

Polypharmacy Project

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N322 Introduction to Pharmacology

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## Polypharmacy Case 2

Background: Amy is an 87-year-old female that lives in an assisted living facility. Part of the living arrangements in the facility is a pharmacy service that delivers their meds in pre-filled medication packages (accu-pacs) every week. These packages are labeled with the date and time of administration. (see example picture attached). Amy is expected to take her medications independently. She has no family nearby to assist her. She is followed by her primary care physician as well as an endocrinologist, whom she currently visits monthly as her diabetes is not well controlled. Amy does not have a driver's license and is experiencing significant difficulty with her vision r/t diabetic retinopathy. Amy does not drink or use illicit drugs. Amy does have a history of smoking cigarettes (26 pack years). She quit 10 years ago, and smoke 1 pack per day for 26 years).

Insurance: Amy has good health insurance that covers the cost of her prescription medications with little co-pay.

Allergies: Sulfa & Pepto-Bismol

Diet: Controlled carbohydrates

Medical diagnosis: Type II Diabetes, diabetic retinopathy, diabetic neuropathy, osteoporosis

Current medications include the following:

**Aspirin 81 mg** by mouth two times a day

**Calcium 500 mg** by mouth two times a day

**Multivitamin** with minerals by mouth one time a day

**Docusate Sodium 100 mg** by mouth two times a day

**Glyburide 10 mg** by mouth one time a day

**Levemir 15 units** SC at HS

**Novolog per sliding scale** SC AC & HS

**Ranibizumab 0.5 mg** via intravitreal injection (given at doctor's office) once a month

**Gabapentin 300 mg** by mouth three times a day

**Ibuprofen 400 mg** by mouth every six hours as needed



Fritz, T. (2004). Accupac image. Retrieved May 12, 2020 from <http://www.modelhealthcare.com/>

<b>Drug #1</b>  <b>Drug Class:</b> Salicylate	<b>Drug Name (Generic):</b> aspirin  <b>Drug Name (Trade):</b> Bayer
<b>How is the medication taken: (include dose, route, and frequency)</b>	81mg  oral  BID
<b>Specific Directions not included above:</b>	Take with food, a glass of milk, or a large glass of water to reduce

	chances of GI irritation (Jones & Bartlett, 2020, p. 98).
<b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b>	<p><b>Ibuprofen</b>, potential reduced cardioprotective and stroke preventative effects of aspirin. Additionally, combining aspirin with other NSAIDs greatly increases the likelihood of GI complications such as bloating, upset stomach or GI bleeds (Jones &amp; Bartlett, 2020, p. 98).</p> <p><b>Calcium</b>: May cause a decreased therapeutic effect of aspirin (Jones &amp; Bartlett Learning, 2020, p. 98).</p> <p><b>Glyburide</b>, increased risk of hypoglycemia (Jones &amp; Bartlett Learning, 2020, p. 562)</p> <p><b>Insulin detemir</b>, aspirin and insulins can increase the risk of hypoglycemia (Thornton, 2021).</p> <p><b>Insulin aspart</b> aspirin and insulins can increase the risk of hypoglycemia (Multum, 2020).</p>
<b>Lifestyle interactions:</b> <b>(Daily tobacco use, alcohol, drugs, etc.)</b>	No current interactions as no current usage of tobacco, alcohol, drugs.
<b>Does any of the client's past medical history contradict</b>	Client has an allergy to <b>bismuth subsalicylate (Pepto-Bismol)</b>

<b>the use of this medication?</b>	which shares a common ingredient with aspirin. The client should be cautious of potential allergy.
<b>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)</b>	Clients with diabetes are at a higher risk from suffering a Transient Ischemic Attack, or a stroke (Cheever & Hinkle, 2018, p. 1489). The client was potentially prescribed this medication to reduce the likelihood of suffering a stroke. Aspirin has a blood thinning component, to aid in lessening the chance of clots forming (Jones & Bartlett, 2020, p. 98).
<b>What would you teach the client about taking this medication?</b>	Discontinue this medication and consult your provider if you experience any signs or symptoms of GI bleeding such as bloody stools or coughing up or vomiting blood (Jones & Bartlett, 2020, p. 98).
<b>How much would medication cost per month if paying out of pocket?</b>	\$5.30 for 30 tablets at Walmart pharmacy (Rxpricequotes, 2021).

