

General Medication Competency: Answer Sheet

Purpose: This competency test can be used for nurses and therapists during orientation, as an annual competency to assess general medication knowledge, or after a staff in-service on medication management. Use these questions as they best fit agency needs. You can delete questions and/or include other medication questions that you develop.

The competency test includes questions on medication reconciliation, medication adherence, high-risk medication side-effects and adverse reactions, and medication safety practices. Some of the questions are drawn from content in the Focused BPIP on Medication Management. Alternatively, questions can be used for weekly tips of the week to email to staff or post on a bulletin board.

Instructions: Enter the correct answer, or circle the one best response for each multiple choice question.

1. Name one clinical reference used to identify high-risk medications in the elderly?

Beers Criteria, Potentially Inappropriate Medication (PIM) in Older Adults, other specific agency resources (e.g., available drug references and/or other tools)

2. What are the 3 steps to medication reconciliation according to the Institute for Healthcare Improvement (IHI)?

Verify, Validate, Clarify

Reference: Focused BPIP Medication Management

3. Which age group is most likely to go to the emergency department with adverse drug events and more likely to be hospitalized as a result of the event?
 - a. Ages newborn through 18 months
 - b. Ages 12-18 years
 - c. **Ages 65 and older**
 - d. Ages 2-5 years

Reference: http://www.cdc.gov/MedicationSafety/Adult_AdverseDrugEvents.html

4. Which of the following can be a side-effect of an ACE-I that does **not** always require discontinuation of the medication?
 - a. Angioedema
 - b. Decreased heart rate
 - c. **Cough**
 - d. Flushing

Reference: Goldman, L., & Schafer, A.I. (2012). Goldman's Cecil Medicine (24th ed.). Philadelphia: Elsevier Saunders. (pp. 311 and 383)

5. A patient reports mild edema in his lower extremities. This is frequently reported side-effect of which one of the following medications?
- a. Furosemide
 - b. Amlodipine**
 - c. Spironolactone
 - d. Lisinopril

Reference: Arcangelo, V.P., and Peterson A. M. (2011). Pharmacotherapeutics for Advanced Practice. Lippincott Williams & Wilkins; Third edition. p. 207.

6. Mr. Grey has returned home after a 3-day hospital stay for heart failure (HF). Based on the discharge summary, the home health clinician teaches Mr. Grey his new medication schedule, including which prescription medications should be continued, any dosage changes, and any medications discontinued or on hold. The clinician documents that Mr. Grey's medication reconciliation was completed. Do you agree that the clinician fully completed medication reconciliation?

Yes or **No**

Explain why you answered yes or no: **The clinician did not compare the discharge summary to Mr. Grey's previous medication list which may have included additional medications. The clinician did not have Mr. Grey actually *show* the pill bottles which could have different dosages if adjustments were made. Additionally, the physician may have needed to be contacted to make decisions about medication clarification and that is an important part of medication reconciliation. In addition, the clinician didn't ask Mr. Grey if he takes OTC meds or herbal products (which may or may not have been on the hospital discharge list).**

Reference: Focused BPIP Medication Management

7. Skills present in patients who successfully self-manage their medications include:
- a. Establishing habits
 - b. Track medications
 - c. Managing medication costs
 - d. All of the above**

Reference: Focused BPIP Medication Management

8. What percent of older adult outpatients who take five or more medications experience adverse drug events according to Marek and Antle (2008)?
- a. 10%
 - b. 95%
 - c. **35%**
 - d. 25%

Reference: Focused BPIP Medication Management

9. You are assessing medication adherence with James, a home health patient. You ask James to tell you how he takes his pills. He says he always takes his lovastatin at night like he was told and he likes to take it with a little grapefruit juice. What would be your best response?
- a. **Advise James that he should not drink grapefruit juice, because the medication could rise to unsafe levels in his blood.**
 - b. Advise James that he should not drink grapefruit juice, because the juice will make the medicine ineffective and his cholesterol will be high.
 - c. Nothing, there is no interaction between the juice and this medication.
 - d. Immediately call the physician and ask him/her to explain to James why he should not drink grapefruit juice.

References:

<http://www.ncbi.nlm.nih.gov/pubmed/9585793>

10. What four medications are most associated with drug-related hospital admissions in older adults?
- a. warfarin, aspirin, benzodiazepines, and opioids
 - b. warfarin, antiplatelet drugs including aspirin, insulin, and antibiotics
 - c. **warfarin, insulin, antiplatelet drugs including aspirin, and oral hypoglycemics**
 - d. Selective serotonin reuptake inhibitors (SSRIs), warfarin, insulin, and ACEIs

References:

<http://www.nejm.org/doi/full/10.1056/NEJMsa1103053>

<http://www.champ-program.org/blog/?p=1590>

11. You are visiting Mr. King the day after his PCP appointment. Mr. King is a newly diagnosed diabetic and has just started taking Metformin 500 mg twice a day. What is a common side effect of Metformin that usually resolves?
- a. Lactic acidosis
 - b. Skin rash
 - c. **Nausea, stomach upset, and/or diarrhea**
 - d. Low blood sugars in the morning

Reference: Arcangelo, V.P., and Peterson A. M. (2011). Pharmacotherapeutics for Advanced Practice. Lippincott Williams & Wilkins; Third edition. p. 686.

