** ASSIGNMENT DESCRIPTION:**
Construct a comprehensive pre-op and acute care rehabilitation program.

**HISTORY**
A sixty-eight year old woman with history of chronic bilateral knee pain, left knee > right knee, for 10 years duration. Left knee pain has increased over the past 2 years, now limiting her IADLs, employment and recreational activity of ballroom dancing. She has undergone knee arthroscopy on left 5 years ago and right knee 2 years ago. She underwent the series of 3 Synvisc injections last year with pain relief and participated in out-patient PT services for 6 weeks earlier this year with mild resolution of left knee pain but improved mobility. Currently, she is able to ambulate 2 miles per day using a straight cane with her husband and attends water aerobics classes at her local YMCA 2 days per week. She ascends/descends stairs non-reciprocally using her cane and handrail. She reports difficulty with donning/doffing her shoes and socks. Because of her left knee pain, she is now only able to work part-time as an elementary school librarian (previously worked 30 hours/week, now only 15 hours/week). She lives with her husband of 38 years in a 2-level home with 3 stairs to enter the home and 1 flight of 11 stairs inside her home to her upstairs bedrooms. She notes there are handrails at both the outdoor and indoor stairs. Her husband is semi-retired building contractor and will be available to assist with her home care and any transportation needs following surgery.

Her primary complaint is medial compartment left knee pain and right knee soreness; the left knee pain is interfering with her functional mobility, employment and dancing (which she and her husband participated in twice weekly previously) at this time but no c/o right knee pain (states this knee is “sore”).

**PAIN RATING**
Perceived Pain Scale – at rest 3/10, with activity 6/10 (worse with sit-to-stand, stair climbing, long distance ambulation)

**PMH**
Hyperlipidemia, OA bilateral knees, morbid obesity (BMI 42.9)

**PSH**
Bilateral knee arthroscopies – left 5 years ago, right 2 years ago

**CURRENT MEDICATIONS**
Statin drug, Mobic, daily multivitamin, Calcium supplement daily

**X-RAY FINDINGS**
AP film revealed decreased joint space with noted “bone-on-bone” presentation at medial compartment of the knee indicative of osteoarthritic changes with ~ 20 degree fixed valgus deformity. Sunrise view of the patella shows arthritic changes on the undersurface of the patella.

**PHYSICAL FINDINGS**
- Chronic left knee joint effusion with noted valgus deformity in supine and standing (no positional change due to fixed deformity)
- Tenderness to palpation over entire joint line of the knee joint
- Limited passive patellar mobility to medial aspect of knee
- AROM left hip restricted in hip IR to 15 degrees and hip abduction of 20 degrees
- AROM left knee: extension -8 degrees, flexion 110 degrees
- PROM left knee: extension -3 degrees, flexion 118 degrees
- Strength
Case Studies

• Sensation
  o intact to LT BLEs with proprioception 5/5 BLE

• Noted bilateral bunions on feet and slight valgus deformity (~ 5 degrees) on right knee

• AROM right knee
  o extension 0, flexion 115 degrees

• PROM right knee: extension 0, flexion 123 degrees

FUNCTIONAL TESTS

• Timed Up and Go (TUG): 19 seconds

  • Norm for her age = 5.6 seconds

RECENT HISTORY:
Patient underwent left TKA successfully (unable to have UKA as she had hoped due to valgus deformity greater than 15 degrees and arthritic changes on the patella) under spinal anesthesia with multimodal post-operative pain management including (but not limited to, Celebrex, Neurotin, oral narcotics, IV narcotics for breakthrough pain, single-shot sciatic nerve block in OR, indwelling continuous femoral nerve block x 36 hours post-op) in the acute care setting and early mobilization by PT.
Total Knee: *A Joint Decision*

Case Study #2

**Assignment Description:**
Devise a comprehensive rehab program, including a home program

**History**
Uneventful hospitalization with patient discharged home morning of POD 2 following rehab session with discharge status as below:

**Perceived Pain Scale**
- 1/10 at rest
- 5/10 with activities
- Requiring oral pain meds every 4 hours and prior to therapy session

**Pain Management**
- Celebrex x 3 days total
- Oral narcotics every 4 hours

**AROM Left Knee**
- -10 degrees extension
- 94 degrees flexion

**AAROM Left Knee**
- -8 degrees extension
- 99 degrees flexion

**Muscle Strength**
- Weak in Quadriceps
  - Left- 15 #
  - Right 38 #
- Norms for age and sex= 50#

**Recent History**
- Acute edema present in distal thigh, entire knee joint
  - most in anterior compartment
- Staples intact in incision
  - to be removed at 2 weeks post-op appointment
- Independent with bed mobility and supine-to-sit at edge of bed
- Minimal to SBA with sit-to-stand
- SBA with rolling walker ambulation 300’ on level surfaces, WBAT LLE
- Minimal assistance with non-reciprocal stair climbing, WBAT LLE using handrail and cane

**Functional Test**
- Timed up and Go (TUG) = 12 seconds
- Norm 5.6 seconds