<b>Drug #2</b>	<b>Drug Name (Generic):</b> calcium
<b>Drug Class:</b> Calcium salts	<b>Drug Name (Trade):</b> Nature Made Calcium 500
<b>How is the medication taken: (include dose, route, and</b>	500mg

<b>frequency)</b>	Oral  BID
<b>Specific Directions not included above:</b>	<b>Calcium Carbonate</b> should be taken 1-2 hours after a meal, but other forms of Calcium should be taken with meals (Jones & Bartlett, 2020 p. 171).
<b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b>	<p><b>Aspirin</b> may decrease the antiplatelet effects of aspirin when taken together (Jones &amp; Bartlett Learning, 2020, p. 98).</p> <p><b>Multivitamin</b>, preparations containing magnesium may lead to increased serum calcium or magnesium levels (Jones &amp; Bartlett Learning, 2020, p. 172).</p> <p><b>Glyburide</b> separate by at least two hours. These medications taken too close together may enhance the hypoglycemic effects of glyburide (Sinha, 2020).</p>
<b>Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)</b>	No current interactions as no current usage of tobacco, alcohol, drugs.
<b>Does any of the client's past medical history contradict the use of this medication?</b>	No contraindications in past medical history.

<p><b>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)</b></p>	<p>Older clients, especially those who are post-menopausal, are at greater risk for osteoporosis (Eliopoulos, 2018, p. 345). Calcium supplements are used to treat or prevent hypocalcemia.</p>
<p><b>What would you teach the client about taking this medication?</b></p>	<p>Avoid taking within 2 hours of other oral drugs due to risk of drug interactions (Jones &amp; Bartlett, 2020).</p>
<p><b>How much would medication cost per month if paying out of pocket?</b></p>	<p>\$7.55 for 60 tablets at Walmart pharmacy (Rxpricequotes, 2021).</p>

<p><b>Drug #3</b></p> <p><b>Drug Class:</b> supplement</p>	<p><b>Drug Name (Generic):</b> multivitamin with minerals</p> <p><b>Drug Name (Trade):</b> One A Day Women's 50+</p>
<p><b>How is the medication taken: (include dose, route, and frequency)</b></p>	<p>1 tablet</p> <p>oral</p> <p>daily</p>
<p><b>Specific Directions not included above:</b></p>	<p>Should be taken with a meal. Multivitamins are better absorbed with</p>

	food in the stomach. (Lee, 2018)
<b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b>	<b>Calcium</b> preparations containing magnesium run the risk of increasing serum calcium and magnesium levels, especially in clients with impaired renal function (Jones & Bartlett Learning, 2020, p. 172)
<b>Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)</b>	No current interactions as no current usage of tobacco, alcohol, drugs.
<b>Does any of the client's past medical history contradict the use of this medication?</b>	No contraindications in past medical history.
<b>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)</b>	Multivitamins are used to help improve health or prevent illness. They offer essential vitamins and nutrients that may be otherwise lacking from the client's diet (Frandsen & Pennington, 2020, p. 698).
<b>What would you teach the client about taking this medication?</b>	Consider an age-appropriate multivitamin, as needs vary based on age/gender. Excessive amounts of vitamins and minerals can be toxic. Try to obtain most vitamin and mineral needed amount from dietary intake (Frandsen & Pennington, 2020, p. 698).

<b>How much would medication cost per month if paying out of pocket?</b>	\$6.09 for 30 tablets at Walmart Pharmacy (Rxpricequotes, 2021).
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<b>Drug #4</b>	<b>Drug Name (Generic):</b> docusate sodium
<b>Drug Class:</b> Laxative: stool softener	<b>Drug Name (Trade):</b> Colace
<b>How is the medication taken: (include dose, route, and frequency)</b>	100mg Oral BID
<b>Specific Directions not included above:</b>	Take with at a glass of water or milk. Increase fiber and drink 6-8 glasses of water a day to prevent constipation (Jones & Bartlett Learning, 2020, p. 356).
<b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b>	No known drug or herbal interactions.
<b>Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)</b>	No current interactions as no current usage of tobacco, alcohol, drugs.
<b>Does any of the client's past medical history contradict</b>	I would question the frequency and consistency of this prescription.

