

Polypharmacy Project

Elizabeth Pasieta, BSN Student

N322 Introduction to Pharmacology

Lakeview College of Nursing

Brittany Lawson MSN, RN

04/26/2020

Patient: 58 year old female

Social History: Patient lives alone in an apartment. Has no family in the area. Recently has lost her job and insurance. Smokes a pack of cigarettes per day but is trying to quit.

Medical History: Diabetes type 1, Diabetic neuropathy, hypertension, hyperlipidemia, depression, insomnia, gastroesophageal reflux disease

Allergies: Codeine and latex

Wt: 175 pounds Ht 5 ft. 9 in

Medications:

Novolin R 10 unites with each (TID) SUBQ

Novolog sliding scale SUBQ prn

Gabapentin 400 mg TID PO

Lisinopril 5 mg daily PO

Benicar HCT 20 mg/25 mg PO daily

Cymbalta 60 mg PO daily

Ambien CR 12.5 mg as needed at bedtime PO

Protonix 40 mg daily PO

Conjugated g-estrogens (Premarin) 0.625 mg daily PO

Atorvastatin 20 mg PO daily

Drug #1	Drug Name (Generic): Regular insulin
Drug Class: Short-acting Insulin	Drug Name (Trade): Novolin R
How is the medication taken: (include dose, route, and frequency)	10 units, TID, subcutaneous injection
Specific Directions not included above:	Novolin R is to be given with each meal, specifically 30 to 45 minutes before meals.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	Yes, this medication along with Novolog, will decrease the patient's blood glucose. Lisinopril is an ACE inhibitor that can increase the effects of insulin resulting in hypoglycemia (Drugs.com, 2020). Estrogens increase insulin requirements, the patient is taking conjugated g-estrogens. Olmesartan causes an increase in the effects of insulin which can lead to hypoglycemia(Drugs.com, 2020).
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	None
Does any of the client's past medical history contradict the use of this medication?	No
What is the indication for use of this medication based on the client's past medical history? (If unable to determine an indication based on past medical	The patient is a Type 1 Diabetic

history, please list potential indications for use of the medication in general)	
What would you teach the client about taking this medication?	It is important to monitor blood glucose levels at least 4 times per day, with meals and at bedtime. The patient must also be able to identify hyper and hypoglycemic episodes and know how to properly correct them. Medical attention is necessary if blood glucose exceeds 250 mg/dL, if ketones are present in the urine, if the patient has a temperature above 100 degrees Fahrenheit, if they have vomiting and diarrhea or difficulty breathing, angina, severe abdominal pain or dehydration(Frandsen & Pennington, 2018).
How much would medication cost per month if paying out of pocket?	The patient will pay about \$153.26 per month for Novolin R (Drugs.com, 2020).

Drug #2	Drug Name (Generic): insulin aspart
Drug Class: Insulin analog	Drug Name (Trade): Novolog
How is the medication taken: (include dose, route,	Sliding scale, subcutaneous injection, PRN

and frequency)	
Specific Directions not included above:	This insulin is to be taken to correct for high blood glucose.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	Yes, this medication along with the Novolin R will decrease the patient's blood glucose. Lisinopril is an ACE inhibitor that can increase the effects of insulin and cause hypoglycemia (Drugs.com, 2020). Estrogens increase insulin requirements, the patient is taking conjugated g-estrogens (Frandsen & Pennington, 2018). Olmesartan also interacts with insulin aspart by increasing the effects of insulin and results in a greater risk for hypoglycemia (Drugs.com, 2020).
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	None
Does any of the client's past medical history contradict the use of this medication?	No
What is the indication for use of this medication based on the client's past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general)	The patient has Type 1 Diabetes.
What would you teach the client about taking this medication?	It is important for the patient to be able to understand the differences between the types of insulins she is taking. The patient needs to be aware of what a sliding scale is utilized for and how to use it properly to avoid over or under dosing on insulin.

How much would medication cost per month if paying out of pocket?	The patient will pay about \$311.59 per month out of pocket for Novolog(Drugs.com, 2020)
--	--

Drug #3	Drug Name (Generic): gabapentin
Drug Class: Gamma-aminobutyric acid structural analog	Drug Name (Trade): Neurontin
How is the medication taken: (include dose, route, and frequency)	400 mg, TID, PO
Specific Directions not included above:	Take with food to decrease gastrointestinal discomfort. Do not cut, crush, or chew extended-release tablets(Frandsen & Pennington, 2018).
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	Gabapentin when taken with zolpidem can result in an increase in CNS effects and/or respiratory depression. Coadministration can also result in sedation, impaired attention, judgement, thinking and psychomotor skills may increase(Drugs.com, 2020). When taken with duloxetine the anticonvulsant effects may decrease. Together they can result in somnolence and psychomotor impairment(Drugs.com, 2020).
Lifestyle interactions:	Alcohol use can increase CNS depression(Frandsen & Pennington, 2018).

