Medications (see attachment 2)	Student Name Evett Pugh_____ Client Initials S.C._____ Date _2/1/13_____	State lab values and identify trends.
IV Sites/Fluids/Rate #20 RT Shoulder Hep-Lock RFA AV Fistula LFA Old AV Fistula	Age __71____ Gender _Male_____ Room # _ICU20____ Admit Date 1/30/13_____ CODE Status _Full_____ Allergies _NKDA_____ Diet _Renal/1800ADA 2gmsoduim/2gmPotassium_ Activity _BR_ Braden Score 14__	142 | 98 | 42H / 98 317 | 31 | 9.380H ___8.4L \ 11.7L ___Mg 9.2 / 247 ___PO4 / 37.5L **State other appropriate lab results** pH-7.82H(7.35-7.45N)-↑ indicative of alkalemia PCO2-20.2L(35-45N)-↓ indicative of respiratory alkalosis PO2-109H(75-100)-↑ HCO3-32.0H(22-28)-↑indicative of metabolic alkalosis
Monitoring: Invasive/Non-Invasive State specific monitoring device and specific values with each device 5 lead ECG on continuous monitoring	Chief Complaint/Admitting Diagnosis(es): Confusion/Agitation after dialysis Medical/Surgical Diagnosis(es): Metabolic Encephalopathy/ ESRD	**State diagnostic test results** BUN-42H(5-20N)-↑ end stage renal disease and fluid overload Creatinine-9.380H(0.5-1.3N)-↑ end stage renal disease and fluid overload Ca2+-8.4L(9-10N)-↓ alkalosis Hgb-11.7L(13.5-18N)-↓ end stage renal disease and anemia Hct-37.5L(40-54N)-↓ end stage renal failure and anemia All Lab Values (Ureden, 2010).
ECG Interpretation (see attachment 3)	1.Describe the patient's condition, including signs/symptoms that led to this admission 2.Briefly describe the pathophysiology related to the patient's diagnosis and current medical/surgical condition. 3.Describe the patient's head to toe assessment findings and explain how they relate to the pathophysiology. Include the vital signs. 4.Integrate the current laboratory, diagnostic test results, hemodynamic parameters medications, medical and nursing interventions, and other treatments into the pathophysiology and explain how it is affecting this patient's outcome/current condition.	
Past Medical/Surgical History Relevant to this admission HTN, diabetes, chronic renal failure, ESRD on hemodialysis, dementia, schizophrenia, fluid overload, bacteremia, anemia, hyperparathyroidism, glaucoma.	See attachment 1	Treatments/ Medical and Nursing Interventions Dialysis M,W,F 3x/wk Blood sugars AC&HS Dialysis 3x/wk over 4 hrs to remove 1L of fluid SCD's

Primary Nursing Diagnosis with Relational Statement	Short Term Goal Relevant to Nursing Diagnosis	6 Nursing Diagnosis with Relational Statement
Excessive fluid volume R/T kidneys inability to produce urine secondary to renal disease	Pt. will have decreased fluid volume by the end of students shift. * Pt. fluid was decreased by 900mL by the end of students shift by means of hemodialysis.	1. Acute confusion R/T alkalosis 2.Risk for infection R/T impaired or lowered resistance 3.Risk for electrolyte imbalance R/T increased BUN and Craetinine levels secondary to renal disease 4.Impaired gas exchange R/T increased respirations secondary to metabolic alkalosis 5.Inneffective renal perfusion R/T acute tubular necrosis secondary to diabetes mellitus 6.Impaired urinary elimination R/T renal disease 7.Risk for unstable blood glucose R/T diabetes mellitus
Definition (State definition and source) "State in which a client experiences or is at risk of experiencing intracellular or interstitial fluid overload." (Carpenito-Moyet, 2010, p. 272). **AEB**: Defining characteristics specifically exhibited by your patient that support primary nursing diagnosis AEB -Decreased urine output -Dialysis 3x/wk -Edema +1 -End stage renal disease secondary to diabetes -Decreased LOC -A&Ox1 -Increased BUN -Increased Creatinine	Outcome Criteria (Must be specific and measurable) Pt. will have minimal fluid intake of 400mL or less for the next 24hrs. *Outcome undetermined due to the short duration of students shift, Pt. had no fluids for students shift. Pt. had plus one pitting edema, for the next four hours the pt. will not have any further increases in edema. *Outcome met Pt.'s edema decreased after hemodialysis Pt. weighed 58.4kg; pt will show no further increase in weight for the next four hours. *Outcome met Pt.'s weight decreased by 2.0 kg after dialysis. Pt.'s lung sounds will have no crackles or diminished breath sounds for next four hours. *Outcome met Pt.'s lung sounds were clear bilaterally at end of students shift. Pt. will be alert to person, place and time and be less drowsy within the next two hours. *Outcome not met Pt. responded to verbal and physical stimuli but was still extremely drowsy and still only alert to self but not place or time.	

