

Sample Stations - Part II (OSCE)

SAMPLE STATION #5

Interactive Station (with a Simulated Health Professional) – involving a prescription medication

TITLE: Warfarin / Carbamazepine Interaction

OBJECTIVES:

- To identify and explain a drug/drug interaction problem.
- To recommend an appropriate solution.

COMPETENCIES TESTED:

Competency 1A Providing Care: Clinical Care

- | | | |
|----------|-----|---|
| Elements | 1.1 | Obtain relevant patient information. |
| | 1.2 | Assess the patient's health status and unique needs, goals, and preferences, in partnership with the patient. |
| | 1.3 | Develop a plan for the patient's care in collaboration with the patient and their circle of care. |
| | 1.4 | Implement a plan for the patient's care in collaboration with the patient and their circle of care. |

Competency 3 Communication and Collaboration

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|----------|-----|--|
| Elements | 3.1 | Use effective communication skills. |
| | 3.3 | Collaborate with pharmacy colleagues, other health professionals and other involved parties. |
| | 3.4 | Document pharmacy care and services and maintain pharmacy records. |

CANDIDATE'S ANSWER SHEET:

Place bar code label here

You are working in a pharmacy in a medical clinic. The following *written prescription* has been left with you to be processed.

- Attach one bar code label to the form – in the space indicated above.
- **The physician who wrote the prescription is in the station. You may speak with them as needed.**
- The *patient record* is provided in the station for your reference. Do NOT write on it.
- You are NOT required to dispense or prepare the prescription or counsel the patient.

Your tasks are to:

1. Review the prescription for any drug related problem(s).
2. You may speak with the physician if:
 - a) you need more information.
 - b) you wish to discuss this patient's therapy.
3. **You must speak directly with the physician to:**
 - a) identify and explain any drug related problem(s).
 - b) recommend an appropriate solution to the problem(s).
4. If no change is necessary, fill in the bubble beside "Fill as written".
OR
5. If a change of therapy is recommended:
 - a) fill in the bubble beside "Change or clarify as follows, as discussed with the physician".
 - b) specify an appropriate drug and/or other option/s.
 - c) document any changes on the prescription review.

When you have finished (or when the final signal sounds), give this prescription form to the assessor.

Time Frame: You have 7 minutes to complete this station.

Crossroads Medical Clinic
1655 West Broadway
City, Province
879-8874

For Chris Langley
731 W 3rd Street, City, Province
Date of birth: February 1, YEAR

current date

carbamazepine (Tegretol) 200 mg

Sig: Take 100 mg bid for
trigeminal neuralgia.
Increase to 200 mg bid if
no relief after 2 weeks.

Mitte: 30 tabs

Dr. J. Gaucher Assume physician's signature is original
J. Gaucher, MD License #543211

PRESCRIPTION REVIEW

- Fill as written **OR**
- Change or clarify as follows, as discussed with the physician:

Continue on reverse if necessary

SCENARIO DESCRIPTION:

A physician has just written a new prescription for a patient with trigeminal neuralgia. The candidate may consult with the physician about any drug related problem(s) introduced with the new prescription.

SIMULATED HEALTH PROFESSIONAL (HP):

Name: Dr. Jean Gaucher
Gender: Any

Behavior, Affect and/or Mannerisms Required:

Open to suggestions.

Patient Record Information:

Patient Name: Chris Langley
Gender: Male
Age: 55 years old
Weight: 80 kg (180 lbs)
Medical History: Deep vein thrombosis (DVT) – diagnosed 5 weeks ago
Trigeminal neuralgia – newly diagnosed
Allergies: None known
Past Medications: Amoxicillin (for an unrelated chest infection and is not linked to the current issue)

Current Medications:

NAME - generic (Trade)	STRENGTH (DOSAGE FORM)	APPEARANCE	DATE STARTED	DOSE or HOW MUCH / HOW OFTEN	PURPOSE
warfarin (Coumadin)	5 mg (tablet)	round, orange	5 weeks ago in hospital	5 mg once daily	blood thinner

Other information (HP responds as follows, when asked):

- The patient has symptoms of facial pain (trigeminal neuralgia).
- The patient had a leg injury from playing recreational floor hockey, followed by deep vein thrombosis (DVT) in the left leg.
- He has been prescribed warfarin, with an expected duration of several more months, depending on resolution of symptoms (pain, edema).
- The prescription for warfarin was dispensed 4 weeks ago at this pharmacy.
- You will be seeing the patient for a follow-up appointment in one month.
- The patient's INR has been stable at 2.5, with the most recent test result from a few days ago.
- You are agreeable to ordering more frequent lab work (if the candidate suggests it).
- The patient was in the hospital for one week following the DVT diagnosis.

SIMULATED HEALTH PROFESSIONAL INSTRUCTIONS:

Opening Line:

“Hello, I’m Dr. Gaucher. I just saw Mr. Langley and wrote that new prescription for him. I’ll just wait a few minutes while you check it, in case you have any questions.”