<b>the use of this medication?</b>	Laxative abuse is a major risk factor that may lead to chronic constipation (Eliopoulos, 2018, p. 303). I would suggest the medication be prescribed on a PRN basis and encourage the client to increase fiber in diet and regular fluids.
<b>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)</b>	Stool softener, taken to treat constipation (Jones & Bartlett Learning, 2020, p. 355).
<b>What would you teach the client about taking this medication?</b>	Excessive or long-term use of laxatives can lead to dependence for bowel movements, as well as other serious side effects such as electrolyte imbalances, and vitamin/mineral deficiencies. I would advise Amy to notify prescriber immediately if she starts experiencing any light-headedness, muscle cramping, weakness, or unrelieved constipation (Jones & Bartlett Learning, 2020, p. 356).
<b>How much would medication cost per month if paying out of pocket?</b>	\$5.63 for 60 tablets OTC at Walmart pharmacy (Rxpricequotes, 2021).

<p><b>Drug #5</b></p> <p><b>Drug Class:</b> Sulfonylureas</p>	<p><b>Drug Name (Generic):</b> glyburide</p> <p><b>Drug Name (Trade):</b> DiaBeta, Glynase</p>
<p><b>How is the medication taken: (include dose, route, and frequency)</b></p>	<p>10mg</p> <p>Oral</p> <p>Daily</p>
<p><b>Specific Directions not included above:</b></p>	<p>Client must take this medication just before the first meal of the day and must not skip this meal after the drug has been taken (Jones &amp; Bartlett Learning, 2020, p. 563).</p>
<p><b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b></p>	<p><b>Aspirin, ibuprofen, insulins (detemir and aspart)</b> may enhance the hypoglycemic effects of glyburide (Jones &amp; Bartlett Learning, 2020, p. 562).</p> <p><b>Calcium</b>, taken too close may increase the hypoglycemic effects of glyburide, separate these two medications by at least two hours (Sinha, 2020).</p>

<b>Lifestyle interactions:</b>  <b>(Daily tobacco use, alcohol, drugs, etc.)</b>	No current interactions as no current usage of tobacco, alcohol, drugs. High-fat foods would affect the bioavailability of glyburide (Jones & Bartlett Learning, 2020, p. 563), though it says the client is on a controlled carbohydrate diet. The fact that her diabetes is poorly controlled implies she may not be sticking to her diet.
<b>Does any of the client's past medical history contradict the use of this medication?</b>	Client has a <b>sulfa allergy</b> , and glyburide is a sulfa drug used for diabetes. Though most research shows that glyburide may still be safe with a sulfa allergy, though her doctor should be made aware (Bhargava, 2017).  <b>2015 Beers Criteria</b> lists glyburide to have a high risk of severe prolonged hypoglycemia in older adults and should be avoided (Frandsen & Pennington, 2020, p. 83).

<b>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)</b>	This medication is used to help control blood glucose levels in clients with type 2 diabetes (Jones & Bartlett Learning, 2020, p. 561).
<b>What would you teach the client about taking this medication?</b>	This medication has a high risk of hypoglycemia. Educate on signs and symptoms of hypoglycemia and treatment (rapidly absorbed source of sugar). Educate on "sick days" and how to manage blood sugar (Jones & Bartlett Learning, 2020, p. 561).
<b>How much would medication cost per month if paying out of pocket?</b>	\$34 retail price at Walmart pharmacy (Goodrx, 2021).

<b>Drug #6</b>  <b>Drug Class:</b> Long-acting Insulin	<b>Drug Name (Generic):</b> insulin detemir  <b>Drug Name (Trade):</b> Levemir
<b>How is the medication taken: (include dose, route, and frequency)</b>	15 units

	Subcutaneous  HS
<b>Specific Directions not included above:</b>	Injection sites should be rotated to reduce the risk of lipodystrophy. Role vial gently till there is uniform mixture, do not shake (Jones & Bartlett Learning, 2020, p. 1344).
<b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b>	<b>Aspirin</b> increased risk of hypoglycemia (Thornton, 2021).  <b>Glyburide</b> increased risk of hypoglycemia (Jones & Bartlett Learning, 2020, p. 562).
<b>Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)</b>	No current interactions as no current usage of tobacco, alcohol, drugs.
<b>Does any of the client's past medical history contradict the use of this medication?</b>	The clients advanced age and poor eyesight put her at high risk of administering the incorrect dose or making some other kind of medication error.
<b>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)</b>	Long-acting insulin (no peak time) given to provide a basal amount of insulin, this means that it is used for long periods of fasting for a client such as sleep (Frandsen & Pennington, 2020, p. 821).

