

Polypharmacy Project

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N322 Introduction to Pharmacology

Lakeview College of Nursing

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PLEASE INSERT YOUR CLIENT SCENARIO HERE – THIS WILL BE PAGE TWO OF THE DOCUMENT

The patient who is a 95 year old female, who has been living in a long term facility for over ten years now. The patient family visits often, but her daughter visits her everyday to help with her daily care. The patient has a history of Dementia, Depression, Osteoarthritis, Hypertension, Glaucoma, and Fibromyalgia. In the past six months she seems more confused, and her depression and pain have been interfering with her performing her activities of daily living. The patient has no known allergies.

Medications;

Cardizem 240 mg daily PO

Furosemide 40 mg daily PO

Fluoxetine 20 mg BID PO

Lyrica 100 mg BID PO

Exelon 1.5 mg daily PO

Lanatrpost 1 drop to each eye daily

Ketorolac 20 mg 4 to 6 hours for pain PRN

Tylenol 500 mg 4 to 6 hours for pain PRN

Calcium with Vitamin D 1200 mg PO daily

Multivitamin PO daily

Drug #1	Drug Name (Generic): Diltiazem
Drug Class: Antihypertensive	Drug Name (Trade): Cardizem
How is the medication taken: (include dose, route,	This medication is 240 mg, it is taken once a day by mouth.

and frequency)	
Specific Directions not included above:	Advise the patient not to chew, but to swallow this medication as a whole.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	It interacts with Fluoxetine, by increasing the effects of the medication. She might need frequent dose adjustment or more frequent monitoring by her doctor to safely use both medications. It also interacts with Ketorolac by causing an increase in the blood pressure. The patient might need to have her blood pressure checked often. While using Rivastagimine with this medication causes excessive slowing of heart rate and low blood pressure.
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	The patient has no listed lifestyle interaction listed that could interact with her medication.
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.
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 using Diltiazem which is antihypertensive, it works by decreasing myocardial oxygen demand by relaxing coronary and vascular smooth muscle, reducing peripheral vascular and systolic and diastolic blood pressure.

history, please list potential indications for use of the medication in general)	
What would you teach the client about taking this medication?	The patient could be advised to avoid every over the counter medications, The patient should also be told to report chest pain, dizziness, and difficulty breathing.
How much would medication cost per month if paying out of pocket?	At meijer pharmacy, the medication cost \$15

<p>Drug #2</p> <p>Drug Class: Anti-depressant</p>	<p>Drug Name (Generic):Fluoxetine</p> <p>Drug Name (Trade): Prozac</p>
<p>How is the medication taken: (include dose, route, and frequency)</p>	<p>This medication is 20 mg, it is taken twice a day by mouth.</p>
<p>Specific Directions not included above:</p>	<p>Letting her know this medication not to stop this medication abruptly.</p>
<p>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</p>	<p>It interacts with diatizem by increasing the effects of diltiazem in the body, and it also increases blood levels. it might also cause irregular heartbeat, fluid retention, swelling and heart failure. Using Furosemide with this medication causes the blood sodium to get too low causing hyponatremia. It also interacts with Ketorolac increasing the risk for bleeding. Using this medication with Pregabalin also causes the sodium levels to get too low. While using Rivastigmine causes slowing of the heart rate, and irregular heartbeat.</p>
<p>Lifestyle interactions:</p>	<p>There is no listed lifestyle interaction that would affect the use of this</p>

(Daily tobacco use, alcohol, drugs, etc.)	medication.
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.
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 fluoxetine to treat her depression, it works by inhibiting the absorption of serotonin by the CNS. This medication is also used to treat Obsessive - Compulsive disorder, Panic, Bulimia, and Premenstrual dysmorphic disorder.
What would you teach the client about taking this medication?	I would caution her to avoid activities that might be hazardous. Tell her to report any unusual signs and symptoms to the doctor or nurse. inform her it might take several weeks before she begins to feel the full effects of this medication
How much would medication cost per month if paying out of pocket?	This medication would cost her \$7 monthly at Walmart pharmacy.

Drug #3	Drug Name (Generic): Rivastigmine
Drug Class: Antidementia	Drug Name (Trade): Exelon
How is the medication taken: (include dose, route, and frequency)	This patient takes 1.5 mg of this medication once daily.
Specific Directions not included above:	This medication should be taken with food to reduce GI effects.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	This medication interacts with Diltiazem. It works by excessively slowing down heart rate, and blood pressure. While using Rivastigmine with Fluoxetine causes slowing of the heart rate, and irregular heartbeat.
Lifestyle interactions:	There is no listed lifestyle interaction that would affect the use of this medication.