(Daily tobacco use, alcohol, drugs, etc.)	
Does any of the client's past medical history contradict the use of this medication?	No
What is the indication for use of this medication based on the clients past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general)	The patient may have diabetic neuropathy(Frandsen & Pennington, 2018).
What would you teach the client about taking this medication?	Do not stop taking gabapentin abruptly. Report severe nausea and vomiting, changes in stool or urine color, diarrhea, or changes in neurologic function or seizures to the prescriber. Do not drive or operate machinery with central nervous system depression(Frandsen & Pennington, 2018).
How much would medication cost per month if paying out of pocket?	If the patient pays out of pocket for generic gabapentin they will spend roughly \$54.43 a month(Drugs.com, 2020).

Drug #4	Drug Name (Generic): lisinopril
----------------	--

Drug Class: Antihypertensive	Drug Name (Trade): Prinivil
How is the medication taken: (include dose, route, and frequency)	5 mg, PO, daily
Specific Directions not included above:	Patient should monitor BP frequently, this medication should be used with caution if patient has heart failure, fluid volume deficit, or impaired renal function(Jones & Bartlett, 2019).
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	Yes, when taken with insulin aspart and Novolin R the patient is at an increased risk for hypoglycemia(Drugs.com, 2020). Benicar can also interact with lisinopril and lead to hypotension, hyperkalemia, syncope and renal dysfunction(Drugs.com, 2020). The administration of lisinopril and zolpidem requires close monitoring because it can cause hypotension, dizziness, lightheadedness, syncope, orthostasis or tachycardia(Drugs.com, 2020).
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	Alcohol use while taking lisinopril can lead to an increased risk of hypotension. The patient is also at risk of hyperkalemia if consuming a high-potassium diet(Jones & Bartlett, 2019).
Does any of the client's past medical history contradict the use of this medication?	Lisinopril is contraindicated in patients with diabetes, so this patient should be taught how to monitor her blood glucose frequently when taking this medication(Jones & Bartlett, 2019).
What is the indication for use of this medication based on the client's past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general)	The patient is on this medication to lower her blood pressure.

What would you teach the client about taking this medication?	The patient will need to be instructed how to monitor her blood pressure and blood glucose when taking this medication. It is also important to teach the patient that lisinopril will not cure their hypertension and treatment will most likely be needed permanently(Jones & Bartlett, 2019).
How much would medication cost per month if paying out of pocket?	Lisinopril on average cost \$15.54 for a month's supply of 5 mg tablets(Drugs.com, 2020).

Drug #5	Drug Name (Generic): olmesartan
Drug Class: Angiotensin II Receptor Blocker	Drug Name (Trade): Benicar HCT
How is the medication taken: (include dose, route, and frequency)	20mg/25mg, PO, Daily
Specific Directions not included above:	Patients may take this medication without food(Frandsen & Pennington, 2018).
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	Olmesartan can interact with lisinopril by increasing the antihypertensive effects and put the patient at risk for hypotension, hyperkalemia, syncope and renal dysfunction(Drugs.com, 2020). Olmesartan can also interact with zolpidem and cause increased antihypertensive effects. Patients need to let providers know if they experience dizziness, lightheadedness,

	<p>syncope, orthostasis, or tachycardia(Drugs.com,2020). Olmesartan can interact with insulin regular by increasing the effects of insulin and cause hypoglycemia(Drugs.com, 2020).</p> <p>Olmesartan can also interact with insulin aspart and have similar effects to that with the insulin regular. When taken together the effects of insulin are increased(Drugs.com, 2020).</p>
<p>Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)</p>	<p>Moderate to high levels of potassium and salt substitutes can increase the risk of hyperkalemia(Drugs.com, 2020).</p>
<p>Does any of the client’s past medical history contradict the use of this medication?</p>	<p>An adverse effect of olmesartan is hyperglycemia. The patient is a diabetic and should be sure to monitor her blood glucose levels and may need to increase her insulin to carbohydrate ratios(Frandsen & Pennington, 2018).</p>
<p>What is the indication for use of this medication based on the client’s past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general)</p>	<p>The patient has hypertension.</p>
<p>What would you teach the client about taking this medication?</p>	<p>Do not stop taking the medication abruptly. Abruptly stopping the medication can cause blood pressure to rise to levels that put the patient at an increased risk for a stroke or heart attack. Taking this medication with other antihypertensive medications can result in an increased risk for hypotension(Frandsen & Pennington, 2018).</p>
<p>How much would medication cost per month if paying out of pocket?</p>	<p>Out of pocket, Benicar HCT costs \$250.66 per month(Drugs.com, 2020).</p>