<b>What would you teach the client about taking this medication?</b>	<b>DO NOT MIX</b> detemir insulin with another insulin solution  (Jones & Bartlett Learning, 2020, p. 1344).
<b>How much would medication cost per month if paying out of pocket?</b>	\$330.46 for one vial which would cover 1 month of 15 units/day  (Rxpricequotes, 2021).

<b>Drug #7</b>  <b>Drug Class:</b> Rapid-acting insulin	<b>Drug Name (Generic):</b> insulin aspart  <b>Drug Name (Trade):</b> Novolog
<b>How is the medication taken: (include dose, route, and frequency)</b>	Per sliding scale: (from Professor Lawson)  70-139 = 0 units  140-180= 2 units  181-240 = 3 units  241-300 = 4 units  301-350 = 6 units

	<p>351 - 400 = 8 units</p> <p>SubQ</p> <p>Before meals and at bedtime</p>
<b>Specific Directions not included above:</b>	<p>Give about 5-10 minutes before meal (Jones &amp; Bartlett Learning, 2020, p. 1342).</p>
<b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b>	<p><b>Aspirin</b> increased risk of hypoglycemia (Thornton, 2021).</p> <p><b>Glyburide</b> increased risk of hypoglycemia (Jones &amp; Bartlett Learning, 2020, p. 562).</p>
<b>Lifestyle interactions:</b> <b>(Daily tobacco use, alcohol, drugs, etc.)</b>	<p>No current interactions as no current usage of tobacco, alcohol, drugs.</p>
<b>Does any of the client's past medical history contradict the use of this medication?</b>	<p>The client's advanced age and poor eyesight put her at high risk of administering the incorrect dose or making some other kind of medication error.</p> <p><b>2015 Beers Criteria</b> lists the use of sliding-scale insulin to be a high risk of causing older adults to become hypoglycemic, and should be avoided unless there is no safer alternatives (Frandsen &amp; Pennington, 2020, p. 83).</p>

<b>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)</b>	This is a rapid-acting insulin that starts working about 15 minutes after injection, peaks after 1 hour and keeps working for 2-4 hours. It is used to lower blood sugar in clients with diabetes (Multum, 2020).
<b>What would you teach the client about taking this medication?</b>	Follow directions per the prescription very closely. Rotate injections sites. Do not inject into skin that is damaged, bruised, scared, or scaly (Multum, 2020).
<b>How much would medication cost per month if paying out of pocket?</b>	\$310.62 per vial at Walmart pharmacy (Rxpricequotes, 2021).

<b>Drug #8</b>  <b>Drug Class:</b> Vascular Endothelial Growth Factor (VEGF)  Inhibitor	<b>Drug Name (Generic):</b> ranibizumab  <b>Drug Name (Trade):</b> Lucentis
<b>How is the medication taken: (include dose, route, and frequency)</b>	0.5mg  intravitreal injection at PCP office  Once a month
<b>Specific Directions not included above:</b>	Before injection, adequate local anesthesia and microbicide will

	be given. Intraocular pressures should be checked 30 minutes prior to the injection. Injection is given using aseptic technique to prevent infection (RxList, 2021).
<b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b>	No studies on drug interactions have been conducted on this medication (RxList, 2021).
<b>Lifestyle interactions: (Daily tobacco use, alcohol, drugs, etc.)</b>	No current interactions as no current usage of tobacco, alcohol, drugs.
<b>Does any of the client's past medical history contradict the use of this medication?</b>	No past medical history contraindications.
<b>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)</b>	This medication is being given to treat Amy's Diabetic retinopathy (RxList, 2021).
<b>What would you teach the client about taking this medication?</b>	Client should be monitored for increased intraocular pressure.  Should be taught to report any signs and symptoms of retinal detachment (floaters, foggy vision) to her provider immediately (RxList, 2021).