(Daily tobacco use, alcohol, drugs, etc.)	
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.
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 is taking this medication for Dementia. This medication slows the decline of cognitive function by mimicking the effects of acetylcholine blocked by high levels of anticholinergics. This medication is also used for Alzheimers and Parkinsons.
What would you teach the client about taking this medication?	Instruct her to report any new cardiac symptom such as chest pain, as it can be an emergency situation. The patient should take this medication with food to reduce adverse Gastrointestinal symptoms. Tell the patient that this medication cannot be stopped abruptly.
How much would medication cost per month if paying out of pocket?	At kroger pharmacy, this medication would cost \$20 for a thirty day supply.

Drug #4	Drug Name (Generic): Furosemide
Drug Class: Diuretic	Drug Name (Trade): Lasix
How is the medication taken: (include dose, route, and frequency)	The patient takes 40 mg by mouth once daily.
Specific Directions not included above:	Instruct the patient to the medication at the same time everyday.
Does this medication interact with any other medication(s) on this list? (see rubric for further	Using Fluoxetine with furosemide increases the chance of hyponatremia. While Ketorolac might cause a need for a dosage adjustment because of both their effects on

instruction)	both the blood pressure and kidney function.
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	There is no listed lifestyle interaction that would affect the use of this medication.
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.
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 Hypertension. which causes fluid build up in the body and this medication helps by inhibiting the retention of fluids and sodium in the body.
What would you teach the client about taking this medication?	Instruct her to take this medication at the same time everyday preferably earlier in the day to prevent nighttime diuresis. Advise her to change position slowly to prevent orthostatic hypotension. Tell her to take this medication with food or milk to prevent GI distress.

How much would medication cost per month if paying out of pocket?	A month supply of this medication at walmart would cost \$4
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Drug #5	Drug Name (Generic): Pregabalin
Drug Class: Anticonvulsant - agent	Drug Name (Trade): Lyrica
How is the medication taken: (include dose, route,	The patient takes 100 mg ths medication by mouth twice a day.

and frequency)	
Specific Directions not included above:	Tell the patient not stop taking this abruptly.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	This medication interacts with Fluoxetine and causes the sodium levels to get too low. It can also cause seizures.
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	There is no listed lifestyle interaction that would affect the use of this medication.
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.
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 using this medication for fibromyalgia. It binds to the CNS tissue where it may reduce calcium dependent release of several neurotransmitters.
What would you teach the client about taking this	Tell the patient not stop taking this abruptly, Tell the patient that the drug might cause

medication?	weight gain and edema.
How much would medication cost per month if paying out of pocket?	At Meijer pharmacy this medication would cost \$16 for a months supply

Drug #6	Drug Name (Generic): Latanoprost
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Drug Class: Ophthalmic glaucoma agent	Drug Name (Trade): Xalatan
How is the medication taken: (include dose, route, and frequency)	This medication has no listed dosage, but the patient is to use one drop in each eye daily.
Specific Directions not included above:	Advise the patient that it is best to lay down while using this medication.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	This medication does not interact with any other medication she is using.
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	There is no listed lifestyle interaction that would affect the use of this medication.
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.
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	The patient is taking this medication to treat glaucoma. It is used to reduce intraocular in ocular hypertension or open- angle glaucoma.

medication in general)	
What would you teach the client about taking this medication?	Teach the patient to wash hands before using this medication. Tell the patient to tilt her head back, look upward, and pull the eyelid out before applying the medication, and to close her eyes for at least two minutes to prevent the medication from draining out.
How much would medication cost per month if paying out of pocket?	At Meijer pharmacy, this medication would cost \$11 for a month's supply.

<p>Drug #7</p> <p>Drug Class: Acetic Acid derivative</p>	<p>Drug Name (Generic): Ketorolac</p> <p>Drug Name (Trade): Toradol</p>
<p>How is the medication taken: (include dose, route, and frequency)</p>	<p>The patient is to take 20 mg of this medication by mouth every four to six hours or as needed.</p>
<p>Specific Directions not included above:</p>	<p>Teach the patient to take this medication with antacid, meals, or snack. Do not use this medication for more than five days.</p>
<p>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</p>	<p>Taking Furosemide with this medication might cause a need for a dosage adjustment because of both their effects on both the blood pressure and kidney function.</p> <p>Taking this medication with Cardizem causes the blood pressure to rise, and the patient might need a dose adjustment and frequent blood pressure monitoring.</p> <p>Taking this medication with Fluoxetine increases the patient's risk of bleeding, especially in patients since she is elderly.</p>

