LOCAL CASE

ASHP CLINICAL SKILLS COMPETITION 2011
PHARMACIST'S PATIENT DATA BASE FORM

Demographic and Administrative Information		
Name: Jones, Jim		Patient ID: 10161981
Address: 13 Remsen Ave		Room & Bed: Critical Care 1
New Brunswick, NJ		Physician: Eisenstein
Date of Birth: 10/11/48		Pharmacy: CVS Pharmacy #562894
Height: 72" Weight: 112 kg		Race: African American
Gender: M		Religion: Baptist

History of Present Illness		**Vitals (Current and previous ED visits)**		
JJ is a 62 yo male who presents to the ED today on 5/23/11 with acute onset of right-sided weakness, decreased consciousness, and blurred vision that started exactly 1 hour ago when he was eating dinner. The patient's wife reports he is normally very talkative at dinner and he has never had symptom like this before. The ED physician calls a code stroke overhead. The neurologist evaluates the patient to have a NIHSS (National Institutes of Health Stroke Score) of 19. A CT scan was performed and based on the results the patient is diagnosed with an acute ischemic stroke.		(5/23/11) @ 19:00 hours BP 225/120 mm/hg Pulse 75 bpm Temp 98.6 Resp 12 Pulse ox 96% Finger stick (FS) BG 215	(2/10/11) BP 161/95 mm/hg Pulse 65 bpm Temp 98.9 Resp 10 Pulse ox 96% FSBG 290	(12/15/10) BP 166/100 mm/hg Pulse 50 bpm Temp 99.6 Resp 11 Pulse ox 96% FSBG 200
Past Medical History		**Chemistry (Current and previous ED visits)**		
Type 2 diabetes Hypertension Myocardial infarction 2009 CHF Dyslipidemia Generalized Anxiety Disorder		(5/23/11) @ 19:00 hours Na 140 mEq/L K 3.6 mEq/L Cl 110 mEq/L CO_2 29 mEq/L BUN 15 mg/dL SCr 1.3 mg/dL BG 190 mg/dL WBC 6.0 x 10^9/L Hgb 15 g/dL Hct 45 % Plt 375 x 10^9/L PTT 30 s INR 1.0 HDL 30 LDL 136 TG 302 A1C 8.6 % Ca 9.0 mEq/dL Alb 4.5 g/dL AST 12 IU/L ALT 16 IU/L T bili 1.0 mg/dL D bili 0.6 mg/dL	(2/10/11) Na 142 mEq/L K 4.0 mEq/L Cl 107 mEq/L CO_2 24 mEq/L BUN 8 mg/dL SCr 1.2 mg/dL BG 172 mg/dL WBC 7.0 x 10^9/L Hgb 12 g/dL Hct 38 % Plt 400 x 10^9/L PTT 27 s INR 1.0 A1C 8.5 % Ca 9.0 mEq/dL Alb 4.5 g/dL AST 12 IU/L ALT 16 IU/L T bili 1.0 mg/dL D bili 0.6 mg/dL ECHO LVEF 33%	(12/15/10) Na 138 mEq/L K 4.2 mEq/L Cl 105 mEq/L CO_2 26 mEq/L BUN 6 mg/dL SCr 1.2 mg/dL BG 168 mg/dL WBC 6.0 x 10^9/L Hgb 14 g/dL Hct 45 % Plt 362 x 10^9/L PTT 32 s INR 1.0 A1C 9.5 % Ca 9.0 mEq/dL Alb 4.5 g/dL AST 12 IU/L ALT 16 IU/L T bili 1.0 mg/dL D bili 0.6 mg/dL

Family History		**Urinalysis and Drug screen**
Father: DM, HTN, Colon cancer dx at age 66 Mother: Died CVA age 59		(5/23/11) Appearance Clear, yellow Specific gravity 1.010 Blood None Ketones None Leukocyte esterase None Nitrites Negative Protein 3+ Glucose 1+ RBCs 2 per HPF WBCs 4 per HPF Bacteria Few per HPF Amphetamines – Negative Barbiturates – Negative Benzodiazepines – Negative Cocaine – Negative Marijuana – Negative Opiates – Negative Blood EtOH 0 mg/dL
Social History:		
Tobacco: Denies ETOH: Social Illicit Drugs – Denies Caffeine: 1-2 cups coffee a day Occupation: Welder Status: Married Children: 3 children Physical Activity: Sedentary Diet: Nothing notable		