Identify nursing interventions that you implemented with this patient.

Monitored Pt.'s I&O for fluid increases or decreases. Obtain daily weights to determine fluid losses or gains. Listen for changes in heart or breath sound this could indicate fluid increases or electrolyte imbalances. Use of ice chips, and oral care to diminish feelings of thirst due to stringent fluid restrictions. Assess for Pt.'s level of consciousness to determine if electrolyte imbalances.

 Evaluate patient progress towards achieving outcome criteria as a result of nursing interventions.

Pt. had no fluid increases but had decrease of 900mL due to hemodialysis. Pt. had a weight loss of 2.0 kg after dialysis target weight loss was 2.3 kg and 1 Liter of fluid removed, Pt. was not tolerating well only removed 900mL of fluid. Pt.'s lungs remained clear bilaterally due to repositioning and dialysis and Pt. maintained normal sinus rhythm throughout students shift. Pt. never complained of thirst ice chips were not implemented. Pt. was drowsy and hard to arouse but responded to his name and was alert and oriented to self only.

Secondary Nursing Diagnosis with Relational Statement	Short Term Goal Relevant to Nursing Diagnosis	What I Would Do Differently
Acute Confusion R/T Fluid and electrolyte disturbances secondary to alkalosis	Pt. will be alert and oriented x3 by the end of the students shift. *Pt. was still only alert and oriented to one by the end of the shift.	I would have tried to interact with the Pt. more to get a better idea of his LOC and depth of confusion. I would also have asked the dialysis team more about the dialysis process, but they did not seem to be very accepting of a student. I would have also liked to of had the time to look up this Pt.'s history and be able to have more information about the Pt.
Definition (State definition and source) "The state in which there is an abrupt onset of a cluster or global, fluctuating disturbances in consciousness, attention, perception, memory, orientation, thinking, sleep-wake cycle, and psychomotor behavior." (Carpenito-Moyet, 2010, p. 167).	Outcome Criteria (Must be specific and measurable) Pt.'s BUN, creatinine, Ph, PCO2, PO2, HCO3, Ca2+,H&H will show significant improvement within next twenty four hours. *Outcome not met due to student not able to access this information.	
AEB: Defining characteristics specifically exhibited by your patient that support primary nursing diagnosis -High pH -High HCO3 -High BUN -High Creatinine -Renal Disease -Encephalopathy -Reduced LOC -A&Ox1 -Increased respirations	Pt. will not curse, throw or strike staff for next four hours. *Outcome met Pt. did not curse, throw or strike staff for the duration of shift. Pt. will be less drowsy within the next four hours. *Outcome not met patient was extremely drowsy at the end of student shift. Pt. will not require the use of restraints for the next four hours. *Outcome not met Pt. required the use of wrist restraints during dialysis.	

Identify nursing interventions that you implemented with this patient.

Monitor labs for levels of improvement. Called the Pt. by name and introduced myself with every interaction. Talked to the Pt. in a slow, calm manner during interactions to ease Pt.'s anxiety. Reaffirmed with the Pt. the place and date with interactions. Notified Pt. when I was entering or leaving the room and when I would be back. Implemented the use of restraint to the Pt.'s right arm during dialysis.

 Evaluate patient progress towards achieving outcome criteria as a result of nursing interventions.

There were no significant changes in the Pt.'s labs from the previous day to the current day. Pt. reacted to his name but was quite drowsy and made no verbal responses to my questions or information given to him. Pt. wasn't experiencing anxiety but talked in a calm manner as to not induce anxiety in the Pt. The use of the restraint was to keep his arm still during dialysis because of the movement it was impeding his treatment but it was not used to prevent harm to himself or others.