<p>Lifestyle interactions:</p> <p>(Daily tobacco use, alcohol, drugs, etc.)</p>	<p>There is no listed lifestyle interaction that would affect the use of this medication.</p>
<p>Does any of the client's past medical history contradict the use of this medication?</p>	<p>There is nothing in her medical history that contradicts the use of this drug.</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 uses this medication for pain which could either be for her osteoarthritis and fibromyalgia. This medication synthesizes prostaglandin, which mediates inflammatory response and causes local vasodilation.</p>
<p>What would you teach the client about taking this medication?</p>	<p>Teach the patient report GI problems because this medication increases the risk of abdominal pain, indigestion, and black tarry stool.</p> <p>Tell the patient to avoid hazardous activities, because the CNS effect of the drug is unknown and it increases the risk of bleeding since she is taking this medication with fluoxetine.</p>
<p>How much would medication cost per month if</p>	<p>This medication would cost \$105, for a month's supply of this medication.</p>

paying out of pocket?	
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Drug #8	Drug Name (Generic): Acetaminophen
Drug Class: Paracetamol derivative	Drug Name (Trade): Tylenol

How is the medication taken: (include dose, route, and frequency)	The patient is taking 500 mg of this medication oral every four to six hours or as needed.
Specific Directions not included above:	I would tell her that she can crush or swallow tablets whole depending on her preference.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	This medication does not interact with any of the other medications on the list.
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	There is no listed lifestyle interaction that would affect the use of this medication.
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.
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	The patient is using this medication for pain. The patient has been reporting increasing pain for about six months that could either be caused by her fibromyalgia and osteoarthritis. It works by blocking prostaglandin production and interfering with pain

medication in general)	impulse generation in the peripheral nervous system.
What would you teach the client about taking this medication?	I would teach the patient that she can crush or swallow this medication as a whole. I would also teach that she cannot exceed the daily maximum dosage. Tell her skin reactions might occur
How much would medication cost per month if paying out of pocket?	This medication would cost \$10 for a month's supply.

Drug #9 Drug Class: Antacid	Drug Name (Generic): Calcium with vitamin D Drug Name (Trade): Calcrate
How is the medication taken: (include dose, route, and frequency)	This medication is for 1200 mg to be taken orally once a day.
Specific Directions not included above:	Advise the patient not to crush this medication.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	This medication interacts with diatizem. It increases the adverse effects of the medication. The patient would need to get her blood pressure checked regularly.
Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)	There is no listed lifestyle interaction that would affect the use of this medication.
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.

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 using this medication for her osteoporosis.
What would you teach the client about taking this medication?	Teach the patient to take this medication one to two hour after her meals. Teach her she has to drink a full glass of water after using this medication, also teach her that she cannot take this medication within two hours of taking another medication.
How much would medication cost per month if paying out of pocket?	This medication would cost \$5 for a months supply

Drug #10	Drug Name (Generic): multivitamin
Drug Class: Mineral supplement	Drug Name (Trade): Daily-vite, Tab-A-Vite
How is the medication taken: (include dose, route, and frequency)	This medication has no listed dosage, but it is to be taken by mouth once a day.
Specific Directions not included above:	Tell the patient she can only take this medication with water, and she has cannot chew or crush this medication.
Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)	This medication interacts with diatizem. It increases the adverse effects of the medication. The patient would need to get her blood pressure checked regularly.
Lifestyle interactions:	There is no listed lifestyle interaction that would affect the use of this medication

(Daily tobacco use, alcohol, drugs, etc.)	
Does any of the client's past medical history contradict the use of this medication?	There is nothing in her medical history that contradicts the use of this drug.
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)	There is no indication for the use of this medication in the patient's past medical history. Although there is no indication of use in her medical history, this medication is used to provide supplements and minerals that are not normally found in food.
What would you teach the client about taking this medication?	Tell the patient she cannot chew this medication
How much would medication cost per month if paying out of pocket?	This medication would cost \$7 for a month's supply.

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

I do not think there would be any medication regimen that would be difficult to comply with, since the patient is in long term care facilities, and long term care facilities have round the clock care for their patients. Although there might not be any problem with the medication administration, there might be some problems getting the patient herself to comply because she is suffering from chronic depression and dementia which would make it very difficult to cooperate with the nursing staff.

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

Most of the patient's medications are prescribed to be taken once daily, or as needed for her pain, and in long term care facilities the patient's medications are handled by a nursing staff._____

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)

I would recommend the provider to give the patient something stronger for her pain, like changing her regular Tylenol to Hydrocodone - Acetaminophen to help the patient. Although, changing from Tylenol to hydrocodone also interacts with four medications on the patient list like Furosemide, Prozac, Lyrica, and Diltiazem. It would help stop her chronic pain and help her return to her activities of daily living. I would also ask the provider to look into combining her Fibromyalgia and Osteoporosis into one medication like Tramadol, which only interacts with Rivastigmine and Prozac, and causes less problems than the adverse effects of both medications combined together.

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

If the patient were to pay for the all ten medications out of pocket, it would cost her about \$200 for a 30-day supply.

Reflective Statement of Experience:

Doing this polypharmacy made me understand how severe medication interaction is. It has also made me understand how some overlooked medications like Calcium, Vitamin D, and Multivitamins also interact with other medications people take. Therefore, this project is also interesting to me because it helps me understand that if I am not sure how medications would work together I should do my research before giving it medications.

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