<p>Drug #6</p> <p>Drug Class: Selective serotonin and norepinephrine reuptake inhibitor</p>	<p>Drug Name (Generic): duloxetine</p> <p>Drug Name (Trade): Cymbalta</p>
<p>How is the medication taken: (include dose, route, and frequency)</p>	<p>60 mg, daily, PO</p>
<p>Specific Directions not included above:</p>	<p>This medication should not be given if the patient has renal failure or if they use alcohol excessively. It is important to assess the patient's blood pressure before beginning treatment to have a normal baseline(Jones & Bartlett, 2019).</p>
<p>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</p>	<p>Zolpidem when taken with duloxetine can cause sedation and impairment of attention, judgement, thinking, and psychomotor skills can increase (Drugs.com,2020).</p>
<p>Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)</p>	<p>Alcohol use can lead to hepatotoxicity(Jones & Bartlett, 2019).</p>
<p>Does any of the client's past medical history contradict the use of this medication?</p>	<p>No</p>
<p>What is the indication for use of this medication based on the client's past medical history? (If unable</p>	<p>To treat the patient's diagnosis of depression.</p>

to determine an indication based on past medical history, please list potential indications for use of the medication in general)	
What would you teach the client about taking this medication?	Do not stop taking this medication abruptly, do not crush or chew the capsule(Jones & Bartlett, 2019).
How much would medication cost per month if paying out of pocket?	If the patient is paying out of pocket for a month's supply of Cymbalta they will pay about \$341.33(Drugs.com, 2020).

Drug #7	Drug Name (Generic): zolpidem
Drug Class: Imidazopyridine derivative	Drug Name (Trade): Ambien
How is the medication taken: (include dose, route, and frequency)	12.5 mg, PO, as needed at bedtime
Specific Directions not included above:	Zolpidem has a fast onset so be sure to administer right before bed on an empty stomach, and can produce muscle relaxant effects at high doses(Jones & Bartlett, 2019).
Does this medication interact with any other	Taking Ambien with Cymbalta can increase the risk of delusions, disorientation, and

medication(s) on this list? (see rubric for further instruction)	hallucinations. The administration of lisinopril and zolpidem requires close monitoring because it can cause hypotension, dizziness, lightheadedness, syncope, orthostasis or tachycardia(Drugs.com, 2020). Coadministration with gabapentin can also result in sedation, impaired attention, judgement, thinking and psychomotor skills may increase(Drugs.com, 2020). Olmesartan can also interact with zolpidem and cause increased antihypertensive effects. Patients need to let providers know if they experience dizziness, lightheadedness, syncope, orthostasis, or tachycardia(Drugs.com,2020).
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	Alcohol use will increase the CNS depression effects of Ambien(Jones & Bartlett, 2019).
Does any of the client's past medical history contradict the use of this medication?	No
What is the indication for use of this medication based on the client's past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general)	The patient is taking this medication for insomnia.
What would you teach the client about taking this medication?	Do not increase dosage without doctor consent, take the medication on an empty stomach right before going to bed, when first starting this medication be cautious of driving vehicles because the sedative effects can last longer than intended(Jones & Bartlett, 2019).

How much would medication cost per month if paying out of pocket?	If the patient were to take this every night for one month it would roughly cost \$269.32(Drugs.com, 2020).
--	---

Drug #8	Drug Name (Generic): pantoprazole
Drug Class: Gastric acid proton pump inhibitor	Drug Name (Trade): Protonix
How is the medication taken: (include dose, route, and frequency)	40 mg, PO, daily
Specific Directions not included above:	Monitor patient's urine output because Protonix can cause acute interstitial nephritis. This medication should not be taken longer than it is needed for(Jones & Bartlett, 2019).
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	When taken with atorvastatin the patient should alert the provider of unexplained muscle pain, tenderness, weakness, fever, or malaise. Patients taking these medications together are at an increased risk of musculoskeletal toxicity (Drugs.com, 2020).
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	None
Does any of the client's past medical history contradict the use of this medication?	No
What is the indication for use of this medication	Protonix is taken to treat gastroesophageal reflux disease.

based on the client's past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general)	
What would you teach the client about taking this medication?	Take this medication 30 minutes before meals. Do not chew or crush this medication because it can cause irritation in the mouth(Jones & Bartlett, 2019).
How much would medication cost per month if paying out of pocket?	Without insurance, this medication will cost the patient almost \$500 per month(Drugs.com,2020).