12. What would you advise Mr. King (from the previous question) to do to avoid this side effect from Metformin?

Always take with a meal

Reference:

<http://www.permanente.net/homepage/kaiser/pdf/52296.pdf>

13. Teach-back is a method that:

- a. **Asks the patient to confirm in their own words what they need to know or do**
- b. Quizzes patient on their knowledge
- c. Improves communication between the patient and caregiver
- d. Should be used only by nurses

Reference: Focused BPIP Medication Management

14. Name the classifications of drugs that, when taken with warfarin, can potentially increase bleeding.

- a. Sulfamethoxazole (Bactrim®, Septra®)
- b. Metronidazole (Flagyl®)
- c. Quinolones (Cipro®, Levaquin®, Avelox®)
- d. **All the above**

Reference:

<http://www.homehealthquality.org/getattachment/8a51d709-28bf-4bf2-9db4-ed1ec77b9eaa/Warfarin-Drug-to-Drug-Interaction-Guidelines.aspx>

15. Which of the following is least likely to help patients with safe medication management:

- a. Direct observation of patient preparing their medications on several occasions
- b. Asking open-ended questions to the patient about medications, looking for red flags
- c. **Asking the patient if they have been taking their medications as prescribed**
- d. Providing printed, health literate patient safety or medication information

Reference: Focused BPIP Medication Management

16. A patient has not had a new prescription filled that was ordered several days ago, and you suspect the reason may be financial. Name 2 ways you could attempt to determine if finances are a barrier for this patient.

Possible responses: Use open-ended questions as to why prescription is not filled; ask patient about co-pays on all medications to determine monthly medication expense; talk with family members about cost of medications; or ask patient if he/she would let clinician call PCP to ask about less expensive medications; MSW for financial assistance if applicable.

Reference: Focused BPIP Medication Management

17. Select the disciplines/roles in your agency that are responsible for the patient's medication safety.
- a. PT and SN
 - b. MSW and SN
 - c. HHA and SN
 - d. **All disciplines**

All disciplines are responsible for medication safety including the home health aides. Aides can report s/s of problems, omissions, dropped pills, etc. Therapists are responsible to assess and monitor medication safety. MSWs may be able to help with the financial constraint of medication costs.

18. Which of the following anti-diabetic medications should be held (with PCP order) for up to 48 hours post procedure if your patient is NPO due to potential renal function impairments?
- a. NPH insulin
 - b. **Biguanides (metformin)**
 - c. Sulfonylureas (gipizide, glyburide)
 - d. Thiazolidinediones (pioglitazone, rosiglitazone)

Reference: Arcangelo, V.P., and Peterson A. M. (2011). Pharmacotherapeutics for Advanced Practice. Lippincott Williams & Wilkins; Third edition. p. 686.

19. Which of the following anti-diabetic medication classes can cause weight gain?
- a. NPH insulin
 - b. Biguanides (metformin)
 - c. **Sulfonylureas (gipizide, glyburide)**
 - d. Thiazolidinediones (pioglitazone, rosiglitazone)

Reference: Arcangelo, V.P., and Peterson A. M. (2011). Pharmacotherapeutics for Advanced Practice. Lippincott Williams & Wilkins; Third edition.p. 686.

20. You are teaching your patient who just starting taking insulin about s/s of hypoglycemia. After successful teach-back, you feel confident she understands s/s of hypoglycemia and now begin instructing her on the best way to treat hypoglycemia. Appropriate treatment includes glucose tablets or foods with 15 grams of carbohydrates as recommended by the American Diabetes Association. Which of the following responses are examples of these foods:
- a. 4 oz (1/2 cup) of juice or regular soda
 - b. 1 tablespoon of regular peanut butter
 - c. 4 or 5 saltine crackers
 - d. **A and C**

Reference: <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/hypoglycemia-low-blood.html>

21. Which of the following best describes when medication reconciliation should occur with your patients?
- a. Start of Care
 - b. When the PCP orders it
 - c. **SOC, ROC, following a physician appointment, or whenever medications are changed**
 - d. Every visit

Reference: Focused BPIP Medication Management

22. Your patient tells you that she is having her A1C level drawn at least every 3 months so she doesn't need to test her blood sugar with fingersticks anymore. The best response would be:
- a. Nothing, the patient is noncompliant.
 - b. **"The A1C gives you a good picture of how you are doing overall but you still need your daily fingersticks to help manage your daily sugar levels."**
 - c. Ask the patient "Did you ask your doctor about this?"
 - d. "Monitoring your A1C every 3 months will replace the need for daily fingersticks, but it would still be a good idea to do a fingerstick once a week."

Reference: <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/a1c/>

23. In March 2013, the FDA issued an alert that the following medication could cause fatal arrhythmias for patients who meet certain risk factors:
- a. Cefuroxime
 - b. **Azithromycin**
 - c. Metronidazole
 - d. Clindamycin

Reference: <http://www.fda.gov/Drugs/DrugSafety/ucm341822.htm>

24. Mr. White has COPD and is taking fluticasone, an inhaled corticosteroid. What do you want him to know about this medication?

- a. Use a spacer to maximize effectiveness of drug delivery
- b. After using the inhaler, wash your mouth out with water and spit the water out
- c. Only use the inhaler following a meal
- d. **A and B**

Reference: <http://www.webmd.com/lung/copd/corticosteroids-for-chronic-obstructive-pulmonary-disease-copd>

25. Match the following:

Medication Reconciliation ____	A. Patient comprehension/understanding, ability, and confidence in taking his/her medications.
Medication Adherence ____	B. A formal process for creating the most complete and accurate list possible of a patient's current medications and comparing the list to those in the patient record or medication orders.
Medication Knowledge ____	C. Extent to which a patient's or caregiver's medication administration behavior coincides with medical advice.

Answers: B, C, A

Reference: Focused BPIP Medication Management

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