A Nursing Process with End Stage Renal Disease

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Attachment 1

Patient S.C.is a seventy one year old African American married male who presented to

the E.R. on 1/30/13 with confusion and not feeling like himself after dialysis.   S.C. could not

remember that he had dialysis earlier. Patient was also alert only to self and could not recall any

self medical history. S.C. was admitted on 1/30/13 with a diagnosis of metabolic

encephalopathy and end stage renal disease.   Patient had labs drawn, history recorded from

family who was present, assessment and vitals were taken. They attempted to have a head CT

performed, but due to the patients agitation they opted for a non contrast head CT done, but the

results were limited due to the patient's restlessness. S.C. was given ativan to try and calm him

before the procedure with no avail.

End stage renal disease (ESRD) "involves deterioration and destruction of nephrons with

progressive loss of renal function." (Black & Hawks, 2009, p. 816). This loss of renal function

causes BUN and creatinine levels to increase. Renal impairment causes the kidney to not be able

to concentrate urine this in turn causes the kidneys to produce diluted urine causing fluid loss,

this fluid loss can cause electrolyte imbalances. The kidneys inability to rid the body of waste

products causes a buildup of toxins that could result in death if dialysis is not administered.

Diabetes mellitus is a common complication caused by ESRD, the body develops impaired

insulin production, insulin levels need to be monitored closely because "short acting insulin's

can become long acting in patients with kidney disease." (Black & Hawks, 2009, p. 817).

Metabolic encephalopathy is an "alteration in brain function or consciousness due to failure of

other internal organs." (Venes, Donald M.D., M.S.J, 2005).   In this case it was caused by the

patient having acid-base abnormalities and electrolyte imbalances caused by ESRD.

Patient S.C. was extremely drowsy, roused him to do his assessment, his Glasgow was a ten, A&Ox1 to self only. This could be because of the metabolic encephalopathy or history of dementia. Right pupil 3mm and sluggish left pupil non-reactive, followed commands, skin warm and dry. Auscultated audible bruit at fistula site. BP taken in right leg due to old fistula in Left upper arm and new fistula in right upper arm, BP 141/49, HR 61, T 98.4, RR 17, Pulse Ox 100% on 2L NC, Glucose 98, Lungs clear all four lobes anteriourly and posteriorly, BSx4, Bilateral hand grasps equal but weak, Capillary refill less than 3 seconds, pedal pulses +1, generalized edema. CT showed an old infarct in the brain, possible explanation of non-reactive pupil and confusion. Diabetes mellitus could also explain the non-reactive pupil due to retinopathy a common complication of DM. Patients overall assessment was within normal limits.

The patient was on anti-hypertensives, antibiotics, and an antianemics. All of these drugs are directly related to the patients end stage renal disease, patients with impaired kidney function can no longer regulate blood pressure causing hypertension. Patients are more susceptible to infection because of the buildup of toxins in the body; this build up will also cause elevated BUN and creatinine levels and decreased Hgb and Hct levels due to development of anemia. Kidney disease will also cause electrolyte imbalances this is indicated by the elevated Ph, PO2, HCO3, and decreased PCO2 and Ca2+; this is caused by the kidneys inability to reabsorb electrolytes and fluid losses due to polyuria. To treat the symptoms of kidney disease the patient was ordered dialysis three times a week and blood sugars before breakfast and before bed. Monitoring the patient's intake and output is very important it is very easy for patient to become in a fluid overload state or depletion of fluids. It is also easy to have these patients develop breathing difficulties due to fluid overload, because of the kidneys inability to regulate electrolytes patient

have altered levels of consciousness due to build up of toxins, if not corrected patients could die

from these toxic build up.