Drug #9 Drug Class: Estrogen derivative, ovarian hormone	Drug Name (Generic): conjugated estrogen Drug Name (Trade): Premarin
---	---

replacement	
How is the medication taken: (include dose, route, and frequency)	0.625 mg, PO, daily
Specific Directions not included above:	Assess patient's blood pressure because this medication can lead to fluid retention(Jones & Bartlett, 2019).
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	Conjugated estrogen can cause hyperglycemia in diabetic patients taking insulin(Drugs.com, 2020).
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	Smoking while taking this medication can increase the client's risk for pulmonary embolism, stroke, thrombophlebitis, and TIA (Jones & Bartlett, 2019).
Does any of the client's past medical history contradict the use of this medication?	No
What is the indication for use of this medication based on the client's past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general)	Based on the client's age and dosage of the medication, it is being used to treat vaginal and vulvar atrophy(Jones & Bartlett, 2019).
What would you teach the client about taking this medication?	Report any unusual vaginal bleeding to the doctor immediately. It is important to recognize the signs and symptoms of a thromboembolism such as abdominal pain, chest pain, headache, eye changes, or severe leg pain. The patient would need to be educated on her increased risk

	for thromboembolism due to smoking. It is imperative to maintain all annual exams, especially to check blood pressure and for breast and pelvic exams (Frandsen & Pennington, 2018).
How much would medication cost per month if paying out of pocket?	Oral conjugated g-estrogen costs about \$208.63 for a 30 day supply of tablets (Drugs.com, 2020).

Drug #10	Drug Name (Generic): atorvastatin
Drug Class: HMG-CoA Reductase Inhibitor	Drug Name (Trade): Lipitor
How is the medication taken: (include dose, route, and frequency)	20 mg, PO, daily
Specific Directions not included above:	It is recommended to take atorvastatin in the evening or before bedtime because this is the time period when the majority of cholesterol synthesis occurs. Do not take with grapefruit juice because it increases atorvastatin levels(Frandsen & Pennington, 2018).
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	When taken with pantoprazole the patient should alert the provider of unexplained muscle pain, tenderness, weakness, fever, or malaise. Patients taking these medications together are at an increased risk of musculoskeletal toxicity (Drugs.com, 2020).

Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	None
Does any of the client's past medical history contradict the use of this medication?	No
What is the indication for use of this medication based on the client's past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general)	Patient has a history of hyperlipidemia.
What would you teach the client about taking this medication?	It is imperative to monitor liver function on a regular basis. Liver function tests occur before starting the medication, at 12 weeks after starting the medication and at every dosage increase, and then periodically. It is also essential to take preventative measures to lower cholesterol such as low fat diet, exercise, weight loss, and the cessation of smoking. Increased lipid levels puts the patient at risk for heart attack, stroke, and peripheral arterial disease(Frandsen & Pennington, 2018).
How much would medication cost per month if paying out of pocket?	Atorvastatin 20 mg out of pocket costs about \$15.50 per month (Drugs.com,2020).

Is there anything about this medication regimen scenario that might indicate a potential difficulty in maintaining compliance with the orders as listed?

The most significant potential difficulty with these medications would be the overall cost. In total, the patient will need to pay about \$2,120.22 out of pocket per month. The patient recently lost her job and no longer has insurance, so she has to pay \$2,120.22 on her own, every month if she wants to take all of her medications as prescribed. Another potential difficulty with maintaining compliance would be taking the medicines at the correct times. The patient should take at least nine drugs and twelve dosages throughout the day, not including her as-needed medications. The high volume of drugs can lead to missed dosages and medications taken at incorrect times.

An additional potential difficulty in maintaining medication compliance would be dealing with medication interactions. Novolin R and Novolog, when taken with lisinopril and Benicar HCT, can result in a decrease in blood sugars (Drugs.com, 2020). Decreasing blood glucose can be very dangerous, especially when taking insulin as well. If blood sugars become too low, the patient can experience seizures, coma, or even death (Frandsen & Pennington, 2018). On the opposite end, g-estrogens(Premarin) cause an increase in blood glucose levels (Drugs.com, 2020). The large flux of blood glucose levels is not suitable for the patient as a person with diabetes. These medication interactions with blood glucose levels need to receive questioning with her primary care provider and her endocrinologist.

Another drug interaction includes gabapentin. Gabapentin, when taken with zolpidem, can cause respiratory depression and an increase in CNS effects(Drug.com, 2020). Gabapentin also interacts with Cymbalta and can cause excessive drowsiness and psychomotor impairment (Drugs.com, 2020). Cymbalta then, when taken with zolpidem, causes sedation, impaired attention, judgment, thinking, and psychomotor skills can increase(Drugs.com, 2020). Zolpidem, when administered with lisinopril, also can cause hypotension, dizziness, lightheadedness, syncope, orthostasis, and tachycardia(Drugs.com, 2020). Lisinopril was mentioned above with the insulins; however, it also interacts with Benicar HCT. The reaction with Benicar HCT results in hypotension, hyperkalemia, syncope, and renal dysfunction (Drugs.com, 2020). Zolpidem, when administered with lisinopril, also can cause hypotension, dizziness, lightheadedness, syncope, orthostasis, and tachycardia(Drugs.com, 2020). Benicar HCT interacts with lisinopril and both insulins, as mentioned prior. It also interacts with zolpidem, which causes an increase in antihypertensive effects as well (Drugs.com, 2020). The patient also takes Protonix. Protonix and atorvastatin can cause musculoskeletal toxicity(Drugs.com,

2020). As listed above, the patient's medications have many interactions amongst each other. These side effects can be troublesome and may cause the patient to stop taking them. The disruption in medication administration can lead to further complications.