<b>How much would medication cost per month if paying out of pocket?</b>	\$4,124 per 0.5mg per vial Walmart Pharmacy price  (Rxpricequotes, 2021).
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<b>Drug #9</b>  <b>Drug Class:</b> GABA analog, anticonvulsant	<b>Drug Name (Generic):</b> gabapentin  <b>Drug Name (Trade):</b> Neurontin
<b>How is the medication taken: (include dose, route, and frequency)</b>	300mg  Oral  TID
<b>Specific Directions not included above:</b>	Separate medication at least 2 hours from any antacids. Can sprinkle contents of capsules with juice or soft foods if there is difficulty swallowing (Jones & Bartlett Learning, 2020, p. 545).
<b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b>	No interactions with any of Amy's other prescriptions.
<b>Lifestyle interactions:</b>  <b>(Daily tobacco use, alcohol, drugs, etc.)</b>	No current interactions, as no current usage of tobacco, alcohol, drugs.

<b>Does any of the client's past medical history contradict the use of this medication?</b>	No past medical history contraindications.
<b>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)</b>	Gabapentin is approved by the FDA for uses in the treatment of partial seizures and postherpetic neuralgia pain. It has many off label uses such as neuropathic pain which this client likely has in relation to her diabetes (Frandsen & Pennington, 2020, p. 1046).
<b>What would you teach the client about taking this medication?</b>	Should the client miss a dose, she should take it as soon as she remembers. However, if it is within 2 hours of her next dose she should continue with her regular dosing at the next dose, as doubling up on doses may be dangerous (Jones & Bartlett Learning, 2020, p. 545).
<b>How much would medication cost per month if paying out of pocket?</b>	\$18.47 at Andes Health Mart for 90 capsules (Rxpricequotes, 2021).

<p><b>Drug #10</b></p> <p><b>Drug Class:</b> NSAID</p>	<p><b>Drug Name (Generic):</b> ibuprofen</p> <p><b>Drug Name (Trade):</b> Motrin, Advil</p>
<p><b>How is the medication taken: (include dose, route, and frequency)</b></p>	<p>400mg</p> <p>Oral</p> <p>Q6H PRN</p>
<p><b>Specific Directions not included above:</b></p>	<p>Total dosage is not to exceed 3200 mg in a 24-hour period. Must be taken with food to lessen risk of GI bleed. (Jones &amp; Bartlett Learning, 2020, p. 604)</p>
<p><b>Does this medication interact with any other medication(s) on this list? (see rubric for further instruction)</b></p>	<p><b>Aspirin</b>, frequent use of aspirin along with ibuprofen can decrease the antiplatelet effects of aspirin and increase risk of adverse GI complications such as GI bleeding (Jones &amp; Bartlett Learning, 2020, p 98).</p> <p><b>Glyburide, inulin aspart, insulin detemir</b>, may increase the antidiabetic affects of insulins and oral antidiabetic medications (Jones &amp; Bartlett Learning, 2020, p. 603).</p>
<p><b>Lifestyle interactions:</b></p> <p><b>(Daily tobacco use, alcohol, drugs, etc.)</b></p>	<p>No current interactions, as no current usage of tobacco, alcohol, drugs.</p>

<p><b>Does any of the client's past medical history contradict the use of this medication?</b></p>	<p>Elderly clients are at extreme risk of suffering GI bleeds with NSAID overuse (Jones &amp; Bartlett Learning, 2020, p. 604).</p> <p><b>2015 Beers Criteria</b> lists chronic use of NSAIDs put older clients at risk for upper GI complications and should be avoided unless the client is also able to tolerate a gastroprotective agent such as a PPI, which Amy is not currently prescribed (Frandsen &amp; Pennington, 2020, p. 84).</p>
<p><b>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)</b></p>	<p>This medication is being used for mild to moderate pain relief.</p>
<p><b>What would you teach the client about taking this medication?</b></p>	<p>Instruct the client on the need to seek medical attention should any potentially serious GI reactions occur. These signs may include epigastric or abdominal pain, black/tarry stools, indigestion, and vomiting blood or coffee ground looking material (Jones &amp; Bartlett Learning, 2020, p. 605)</p>
<p><b>How much would medication cost per month if paying out</b></p>	<p>\$11.04 for 120 tablets (max dose) at Walmart (Rxpricequotes,</p>

of pocket?	2021).
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**Is there anything about this medication regimen scenario that might indicate a potential difficulty in maintaining compliance with the orders as listed?**

The client is an advanced-aged older woman with poor eyesight and is expected to take all of her prescriptions precisely as prescribed independently. The accu-pacs are a good idea in theory, as they group the medications with specific instructions as to how they need to be taken. However, Amy may not be able to tell which medication is which (i.e., differentiate her aspirin and her

glyburide). That along with her poor eyesight affecting her ability to read the instructions on the packs, it is very likely she may be taking her medications inappropriately. Her poor eyesight will also hinder her ability to properly dose and administer her insulin, which may have fatal consequences should she receive too little or too much.