Procedures		
CT Scan: No evidence of hemorrhage or masses, evidence of chronic ischemic disease EKG: Sinus rhythm @ 77 bpm		
Physical Exam		
General: Obese African American male in severe neurologic distress Skin: Cool, dry 2 + pitting edema bilateral lower extremities HEENT: leftward gaze, (+) gag reflex Chest: Rales bilaterally at both bases CV: Sinus, S1S2 (+), S3S4 (-) Abd: Soft Non-tender, Non-distended, +BS GI/GU: Stool guaiac (-), normal rectal tone Neuro: NIHSS 19, 1/5 RUE, 1/5 RLE, Right Sided facial droop		

Allergies/Intolerances	Prescription Coverage
hydromorphone – rash and shortness of breath	Insurance: Qualcare
glipizide - rash	Copay: $5 Preferred/ $ 20 Non preferred
	Cost per month: $ 125
	Annual Income: $ 65,000

Medication History	Indication	Start date
Metformin 1000mg once daily	Diabetes	Unknown at this time
Escitalopram 10 mg once daily	Anxiety	Unknown at this time
Metoprolol extended release 100 mg daily	HTN/ s/p MI	Unknown at this time
Aspirin 81mg once daily	s/p MI	Unknown at this time
Clopidogrel 75 mg once daily	s/p MI	Unknown at this time
Alprazolam 0.25 mg prn anxiety	Anxiety	Unknown at this time
Simvastatin 80 mg once daily	Hyperlipidemia	Unknown at this time
Furosemide 20mg once daily	CHF	Unknown at this time
Hydrochlorothiazide 25 mg once daily	HTN	Unknown at this time

Patient Narrative

As part of stroke team you are in the ED room with the patient. The patient's symptoms are not improving since the patient has returned from CT scan 30 minutes ago. The stroke team is discussing recommendations for pharmacotherapy and would like your recommendations. Prioritize your problem list as dictated by this competition.

Evaluated for competition

ASHP Clinical Skills Competition - Pharmacist's Care Plan – 2011 Local Answer Key

Problem Identification and Prioritization with Pharmacist's Care Plan

Team # _____

A. List all health care problems that need to be addressed in this patient using the table below.
B. Prioritize the problems by indicating the appropriate number in the "Priority" column below:
   1 = Most urgent problem (Note: There can only be one most urgent problem)
   2 = Other problems that must be addressed immediately or during this clinical encounter; **OR**
   3 = Problems that can be addressed later (e.g. a week or more later**)**

**Please note, there should be only a "1", " 2", or "3" listed in the priority column, and the number "1" should only be used once.*

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
Acute ischemic stroke complicated by malignant hypertension	1	Make eligible for TPA Prevent hemorrhage Prevent decline in function Maintain quality of life Prevent death	-Labetalol 10 – 20 mg IV push repeat in 10 minutes. If patient is not at goal repeat labetalol x 1 -If patient has not reached goal after 2 doses of labetalol initiate nicardipine 5 mg/hr. Titrate by 5mg/hr every 5 minutes to a maximum of 15 mg/hr. -If goal still not met initiate nitroprusside 0.5 mcg/kg/min -Non pharmacologic interventions include quiet environment, dim lights, bowel and bladder empty -Once blood pressure is with in goal initiate Tissue Plasminogen Activator (Alteplase) 0.9mg/kg. Maximum dose 90mg based on actual body weight. Give 10% (9mg) bolus over 1 minute. Follow with 1 hour infusion of remaining dose (81mg) -Document and discuss risks and benefits of TPA -Hold aspirin and clopidogrel for 24 hours -Lay patient flat to increase cerebral perfusion -PT/OT evaluation -Swallow evaluation	-When TPA infusion begins: Monitor blood pressure every 15 minutes for the first 2 hours. Monitor for 30 minutes for 6 hours. Then every hour for 16 hours. -Monitor NIHSS every 15 minutes for first 2 hours then every 30 minutes for the next 2 hours. Monitor every 30 minutes for 6 hours. Then every hour for 16 hours. If acute change in neurologic status noted stop TPA infusion and perform head CT. -Maintain BP < 185/110 and greater than 150/90 -H/H, PLT, Glasgow Coma Score, HR -Subjective complaints (headache, increased weakness, blurry vision, slurred speech), -Observe patient for signs of bleeding. -Repeat CT in 24 hours or acute change in mental status