Is there anything about this medication regimen scenario that might assist the client in maintaining the medication regimen as ordered?

The patient does have a majority of daily medications, which would make it easier to take them all at once in the morning. Her other medicines, such as her insulin and her gabapentin, are prescribed TID, and with meals. It may be beneficial for her to take all of her medications with breakfast, then repeat her insulin with her gabapentin with lunch and dinner. It also would not hurt to reinforce patient education. It is essential to ask the patient how she is taking her medications to make sure she is administering them as prescribed. The subject of her diabetes management is another potential teaching topic. An example would be to print the patient's sliding scale formula for her to reference when to give herself insulin.

What suggestions might you make to the prescriber and/or client (or questions you might ask the prescriber) to help this client scenario? (think about decreasing the potential for interaction(s) through medication reduction, other potential medications, diet changes, lifestyle changes, etc)

Assistance in maintaining a medication regimen for the patient may include utilizing a monthly medication dispenser. The patient could divide her medications throughout the boxes designated for morning, afternoon, and night. She could also set alarms on her phone or in her home as a reminder to take her medications. Another option would be to sync her medications with her meals so

she will get into the pattern of taking her medications before she eats. It would also be essential to discuss insurance with the patient. Her decrease in income makes her eligible for Medicaid. The patient has multiple comorbidities, which makes it impossible to afford all of her medications with no income. It is imperative for her to have insurance, if not through an employer, at least she can get help from the government in the meantime.

The patient would also need to receive questioning upon her lifestyle. She has a history of smoking and states that she is trying to quit. If the patient stops smoking, this will have an overall positive effect on her health. According to the CDC, quitting smoking is having a significant impact on the cardiovascular system. After one year of quitting, the risk for myocardial infarction reduces drastically. After two to five years, the risk of stroke has decreased to that of a non-smoker. Five years of smoking free results in the drop of cancer risk to half of what it originally was(CDC,2020). The patient has hyperlipidemia and hypertension, which also puts the patient at risk for cardiovascular disease. If the patient were to quit smoking, her overall health will not only be improved, but she may be able to have a decrease in her medication dosages or stop taking some of her medications overall. Along with preventing cardiovascular disease is exercise. According to the Mayo Clinic, exercise helps to prevent any disease and complications. Some listed were stroke, depression, and many types of cancer(Mayo Clinic Staff, 2020). Exercise is beneficial to everyone and could significantly impact the patient's health.

When consulting with the provider, the medication prices would be a priority. The patient is taking several brand name medications that cost far more than the generic brands. If the doctor were to change the patient's prescriptions to generic brands, this would help cut down on the patient's monthly cost. The patient is currently taking six brand name medications. These medications are Protonix,

Ambien, Cymbalta, Benicar HCT, Novolog, and Novolin R. The doctor may also require discussion as to if the patient is eligible to potentially lower any of her medication doses which could also help to lower costs for the patient. Reducing costs is a priority because the patient is currently unemployed and no longer has insurance. It would also be imperative to discuss the multiple drug interactions between the medications prescribed. The interactions resulted in increased effects of some meds and decreased in others, as well as potentially harmful CNS effects. The two drugs that affect most of the medications listed are lisinopril and Benicar HCT. Instead of asking the prescriber to completely change the patient's medication regimen, finding alternatives for these two medications would make a difference. A possible option would be amlodipine. Amlodipine does not interact with the patient's medicines like lisinopril and Benicar HCT (Drugs.com, 2020). Another recommendation would be to change the patient's PRN Ambien to melatonin. Melatonin also has decreased interactions compared to Ambien and is cheaper (Drugs.com, 2020). Altering the patient's medications is also a priority because it can reduce the risk of side effects due to polypharmacy.

What would the patients monthly out of pocket expense for all 10 medications? (Total Cost for all 10 meds)?

The patient's total monthly out of pocket cost for her medications is about \$2,120.22.

Reflective Statement of Experience:

This experience has provided insight into the perspective of the patient, nurse, med rec, a pharmacist, and a provider. Through the point of view of the patient, one can see the potential adverse effects that they may be experiencing due to the administration of

multiple medications. The role of medication reconciliation is to achieve a complete medication list to begin to organize and decipher interactions. It is then the role of the provider, the pharmacist, and the nurse to review the list and identify harmful medication reactions. The nurse will be able to monitor the patient the closest due to their position at the bedside and can alert the provider of potential allergic reactions after administering medications.

This assignment involved a lot of critical thinking and creating connections. It gave a clear example of the effects of polypharmacy. Exposure to polypharmacy is essential, especially as future nurses. Due to the large numbers of patients taking multiple medications for various comorbidities. This experience will make a future nurse more aware of the potential complications that their patients may experience due to the amount and the drugs that patients are taking.