Attachment 2

MEDICATION WORKSHEET

Name: ___Evett Pugh_____
Date: _2/1/13_____

Patient: _S.C.__ Diagnosis: _Metabolic Encephalopathy/ESRD__ Allergies: __NKDA_____ Weight: _82.3Kg Unit/Bed: ICU20__

ORDER Drug Name (generic & trade) Dosage, Frequency, Route **Show dosage calculations** ***Include all IV continuous medications***	DRUG CLASSIFICATION/ THERAPEUTIC USES 1. Identify pharmacologic/therapeutic classification 2. Describe mechanism of action for the drug and the END RESULT of that action 3. Describe how your patient will benefit from this drug *For insulin, include onset, peak and duration	PATIENT-SPECIFIC NURSING RESPONSIBILITIES 1.Identify your specific nursing responsibilities related to the administration of this medication to your patient. 2.Include all patient specific data relevant to this drug (i.e. HR=82, K=4.1)
Drug Name:Lopressor(Metoprolol) **Dose: amp 5mg** **Frequency: q4h PRN** **Route: IV push** **Calculations:**	**1.Pharmacologic/therapeutic classification of drug:** Therapeutic-antianginals, antihypertensives Pharmacologic- beta blockers **2. Mechanism of action and the end result:** blocks stimulation of beta 1 (myocardial)-adrenergic receptors. Does not usually effect beta 2 (pulmonary, vascular, uterine)-adrenergic receptor sites. Decreased BP, HR, attacks of angina pectoris, cardiovascular mortality and hospitalization in patients with HF. Increase in activity tolerance. Prevention of MI. **3. Pt. Specific Benefit of this drug:** This was used in my patient as a preventative measure that if his systolic BP was greater than 150 it was to be administered to prevent the possibility of the patient	**1. Pt. specific nursing responsibilities for this drug:** monitor BP, ECG, and pulse frequency during dose adjustment and periodically during therapy, frequency of prescription refills to determine compliance, I&O, and daily weights, assess for S&S of CHF, if BP is below 40 and CO is low administer atropine. Fatigue, weakness, bradycardia, CHF, pulmonary edema, hyper and hypoglycemia. **2. Pt. specific data relevant to this drug:** PT HR was 61BPM; PTs BP was 141/49 which is low. Also monitor this PTs blood sugar levels to make sure there are no spikes or drops in PTs levels. At the time of assessment PTs blood sugar was 110 which was within normal limits.

	having an MI.	Pt. has hx of HTN and DM. Lung sounds were clear bilaterally.
Drug Name: Piperacillin/Tazobactam(Zosyn) **Dose: 3.375G in 50ml NaCl** **Frequency: q12h** **Route: IVover 4h** **Calculations:50ml/4h=12.5ml/h**	**1.Pharmacologic/therapeutic classification of drug:** Therapeutic-anti-infective Pharmacologic-extended spectrum penicillin's. **2. Mechanism of action and the end result:** piperacillin-binds to bacterial cell wall membrane, causing cell death, spectrum is extended compared with other penicillin's. Tazobactum-inhibits beta lactamase, an enzyme that can destroy penicillin's. **3. Pt. Specific Benefit of this drug:** this Pt was taking this to prevent an infection in the lungs.	**1. Pt. specific nursing responsibilities for this drug:** confusion, diarrhea, rashes, pain, phlebitis at IV site, anaphylaxis including serum sickness. **2. Pt. specific data relevant to this drug:** Pt. had edema and was being monitored for possible fluid in the lungs. Patients' respirations were shallow and ranged between 4 to 12RR/min. Pt. had to be roused often to take deep breaths due to being very drowsy.

| **Drug Name:Vancocin(Vancomycin)** **Dose: 1gm/100ml NaCl** **Frequency: After dialysis** **Route: IV 100ml/h** **Calculations:** | **1.Pharmacologic/therapeutic classification of drug:** Pharmacologic: bactericidal action against susceptible organisms. Therapeutic: anti-infective **2. Mechanism of action and the end result:** Binds to bacterial cell wall resulting in cell death. Resolution of infection. **3. Pt. Specific Benefit of this drug:** I don't know what the benefits of giving this Pt. this | **1. Pt. specific nursing responsibilities for this drug:** Do a culture and sensitivity prior to therapy, monitor IV site, BP, I&O, assess for superinfection, anaphylaxis, assess bowel status. N/V, ototoxicity, hypotension. **2. Pt. specific data relevant to this drug:** Pt. did not have elevated WBC's or a diagnosis of an infection, it was ordered after dialysis for |