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

The client has excellent insurance, allowing her to receive all her medications with little co-pay, reducing the likelihood of not taking all her medication due to being unable to afford them. The client also receives monthly visits from her physician and endocrinologist. Many clients do not get the benefit of seeing their provider so frequently. Regular visits should allow them to catch problems that may arise due to inappropriate medication administration and give them opportunities to put in interventions to fix them. The accu-pacs would be a helpful tool. However, with the client being independent in maintaining her medications, I feel this is an insufficient half-measure in making sure that she strictly sticks to her medication regimen.

**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 consult the provider about the medications that the client is taking on the Beers Criteria list. **Ibuprofen** has many interactions with the client's medications and carries a high risk of GI bleeds with chronic use. I would recommend the discontinuation

of that medication or the supplementation with some gastroprotective agent. **Glyburide** has a high risk of causing hypoglycemia in this client. Despite taking this high-risk medication, her diabetes does not seem to be well controlled. I would try to see if there are other alternatives to taking this risky medication. Same with the use of **sliding scale inulin** for its hypoglycemic risks. The twice daily use of **docusate sodium** is also a questionable due to its risk of inflicting chronic constipation on geriatric patients. I would also like to get a care partner to make home visits to help the client, making sure that she is taking her medications correctly. Her insurance is good, so it should cover it as it seems to be necessary to get her diabetes to be better managed. Home visits from a care provider may also assist the client with her diet, light exercise, and ADLs. This would benefit the client's health immensely as well as her quality of life seeing as she is unable to travel and does not seem to have visitors.

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

Out of pocket costs would be approximately **\$4,853.16** per month. Good thing she has good insurance!

**Reflective Statement of Experience:**

This project was a monstrous amount of work to undertake! So many drugs were checked and double-checked, and cross-referenced, and there were only ten different medications. With my clinical and pharmacy-technician experience, I know that many older adult clients take even more medications than the client in this scenario. It was eye-opening how many different interactions and complications to look out for with diabetic medications and older adult clients specifically. Polypharmacy is an insanely complex and yet vital portion of good client care. It is essential to maintain a thorough medication record of what the client is taking. They may be

prescribed medications from multiple prescribers or pharmacies that may not communicate, allowing medication interactions to happen. The client may also be self-prescribing over-the-counter medications that may interact that could cause interactions. A thorough look at the client's medications points out medication interactions in ibuprofen/aspirin with antidiabetic medications in this scenario.

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## N322 Polypharmacy Grading Rubric

Criteria	Excellent 40 points	Acceptable 31-39 points	Unacceptable 0-30 points	Points Earned
<p>Each drug should have a completed breakdown within the tables provided, which includes the following:</p> <ul style="list-style-type: none"> <li>• Drug class</li> <li>• Generic name</li> <li>• Trade name</li> <li>• How is the medication taken (include dose, route, frequency)</li> </ul>	All key components were addressed within the paper and were accurate.	The student provided the required information for some of the medications, but not all and/or the answers provided were inaccurate. (Each individual component for each medication is worth one point)	The student failed to address a sufficient number of the listed components within the paper and/or the components were addressed but were inaccurate. (Each individual component for each medication is worth one point)	___/40
Criteria	Excellent 10 points	Acceptable 8-10 points	Unacceptable 0 - 7 points	Points Earned
<p>Specific Directions not included above:</p> <ul style="list-style-type: none"> <li>• Is there any type of medication on the patient list that have specific directions?</li> </ul> <p>(before bed, before breakfast, 30 minutes before meals, etc..)</p>	All key components were addressed within the paper.	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)	Student failed to answer the questions and/or the answers were inaccurate. (For each medication this question is worth one point)	___/10