The polypharmacy assignment primarily focused upon the role of the nurse. The doctors prescribe the medications, but the nurses will provide most of the education and answer follow up questions. For example, when a nurse is discharging a patient, they will need to produce printed documents that include information about the patient's medications. The nurse will go over these documents with the patients. Nurses have the responsibility to make sure their patients have a clear understanding of how and when to take the medications. As well as what not to do while taking them.

Overall, this assignment was informative and beneficial to the overall perspective of polypharmacy and the role of a nurse. This information will be carried on to future experiences and hopefully make potential nurses more aware to provide better patient care, as well as patient advocacy.

References

- CDC(2020).Smoking and tobacco use: Health effect of cigarette smoking. *Centers for disease control and prevention*. Retrieved on April 26th, 2020 from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm
- Drugs.com(2020). *Ambien prices*. Retrieved on April 17th, 2020 from <https://www.drugs.com/price-guide/ambien>
- Drugs.com(2020). *Atorvastatin prices*. Retrieved on April 17th, 2020 from <https://www.drugs.com/price-guide/atorvastatin>
- Drugs.com(2020). *Benicar HCT prices*. Retrieved on April 23rd, 2020 from <https://www.drugs.com/price-guide/benicar-hct>
- Drugs.com(2020). *Cymbalta prices*. Retrieved on April 23rd, 2020 from <https://www.drugs.com/price-guide/cymbalta>
- Drugs.com(2020). *Gabapentin prices*. Retrieved on April 22nd, 2020 from <https://www.drugs.com/price-guide/gabapentin>
- Drugs.com(2020). *Drug interaction report*. Retrieved on April, 22nd, 2020 from https://www.drugs.com/interactions_check.php?drug_list=276-0,1147-0,1351-1569,1341-802,2333-1544,949-0,2360-0,1476-0,1745-1114,1790_1152&types%5B%5D=major&types%5B%5D=minor&types%5B%5D=moderate&types%5B%5D=food&types%5B%5D=therapeutic_duplication&professional=1

Drugs.com(2020). Drug interaction report. Retrieved on April 25th, 2020 from https://www.drugs.com/interactions_check.php?drug_list=1351-1569,1341-802,1147-0,1790-1152,2360-381,172-0,1548-0,276-0,949-2273

Drugs.com(2020). *Lisinopril prices*. Retrieved on April 23rd, 2020 from <https://www.drugs.com/price-guide/lisinopril>

Drugs.com(2020). *Novolin R prices*. Retrieved on April 22nd, 2020 from <https://www.drugs.com/price-guide/novolin-r>

Drugs.com(2020). *Novolog prices*. Retrieved on April 22nd, 2020 from <https://www.drugs.com/price-guide/novolog>

Drugs.com(2020). *Premarin prices*. Retrieved on April 17th, 2020 from <https://www.drugs.com/price-guide/premarin>

Drugs.com(2020). *Protonix prices*. Retrieved on April 17th, 2020 from <https://www.drugs.com/price-guide/protonix>

Frandsen, G., Pennington, S.S.(2019). *Abrams' clinical drug therapy: Rationales for nursing practice*(11th ed.). Wolters Kluwer.

Jones & Bartlett (2019). *2019 Nurse's drug handbook*(18th ed.). Jones & Bartlett Learning, LLC

Mayo Clinic Staff(2019). Fitness: 7 benefits of regular exercise. *Mayo Clinic foundation for medical education and research*.

Retrieved on April 26th, 2020 from <https://www.mayoclinic.org/healthy-lifestyle/fitness/in-depth/exercise/art-20048389>

N322 Polypharmacy Rubric

You will be given a scenario about your client with a list of medications. You will make sure your client is taking medications correctly, educate them on educations, and look for contradictions, costs, over the counter lifestyle factors & compliance with medications.

Please address all rubric items. Please include a reflection of your experience. You may place drugs in each separate paragraph or in a table. You must cite your source for each paragraph or table.

N322 Polypharmacy Grading Rubric

Criteria	Excellent 40 points	Acceptable 31-39 points	Unacceptable 0-30 points	Points Earned
Each drug should have a completed breakdown within the tables provided, which includes the following: <ul style="list-style-type: none"> • Drug class 	All key components were addressed within the	The student provided the required information for some of the medications, but not all and/or the	The student failed to address a sufficient number of the listed components within	___/40

