MAIN IPE CASE STUDY

Introduce patient for the day:

- BA is a 73 yo female that lives in Kansas City, KS.
- She lives alone and goes to her primary care physician about every 3-6 months. Her last visit to her primary care clinic was 5 months ago.
- The patient is functionally independent with all activity of daily living (ADL). She is independent with most instrumental activities of daily living (IADL); however she no longer drives. She has some mild, right-sided functional strength deficits from her previous stroke, but those are present mostly only after prolonged activity. She has fallen twice in the past year, once at home and once in the community, but is unwilling to use a cane.
- She has interacted with a primary care physician, a neurologist, several nurses, pharmacists, PT/OT, dentist, and a dietician at some point for her medical conditions over the years
- Her primary medial history (PMH) includes: Hypertension, Type 2 Diabetes, Osteoarthritis, Ischemic stroke, Dyslipidemia, Peripheral Neuropathy, Asthma, and Depression
- She takes 11 medications for her chronic disease management
- Overall she appears to be undernourished and in fair health considering all of her PMH but is still able to maintain independent living, enjoys watching game shows on TV and attending church on Sundays.

Inpatient Case:

BA is a 73 y/o Caucasian female who presented to the ED with a chief complaint of slurred speech. Her history of present illness included generalized weakness for two days and slurred speech and right lower extremity weakness for 6 hours. The patient did not want to bother anybody and wanted to wait out the symptoms. After right hand and arm became weak she called a church friend who ended up calling EMS. The patient underwent a work-up for stroke and a CT scan of her head revealed the patient had evidence of a new ischemic stroke (small lacunar infarct) and evidence of past infarcts. She did not receive full treatment including tPA medications by the stroke team as the patient was not a candidate due to late arrival to ED and onset of symptoms. The patient was admitted to the family medicine inpatient service for observation and the neurology service was consulted. The patient has been admitted to the hospital for about ~60 hours and the team is preparing to discharge the patient to a SNF rehabilitation center today.

Please prepare to discuss this case, your profession-specific recommendations, and discussion questions with your team. *Develop a general interprofessional plan of care.*

PMH:

- HTN
- DM type 2
- Osteoarthritis of knees
- Ischemic stroke
- Dyslipidemia
- Peripheral neuropathy
- Asthma
- Depression
- Full upper denture and severe tooth and gum pain mandibular arch

Social History:

- Tobacco use – never smoker
- Alcohol use – no
- Lives alone in apartment, no family involvement
- Medicare and Part D prescription insurance

- Retired factory meat cutter x 30 years (early retirement at age 50 due to disability)
- Supplemental disability income ($380 per month)

Family History:

- Mother (deceased) – Colon cancer
- Father (deceased) – HTN, heart disease, heart attack, ischemic stroke
- Maternal Grandmother – heart disease, HTN

Allergies:

- No known allergies

Immunizations:

- Flu vaccine, pneumovax, varicella

• Labs:	10/1/13	10/2/13	10/3/13
Cholesterol (<200 mg/dl)			237
Triglycerides (<150 mg/dl)			205
HDL (>40 mg/dl)			52
LDL (<100 mg/dl)			162
VLDL (2-30 mg/dl)			41
Sodium (137-147 mmol/L)	141	140	141
Potassium (3.5-5.1 mmol/L)	4.1	4.2	4.1
Chloride (98-110 mmol/L)	108	108	109
Bicarbonate	27	28	28
BUN (7-25 mg/dl)	11	12	12
Serum Creatinine (0.4-1.00mg/dl)	1.2	1.00	0.92
Calcium (8.6-10.3 mmol/L)	9.4		9.5
Magnesium (1.6-2.6 mg/dl)	2.9		3.0
Glucose (70-100 mg/dl)	169	160	144
AST (7-40 IU/L)	38		40
ALT (7-56 IU/L)	35		39
RBC (4.0-5.0 M/ul)	4.2		
WBC (4.5-11.0 K/ul)	6.5		
Hemoglobin (12.0-15.0 g/dl)	12.8		
Hematocrit (36-45 %)	36.2		
Platelets (150-400 K/ul)	189		
TSH (0.35-5.00 U/ml)	2.8		
INR (0.8-1.2)	1.00		
Troponin (0.0-0.05 ng/ml)	<10		
POC Hemoglobin A1C (4.0-6.0)	9.7		

Abnormal

Vital Signs by date	10/1/13	10/2/13	10/3/13

Blood Pressure	175/90 on admission 165/80 160/82 158/78	155/80 148/82 150/80	144/75 145/80
Pulse	89 on admission 85 86 90	90 80 82	84 82
Respiratory Rate	18 on admission 15 19 18	15 14 12	18 14
Pulse Oximetry	96% Sat on admission 97%	93% 95%	96%
Height	5’5”		
Weight	98 kg		

Current Medications:
Hospital:

- Asthma
  - Albuterol HFA 90mcg/actuation 2 puffs q4h PRN for SOB
  - Albuterol 2.5 mg Nebulizer Q 4 hours PRN for SOB
  - Symbicort 160/4.5mcg 2 puffs by mouth BID
- HTN
  - Hydrochlorothiazide 25 mg QAM
  - Lisinopril 10 mg QAM
- Hyperlipidemia
  - Atorvastatin 20mg daily
- Stroke prophylaxis
  - Clopidogrel 75mg daily
- Arthritis
  - Celebrex 100mg BID
  - Norco 5/325mg 1 q6h PRN pain
- Peripheral Neuropathy
  - Gabapentin 300 mg TID
- Diabetes
  - Metformin 1000 mg BID with meals
  - Lantus Insulin 20 units QHS
- Depression
  - Paroxetine 20 mg QAM

Pertinent Findings (Positive and Negative) on Review of Systems and Physical Exam:

Admission ROS and Exam:

ROS:
Constitutional: No fever, no chills, no distress, + generalized weakness HEENT: No dysphagia
Chest: No shortness of breath, no cough
CV: No chest pain, no palpitations, no edema
Abd: No abdominal pain, no N/V, no constipation or diarrhea, no blood in stool, no dark stools Ext: No rash
Neuro: +slurred speech, + new right upper and lower extremity weakness, +difficulty with word finding
Malnourished inability to eat due to oral concerns

Exam:
Constitutional: Alert & oriented to self, situation, place, year, and president - not date, Well-developed, well-nourished.
No distress.
HENT: Nose normal. Oropharynx is clear. Dry mucous membranes.
Oral screening: severe mal odor and tooth pain
Eyes: Conjunctivae and extraocular motions are normal. PERRLA. No scleral icterus. Arcus Senilus noted bilaterally
Neck: Normal range of motion. Neck supple. Carotid bruit is not present. No thyromegaly present.
Cardiovascular: Normal rate, regular rhythm and normal heart sounds. No gallop, No murmur heard.
Pulmonary/Chest: Effort normal and breath sounds normal. No respiratory distress. No wheezes/rales/rhonchi.
Abdominal: Soft, NT, ND, Bowel sounds are normal. No rebound and no guarding. No hernia.
Musculoskeletal: Tenderness on palpation of the right hip, no bruising or deformity noted.
Neuro: Left LE 3/5 (baseline per patient subsequent to last stroke) RLE with 1/5 strength (new) bilateral UE 4/5 strength left> right. Decreased ROM of left upper shoulder to previous stroke.
Lymphadenopathy: No cervical adenopathy.
Skin: Skin is warm and dry. No rash noted. No erythema. Rolled patient and no evidence of wounds found.
Psychiatric: Mood, affect and judgment normal.

Today's ROS and Exam Exam

ROS: Pertinent positives include + right upper and lower extremity weakness, + difficulty with word finding

Exam:
Musculoskeletal: Tenderness on palpation of the right hip, no bruising or deformity noted.
Neuro: Left LE 3/5 (baseline weakness) RLE with 2/5 strength, bilateral UE 4/5 strength left> right. Decreased shoulder ROM of left upper extremity due to previous stroke.
Psychiatric: Mood, affect and judgment normal.

Diagnostic Tests and Findings:

CT Scan:

1. NEW LEFT LACUNAR INFARCT.
2. NO EVIDENCE FOR ACUTE INTRACRANIAL HEMORRHAGE.
3. MILD BRAIN STEM AND CEREBRAL ATROPHY WITH MODERATE CEREBELLAR ATROPHY AND STABLE MILD VENTRICULOMEGALY.
4. BILATERAL CHRONIC BASAL GANGLIA, WHITE MATTER AND BRAIN STEM LACUNAR INFARCTS.

EKG: NORMAL RATE AND RHYTHYM, NO ST ABNORMLALITIES

Day 1 Summary: The patient was admitted to the inpatient service from the ED. The primary team (inpatient family medicine) rounded on the patient and the team included medicine, nursing, and pharmacy. The Neurology team was consulted and agreed with the findings of acute ischemic stroke (small lacunar infarct) and recommended aggressive risk factor reduction, changing to a different antiplatelet agent other than aspirin and rehabilitation services. The team monitored the patient closely for 24 hours and did not want blood pressure to drop by more than about ~15% during this 24-hour period. New medications included Lantus Insulin 10 units daily and Clopidogrel. A consult was placed for Speech Therapy, PT, OT, Dental Hygiene, and Dietary services who put her on a heart healthy diet.

Day 2 Summary: The patient remained stable until exertion during the initial assessment from PT. The patient became progressively short of breath and complained of symptoms of an asthma attack. Patient complaining of severe pain lower jaw and hospital staff observed blood on her pillow overnight. In addition her side of her tongue is not moving correctly and having more difficulty chewing after the stroke. Respiratory therapy was called and the patient received a nebulizer treatment and subsequently symptoms resolved. Medication adjustments included: Increasing Lantus to 20 units daily and adding Lisinopril. All the consult services (PT, OT, Dietary, Speech) saw the patient, wrote notes and communicated recommendations and progress with the primary team. An additional consult for social work was placed in preparation for discharge.

Day 3 (today- day of discharge) Summary: The patient had an episode of hypoglycemia overnight and was subsequently treated and is now stable, had no other issues and in general is making good progress. She is eager to be discharged to a SNF rehab facility for a short-term stay and then is excited to go home. The entire healthcare team is going to meet today to coordinate a plan of care and prepare for discharge.