DVT prophylaxis	2	Prevent thrombus formation Decrease morbidity and mortality	Sequential compression devices for 1st 24 hours then unfractionated heparin or LMWH afterward	PLT, H/H, PTT, venous doppler, complaints of leg pain, shortness of breath or bleeding.
Hyperglycemia/Uncontrolled diabetes	2	Decrease mortality Decrease morbidity Decrease microvascular events	-Acutely consider sliding scale regular insulin (See below for example, other reasonable iterations are acceptable) 2 units subq for FSBG 200-250 4 units subq for FSBG 251-300 6 units subq for FSBG 301-350 8 units subq for FSBG 351-400 Call MD for FSBG greater than 400 or FSBG less than 70 Or Consider insulin infusion -Hold metformin during inpatient stay as patient will have CT angiogram Upon discharge: -If inpatient insulin requirement greater than 30 units per day initiate outpatient basal insulin regimen -Increase metformin to 1000mg BID with meals -Consider addition of DPP-4 (sitagliptan 50mg daily) or GLP1 (exanetide 5 mcg subcutaneous BID) secondary to extremely elevated A1C -Thiazolidinedione use not preferred secondary to CHF - Sulfonylurea cannot be used as patient is allergic -Refer to diabetes educator/ dietitian	-Fingerstick blood glucose three times a day before meals and at bedtime. -Fingerstick blood glucose goal is 140-180 mg/dL, -FBG, Scr, A1C < 6.5 % in 3 months -Urinalysis for proteinuria in 3 months -Signs and symptoms of hypoglycemia (altered mental status, tachycardia, diaphoresis, hypotension) -Patient compliance

Chronic uncontrolled stage II hypertension / Sub optimal congestive heart failure regimen	2	Prevent cardiac events Improve mortality Decrease rehospitalization	-Give furosemide 40mg IV push x 1 as patient is in acute heart failure -Place foley catheter -Add ACE inhibitor (ramipril 5mg daily or enalipril 10 mg BID) -Add Aldosterone antagonist (Spironolactone preferred as first line. Consider eplerenone of patient cannot tolerate side effects of spironalactone) - Only consider dihydropyridine calcium channel blocker or hydralazine/isosorbide dinitrate combination after ace inhibitor and beta blocker are maximized - Decrease caffeine intake - Dietary referral (BMI 33.4) - Sodium restriction - DASH eating plan -Encourage physical activity as tolerated	- Goal BP less than 130/80 - Left ventricular ejection fraction - Complaints of shortness of breath, exercise intolerance, pedal edema. - Daily weights - Potassium and SCr - In's and out's - Patient compliance
Hyperlipidemia	2	Decrease mortality Prevent cardiac event Slow atherosclerosis progression	- Discontiue simvastatin - Initiate atorvastatin 80mg daily - Consider Fibric acid derivative addition (fenofibrate 48mg daily or gemfibrozil 600mg BID secondary to metabolic syndrome) -Saturated fat <7% of calories, cholesterol <200 mg/day - Consider increased viscous (soluble) fiber (10-25 g/day) and plant stanols/sterols (2g/day)	Goal : LDL<70, HDL >60, TG < 100 -Recheck lipid levels in 6 -8 weeks -AST/ ALT 12 weeks after initiation -CPK initially and with any complaints of muscle soreness Statin complaints : muscle soreness or weakness Fibric acid complaints: bloating, abdominal pain, cholelithiasis - Patient compliance

Antiplatelet regimen	2	Prevent thrombotic event Decrease mortality	- Increase daily aspirin to 325mg daily for the immediate two weeks following stroke -Start 24 hours after TPA.	- PLT, H/H -Signs of bleeding - Patient compliance
Colon Cancer Screening	3	Prevent colon cancer	Colonoscopy - secondary to father diagnosis colon cancer at 66 yo (Colonoscopy should be performed at 50 years of age or 10 years before the diagnosis age of a first degree relative) -Encourage high fiber diet	-Results from colonoscopy -Change in bowel habits -Blood in stool
Anxiety disorder	3	Improve quality of life Reduce Stress	Continue current drug regimen	-Signs of abuse (consistent early prescription refills, not fulfilling responsibilites) -Monitor for signs of depression -Patient compliance