Criteria	Excellent 0 points	Acceptable 16-19	Unacceptable 0-15 points	Points Earned
<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 monitored due to co-administration?</p> <ul style="list-style-type: none"> <li>Do any of the medications interact with each other?</li> </ul> <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>	All medications reviewed and student explained medication interactions.	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. (for each medication listed this question is worth two points)	Student failed to answer question and/or 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. (for each medication listed this question is worth two points)	___/20

Criteria	Excellent 5 points	Acceptable 4 points	Unacceptable 0 -3 points	Points Earned
Lifestyle interactions:	Student	The student listed lifestyle	Student failed to	___/5

<ul style="list-style-type: none"> <li>What lifestyle factors counteract with the medications? (tobacco user, ETOH use – 3 beers daily)</li> </ul>	<p>showed knowledge why lifestyle would counteract with medications</p>	<p>interactions for 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>answer question or 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 medication, this question is worth half a point)</p>	
<p><b>Criteria</b></p>	<p><b>Excellent 10 points</b></p>	<p><b>Average 8-9</b></p>	<p><b>Unacceptable 0-7 points</b></p>	<p><b>Points Earned</b></p>
<ul style="list-style-type: none"> <li>Does any of the client's past medical history contradict the use of this medication?</li> </ul>	<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</p>	<p>___/10</p>

Criteria	Excellent 10 points	Acceptable 8-9 points	Unacceptable 0-7 points	Points Earned
<ul style="list-style-type: none"> <li>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)</li> </ul>	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)	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"> <li>What education is needed for the medication? (For each medication listed the student must prioritize two topics for client education)</li> </ul>	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 appropriately	___/20

<p>(You must consider all 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)</p>			<p>prioritized education for the client. (Each topic of education is worth one point)</p>	
<p><b>Criteria</b></p>	<p><b>Excellent 10 points</b></p>	<p><b>Acceptable 8-9 points</b></p>	<p><b>Unacceptable 0-7 points</b></p>	<p><b>Points Earned</b></p>
<p>Is there anything about this medication regimen/ scenario that might indicate a potential difficulty in maintaining compliance with the orders as listed?</p> <ul style="list-style-type: none"> <li>Why would the patient have difficulty maintaining the medication regiment?</li> </ul> <p>(Please consider all factors in the scenario and all information provided within your chart – including cost, insurance, frequency of administration, etc)</p>	<p>Student had knowledge on why a patient would have difficulty with medication regiment</p>	<p>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)</p>	<p>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 medication)</p>	<p>___/10</p>
<p><b>Criteria</b></p>	<p><b>Excellent</b></p>	<p><b>Acceptable</b></p>	<p><b>Unacceptable</b></p>	<p><b>Points Earned</b></p>

	10 points	8-9 points	0-7 points	
<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"> <li>What factors are present to remain compliant?</li> </ul> <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)	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)	___/10
Criteria	Excellent 10 points	Acceptable 8-9 points	Unacceptable 0 points	Points Earned
<ul style="list-style-type: none"> <li>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)</li> <li>What would the client's monthly out of pocket expense for all 10 medications?</li> </ul>	Student showed research on medication costs	The student provided accurate research for some of the medications, but failed to provide 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 provide research for all medications (This question is worth one point	___/15

Criteria	Excellent 20 points	Acceptable 16-19 points	Unacceptable 0-15 points	Points Earned
<p>The student must appropriately format the paper and include all of the following:</p> <ul style="list-style-type: none"> <li>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)</li> <li>The student provided a rubric attached for grading (3 points)</li> <li>The student included the provided client scenario on page two of the document (2 points)</li> </ul>	<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>for each medication, with the total cost being worth 5 points)</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"> <li>The paper included a minimum of five references which were cited within the document (each reference with one citation is worth 5 points)</li> </ul>				
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 is priority and provide evidence behind your presentation.</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>
Criteria	Excellent 10 points	Acceptable 8-9 points	Unacceptable 0-7 points	Points Earned
<ul style="list-style-type: none"> <li>Reflective statement of experience should</li> </ul>	<p>The students provided</p>	<p>The student provided a reflection, however the</p>	<p>Student failed to reflect on their</p>	<p>____/10</p>

<p>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>	<p>reflection showed good insight into the project itself, polypharmacy, and the nurses role in client advocacy</p>	<p>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>project OR the student addressed only of the topics of reflection</p>	
<p><b>Total Points</b></p>				<p>____/200</p>