<ul style="list-style-type: none"> Generic name Trade name How is the medication taken (include dose, route, frequency) 	<p>paper and were accurate.</p>	<p>answers provided were inaccurate. (Each individual component for each medication is worth one point)</p>	<p>the paper and/or the components were addressed but were inaccurate. (Each individual component for each medication is worth one point)</p>	
<p>Criteria</p>	<p>Excellent 10 points</p>	<p>Acceptable 8-10 points</p>	<p>Unacceptable 0 - 7 points</p>	<p>Points Earned</p>
<p>Specific Directions not included above:</p> <ul style="list-style-type: none"> Is there any type of medication on the patient list that have specific directions? <p>(before bed, before breakfast, 30 minutes before meals, etc..)</p>	<p>All key components were addressed within the paper.</p>	<p>The student did list some of the medications that required specific directions, however some of the medications included specific directions that were not addressed and/or were inaccurate. (For each medication this question if worth one point)</p>	<p>Student failed to answer the questions and/or the answers were inaccurate. (For each medication this question is worth one point)</p>	<p>___/10</p>
<p>Criteria</p>	<p>Excellent 0 points</p>	<p>Acceptable 16-19</p>	<p>Unacceptable 0-15 points</p>	<p>Points Earned</p>
<p>Does this medication have any potentially serious interactions with any other medication(s) on this list, and/or potential interactions that should be closely</p>	<p>All medications reviewed and student explained medication interactions.</p>	<p>The student did list some of the potential interactions of the medication(s), but failed to address all potential interactions that are serious and/or need close monitoring.</p>	<p>Student failed to answer question and/or The student did list some of the potential interactions of the medication(s), but failed to address</p>	<p>___/20</p>

<p>monitored due to co-administration?</p> <ul style="list-style-type: none"> Do any of the medications interact with each other? <p>(Please note: if there is an interaction between two medication, you MUST list that interaction on BOTH medications to receive full credit. You may utilize the same verbiage/wording on each medication, we want to know you are thinking about it when considering each medication)</p>		<p>(for each medication listed this question is worth two points)</p>	<p>all potential interactions that are serious and/or need close monitoring. (for each medication listed this question is worth two points)</p>	
---	--	---	---	--

Criteria	Excellent 5 points	Acceptable 4 points	Unacceptable 0 -3 points	Points Earned
<p>Lifestyle interactions:</p> <ul style="list-style-type: none"> What lifestyle factors counteract with the medications? <p>(tobacco user, ETOH</p>	<p>Student showed knowledge why lifestyle would counteract</p>	<p>The student listed lifestyle interactions for some of the medications, but not all and/or the interactions listed were not priority or were incorrect. (For each</p>	<p>Student failed to answer question or the student listed lifestyle interactions for</p>	<p>___/5</p>

<p>use - 3 beers daily)</p>	<p>with medications</p>	<p>medication, this question is worth half a point)</p>	<p>some of the medications, but not all and/or the interactions listed were not priority or were incorrect. (For each medication, this question is worth half a point)</p>	
<p>Criteria</p>	<p>Excellent 10 points</p>	<p>Average 8-9</p>	<p>Unacceptable 0-7 points</p>	<p>Points Earned</p>
<ul style="list-style-type: none"> Does any of the client's past medical history contradict the use of this medication? 	<p>Student showed knowledge why the client's past medical history would contradict the use of the medication(s).</p>	<p>Student provided answers to the question(s), but failed to answer all the questions and/or the answers provided were inaccurate. (For each medication this question is worth one point)</p>	<p>Student failed to answer question or Student provided answers to the question(s), but failed to answer all the questions and/or the answers provided were inaccurate. (For each medication this question is worth one point)</p>	<p>___/10</p>

Criteria	Excellent 10 points	Acceptable 8-9 points	Unacceptable 0-7 points	Points Earned
<ul style="list-style-type: none"> What is the indication for use of this medication based on the client's past medical history? (If unable to determine an indication based on past medical history, please list potential indications for use of the medication in general) 	Student showed knowledge of medications and what conditions corresponds with medications	The student provided appropriate indications for some of the medications, but failed to capture all of the appropriate indications for use. (For each medication this question is worth one point)	Student failed to answer the question or The student provided appropriate indications for some of the medications, but failed to capture all of the appropriate indications for use. (For each medication this question is worth one point)	___/10
Criteria	Excellent 20 points	Acceptable 16-19 points	Unacceptable 0-15 points	Points Earned
<p>What would you teach the client about taking this medication?</p> <ul style="list-style-type: none"> What education is needed for the medication? (For each medication listed the student must prioritize two topics for client education) <p>(You must consider all</p>	Student showed the importance of medication education, and appropriate prioritized client education for the scenario provided.	The student provided some appropriate education for the client, but failed to capture all of the appropriately prioritized education for the client. (Each topic of education is worth one point)	Student failed to answer the question OR The student provided some appropriate education for the client, but failed to capture all of the	___/20

component(s) of the medication list when answering this question... if there are potential interactions with other medication this may be a priority over general education for this one medication)			appropriately prioritized education for the client. (Each topic of education is worth one point)	
Criteria	Excellent 10 points	Acceptable 8-9 points	Unacceptable 0-7 points	Points Earned
Is there anything about this medication regimen/ scenario that might indicate a potential difficulty in maintaining compliance with the orders as listed? <ul style="list-style-type: none"> Why would the patient have difficulty maintaining the medication regiment? (Please consider all factors in the scenario and all information provided within your chart – including cost, insurance, frequency of administration, etc)	Student had knowledge on why a patient would have difficulty with medication regiment	The student indicated some potential reasons that the client may have difficulty, however the student failed to indicate a reason OR an appropriate reason for some of the medications (This question is worth one point for each medication)	Student failed to answer the question OR the student indicated some potential reasons that the client may have difficulty, however the student failed to indicate a reason OR an appropriate reason for some of the medications (This question is worth one point for each	___/10