	drug he was admitted for metabolic encephalopathy. It could possibly being giving to prevent the possibility of infection due to the invasive technique used to do his dialysis.	possible prevention of infection. There were no signs or symptoms of infection but patients with ESRD are more susceptible to infection.
Drug Name:Apresoline(Hydralazine) **Dose: 10mg** **Frequency: q4h PRN** **Route: IV** **Calculations:**	**1.Pharmacologic/therapeutic classification of drug:** Pharmacologic: Vasodilator Therapeutic: antihypertensive **2. Mechanism of action and the end result:** Direct acting peripheral arteriolar vasodilator. Decreased BP without side effects and afterload in pt. with HF. **3. Pt. Specific Benefit of this drug:** pt. has hx of HTN. Used to reduce high BP as needed.	**1. Pt. specific nursing responsibilities for this drug:** Monitor BP and Pulse, Monitor Labs-CBC and electrolytes, tachycardia, edema, orthostatic hypotension, D/N/V, sodium retention. **2. Pt. specific data relevant to this drug:** Pt. HR was 61BPM; PTs BP was 141/49 which is low. Pt. showed no S/S of HTN while present in the ICU or Dialysis center.
Drug Name:Epogen(Epoetin) **Dose: 5500 units** **Frequency: After dialysis** **Route: SC,IV** **Calculations:**	**1.Pharmacologic/therapeutic classification of drug:** Pharmocologic:hormones Therapeutic: antianemics **2. Mechanism of action and the end result:** Stimulates erythropoiesis, maintains and may elevate RBC's decreasing the need for transfusions. Increase in HCT to 30-36% with improvements in symptoms of anemia in Pts. With chronic renal failure. **3. Pt. Specific Benefit of this drug:** To decrease the S/S of anemia by using the least invasive method first.	**1. Pt. specific nursing responsibilities for this drug:** Monitor BP, S/S of anemia, dialysis shunts, Labs-WBC's, Platelets, Ptt, INR, HCT, CBC with differential, HgB, Iron, Electrolytes. Assess for seizures, HTN, CHF, MI, stroke. **2. Pt. specific data relevant to this drug:** Pt. RBC's 4.28L, Hgb 11.7L, Hct 37.5L, Lymph 17.9L, Mono 19.1H. Pt was also in uncompensated metabolic alkalosis throwing off all of his ABG's. His Ph was high, Hgb was low, CO2 was low, O2 was high HCO3 was high this was caused by the patient having renal disease and going through dialysis.

Drug Name: Pantoprazole(Protonix) **Dose: 40mg** **Frequency: qd** **Route: PO, IV** **Calculations:**	**1.Pharmacologic/therapeutic classification of drug:** Therapeutic-antiulcer agent Pharmacologic-proton pump inhibitor **2. Mechanism of action and the end result:** .Binds to an enzyme in the presence of acidic gastric pH, preventing the final transport of hydrogen ions into the gastric lumen. Lessens gastric reflux, healing of duodenal ulcers and esophagitis, decrease in hypersecretory conditions. **3. Pt. Specific Benefit of this drug:** Pt. was not ordered this drug but it is common practice in the ICU to give this as a preventative medication to control acid reflux.	**1. Pt. specific nursing responsibilities for this drug:** Assess for epigastric or abdominal pain and for frank or occult blood in stool, emesis or gastric aspirate. Monitor for headache, abdominal pain, diarrhea, eructation, flatulence, and hyperglycemia. **2. Pt. specific data relevant to this drug:** None
		All medications taken from (Davis, 2011)**.**

References

Black, J. M., & Hawks, J. H. (2009). *Medical Surgical Nursing Clinical Management for Positive Outcomes eighth edition.* Saint Louis: Saunders Elsevier.

Carpenito-Moyet, L. J. (2010). Excess Fluid Volume. In L. J. Carpenito-Moyet, *Nursing Diagnosis Application to Clinical Practice* (pp. 272-277, 167-175). Philadelphia: Wolters Kluwer, Lippincott Williams & Wilkins.

Davis, F. (2011). *Davis's Drug Guide for Nurses 12th edition.* Philadelphia: F.A. Davis Company.

Ureden, L. D. (2010). *Critical Care Nursing Diagnosis and Management sixth edition.* St. Louis: Mosby Elsevier.

Venes, Donald M.D., M.S.J. (2005). *Tabors Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company.