepsis
  – Wound infection
  – Drip site infection or phlebitis
  – Abscess formation e.g. subphrenic or pelvic
  – DVT
• Fever after day 5 post op
  – Specific complications related to surgery, e.g. bowel anastomosis breakdown, fistula formation
  – Wound infection
  – Distant site infections e.g. UTI, URI
  – DVT
  – PE
• Respiratory
  – Atelectasis (alveolar collapse) happen when airways are obstructed, usually by bronchial secretions. Most cases are mild and may go unnoticed
  – Symptoms are slow recovery from operation, poor color, mild tachypnea, tachycardia and low-grade fever
– **Prevention** is by pre and post op physiotherapy. In severe cases, positive pressure ventilation may be required.

– **Pneumonia** requires antibiotics and/or physiotherapy

• DVT risk factors
  – Obesity
  – Smoking
  – Length of surgery
  – Type of surgery
  – Venous stasis
  – Hypercoagulable state
  – Inactivity after surgery such as prolong sitting on an flight
  – Use of oral contraceptive medications

**Home Post-Operative**

1. Referring/Primary Care Physician Follow Up Care
   • Medical/Surgical reports and communication
     – The PCP needs access to information post op via the following:
     – Mail
     – Fax
     – Web-based communication portals

2. Guide to the early phase treatment plans
   • Respiratory therapy
     – Spirometry (4 times daily for 10 days)
     – Cpap
     – Pulmonary consult
   • Cardiac therapy
     – Cardiac rehab
     – Cardiac consult
   • Wound care
     – When does the destination surgeon want wound site dressing changes to start post operatively?
     – How frequently should the dressing be changed?
     – Are there sutures to be removed and if so, when?
     – Watch for signs of infection
» Wound discharge
» Redness
» Swelling

• Physical Rehab
  – Early ambulation
  – Ambulation aids
  – Special equipment needs
    » Walkers, beds, wheelchairs, crutches

• PT and OT
  – In-home
  – Frequency
  – Goals
    » Early: avoid lifting, limited range of motion
    » Late: increase range of motion, strength training

• Medications
  – Adjustment of pre op medications
  – Adjustment of new post op medications
  – Medications you may want to add to the therapy
  – Medications you may want to discontinue

• Diet progression
  – Clear liquids
  – Full liquids
  – Pureed foods
  – Solid foods
  – Vitamin and mineral supplements

• Follow up Primary Care Physician (PCP) visits and specialty office visits
  – As recommended by the destination surgeon
  – As recommended by PCP

• Follow up Primary Care Physician visits and specialty physician office visits
  – PCP follow up
    » 1st day after returning home
    » One week post op
    » 2 weeks post op
6 weeks post op
PRN or based upon post op discharge instructions

- Specialty Physician/Surgeon follow up
  - Per destination surgeon request
  - Per post op discharge orders
  - Per post op complications

- Long-term Care Plan
  - PCP should follow up throughout complete healing process and per postop discharge recommendations by the destination surgeon.
  - PCP should initiate long-term PT, OT, dietary, and other ancillary services to ensure best clinical outcomes.
  - Schedule regular follow up office visits with PCP and recommended medical specialist to ensure best clinical outcomes
  - Ensure that the client is following up with destination surgical team (live or virtual) as recommended.
  - Ensure client is following up with local medical specialties as recommended by surgeon.
  - Share the complications and clinical findings with the client that would require post op consultation or return visit with destination surgeon or local surgeon or an ER visit.
  - Provide destination surgeon outcome data, medical reports, lab etc. that they may have been collecting long-term for their centers of excellence credentialing.

Late Post Op Complications

- Infection
  - Abscess formation
  - Cellulitis

- PE

- Anastomotic leaks (gastric bypass)
  - Abdominal pain, elevated pulse rate (>120bpm), fever>101° F

- Bowel obstruction due to fibrous adhesions
  - If bowel function doesn’t return to normal by day 4 post op, consider bowel obstruction

- Disordered wound healing
  - Poor blood supply
  - Excess suture tension
  - Long term steroid use
  - Immunosuppressive therapy
- Radiotherapy
- Severe rheumatoid disease
- Malnutrition and vitamin deficiency

**Wound dehiscence**
- Affects about 2% of mid-line laparotomy wounds
- Serious complication with a mortality rate of up to around 30%
- Due to failure of wound closure technique
- Usually occurs between 7 and 10 days post op
- Often heralded by serosanguinous discharge from the wound
- Should be assumed that the defect involves whole of the wound
- Initial management includes opiate analgesia, sterile dressing of wound, fluid resuscitation and early return to surgery for resuture under general anesthesia
- Risk factors: poor nutrition, sepsis, anemia, steroid therapy, uremia, diabetes, liver failure, wound infections, poor surgical closure technique and postoperative distention

**Incisional hernia**
- Occurs in 10-15% of the abdominal wounds, usually appears within first year but can be delayed by up to 15 years after surgery.
- Risk factors include obesity, distention and poor muscle tone, wound infection and multiple use of same incision site.
- Presents as a bulge in the abdominal wall close to previous wound. Usually asymptomatic but there may be pain, especially if strangulation occurs. Tends to enlarge over time and become a nuisance.
- Management surgical repair if there is pain, strangulation or nuisance

**Persistent sinus**

**Recurrence of reason for surgery**
- Two stage surgery
- Malignancy
- Weight regain (bariatrics)