Criteria	Excellent 10 points	Acceptable 8-9 points	Unacceptable 0-7 points	Points Earned
<p>Is there anything about this medication regimen/ scenario that might assist the client in maintaining the medication regimen as ordered?</p> <ul style="list-style-type: none"> • What factors are present to remain compliant? <p>(Please consider all factors in the scenario and all information provided within your chart – including cost, insurance, frequency of administration, etc.</p>	Student had knowledge on medication compliance	The student answered the question appropriately for some of the medications but failed to indicate all of the factors that are present that assist with compliance. (This question is worth one point for each medication)	<p>medication)</p> <p>Student failed to answer the question OR The student answered the question appropriately for some of the medications but failed to indicate all of the factors that are present that assist with compliance. (This question is worth one point for each medication)</p>	___/10
Criteria	Excellent 10 points	Acceptable 8-9 points	Unacceptable 0 points	Points Earned
<ul style="list-style-type: none"> • How much would this medication cost per month if the patient were to pay for them out of pocket? (best assessment based off of research) • What would the client's monthly out of pocket 	Student showed research on medication costs	The student provided accurate research for some of the medications, but failed to provided research for all medications (This question is worth one point for each medication, with the total cost being worth 5 points)	Student failed to answer the question OR The student provided accurate research for some of the medications, but failed to provided	___/15

<p>expense for all 10 medications?</p>			<p>research for all medications (This question is worth one point for each medication, with the total cost being worth 5 points)</p>	
<p>Criteria</p>	<p>Excellent 20 points</p>	<p>Acceptable 16-19 points</p>	<p>Unacceptable 0-15 points</p>	<p>Points Earned</p>
<p>The student must appropriately format the paper and include all of the following:</p> <ul style="list-style-type: none"> Entire document must include appropriate citations, reference page, title page, page numbers, running head, all with appropriate formatting per APA (10 points - each missing or inaccurate portion per APA is worth one point) The student provided a rubric attached for grading (3 points) 	<p>The document included a title page, the rubric, the client scenario, a reference page which included five references that were cited within the document. APA formatting was consistent with the APA manual.</p>	<p>The document did not meet all of the criteria for formatting/ referencing. See “criteria” to the left for further breakdown.</p>	<p>The document did not meet all of the criteria for formatting/ referencing. See “criteria” to the left for further breakdown.</p>	<p>___/20</p>

<ul style="list-style-type: none"> • The student included the provided client scenario on page two of the document (2 points) • The paper included a minimum of five references which were cited within the document (each reference with one citation is worth 5 points) 				
Criteria	Excellent 20 points	Acceptable 16-19 points	Unacceptable 0-15 points	Points Earned
<p>What suggestions might you make to the prescriber and/or client (or questions you might ask the prescriber) to help this client scenario? (think about decreasing the potential for interaction(s) through medication reduction, other potential medications, diet changes, lifestyle changes, etc)</p> <p>Elaborate on this, explaining why you feel it should be addressed, why it</p>	<p>The student was able to identify one potential idea or question to present to the prescriber or client. This question showed evidence of good critical thinking.</p>	<p>The student was able to identify one potential idea or question to present to the prescriber or client, however there was a much higher priority question/suggestion/issue within the scenario that should have been addressed.</p>	<p>The student failed to answer the question OR the student answered the question, however the students answer was dangerously inaccurate.</p>	<p>____/20</p>

<p>is priority and provide evidence behind your presentation.</p>				
<p>Criteria</p>	<p>Excellent 10 points</p>	<p>Acceptable 8-9 points</p>	<p>Unacceptable 0-7 points</p>	<p>Points Earned</p>
<ul style="list-style-type: none"> • Reflective statement of experience should include the following: -insight into the project itself (a specific example within the project and its implications) -A basic understanding of polypharmacy -A reflection on this student nurses role in this scenario as a client advocate/educator/caregiver 	<p>The students provided reflection showed good insight into the project itself, polypharmacy, and the nurses role in client advocacy</p>	<p>The student provided a reflection, however the reflection lacked one of the following -insight into the project itself (a specific example within the project and its implications). -A basic understanding of polypharmacy -A reflection on this student nurses role in this scenario as a client advocate/educator/caregiver</p>	<p>Student failed to reflect on their project OR the student addressed only of the topics of reflection</p>	<p>___/10</p>
<p>Total Points</p>				<p>___/200</p>