Potential HP Responses:

a) If the candidate recommends a change without identifying the problem, the **HP must** ask:

“What is the problem?”

b) If the candidate identifies the problem but does not explain it, the **HP must** ask:

“About the interaction / you mentioned an interaction – can you give me a bit more information?”

c) Following discussion of the problem, if the candidate has not yet offered a recommendation, the **HP must** ask:

“What would you suggest to resolve the problem?”

d) If the candidate wants to change the Tegretol to a different drug, the **HP must** ask:

“I have had a lot of success with carbamazepine in trigeminal neuralgia, so I prefer to use it. Do you have any other suggestions?”

e) If the candidate discourages use of carbamazepine and warfarin concurrently or still wants to change the Tegretol to an alternate drug, the **HP must** say:

“I’ll take that under advisement and note your concern here, but for now I want him on both.”

f) If the candidate recommends more frequent monitoring as a general precaution, without identifying or explaining the interaction, the **HP must** ask:

“What do you think the results would show?”

g) If the candidate identifies the problem and suggests monitoring INR as before without discussing frequency or using an alternative, the **HP must** say:

“He’s going for monthly blood work so will have another test in about 3 or 4 weeks.”

Closing Line: “Thank you.”

ASSESSOR INFORMATION (to guide scoring):

Problem Solved (full solution) *if candidate:*

- ★ Identifies a (potential) carbamazepine - warfarin drug interaction.
- ★ Explains the mechanism of the interaction: carbamazepine induces warfarin metabolism/cytochrome P450 enzymes.
- ★ Explains probable outcome of the interaction: expect a decreased INR/decreased anticoagulant effect.
- ★ Explains management of the interaction: warfarin dose may need to be increased.
- ★ Recommends acceptable option(s): use of both/carbamazepine as ordered AND monitor INR more frequently - OR other acceptable drug.

Solved/Marginal (partial solution) *if candidate:*

- ★ Identifies a (potential) carbamazepine - warfarin drug interaction.
- ★ Explains either the mechanism of action OR probable outcome (NOT both) - provides scant information.
- ★ Explanation of management of interaction is nonspecific – e.g., may need to adjust warfarin dose OR do not use together.
- ★ Recommends acceptable option(s): use of both/carbamazepine as ordered AND monitor INR more frequently - OR other acceptable drug.

Uncertain (unsolved/marginal) *if candidate:*

- ★ Identifies a (potential) carbamazepine – warfarin drug interaction.
- ★ Does not explain either the mechanism of the interaction or the probable outcome OR explanation is unclear.
- ★ Recommends NOT using carbamazepine and warfarin together, but does NOT suggest a solution.
- ★ Recommends increased INR monitoring.

Unsolved *if any of the following apply:*

- ★ Does NOT identify the carbamazepine - warfarin drug interaction.
- ★ Incorrectly explains the interaction (e.g., carbamazepine inhibits warfarin metabolism or results in increased INR or enhanced anticoagulation).
- ★ Does NOT recommend increased monitoring.
- ★ Recommends unacceptable solution: (i.e. change to phenytoin, stop warfarin or decrease dose of warfarin).
- ★ Indicates “Fill as written” without discussing the interaction or the need for more frequent INR monitor.

PRINTED MATERIALS IN THE STATION:

- Drug Monographs
- Patient Record
- Written Prescription

PATIENT RECORD

PATIENT:	LANGLEY, Chris	DATE OF BIRTH:	February 1, YEAR <i>(appropriate for age)</i>
ADDRESS:	731 W. 3 rd Street, City, Province	AGE:	55 years old
PHONE:	775-9990	GENDER:	Male
PHYSICIAN:	Dr. J. Gaucher	ALLERGIES:	None known
ADDRESS:	1655 West Broadway, City, Province	COMMENTS:	Deep vein thrombosis (5 weeks ago)
PHONE:	879-8874		

Rx No.	Medications - Directions	Qty	Prescriber	Refills Authorized	Refills Remaining	Dispensing Intervals		
						Prescription Date	Refill Frequency	Last Filled
2	warfarin (Coumadin) 5 mg tablets Take one tablet daily for DVT	60	J. Gaucher	0	0	4 weeks ago	every 60 days	4 weeks ago
1	amoxicillin (Amoxil) 250 mg capsules Take one capsule three times daily for seven days for chest infection	21	J. Gaucher	0	0	2 months ago		2 months ago

EXAMINATION MASTER

Do not mark in any way

CHECKLIST (expected candidate responses):

1. Determines patient is currently taking warfarin.
2. Identifies and explains drug interaction between warfarin and carbamazepine.
3. Explains mechanism: carbamazepine increases the metabolism of warfarin / induces cytochrome P450 enzymes.
4. Explains outcome: decreased INR / decreased anticoagulant effect.
5. Explains management:
 - warfarin dose may need to be increased
 - do not use warfarin and carbamazepine together
6. Recommends acceptable option(s):
 - monitor INR more frequently

AND

 - continue carbamazepine as ordered (fill as written) **OR**
 - change from carbamazepine to acceptable alternative (gabapentin / Neurontin, valproic acid / Depakene, clonazepam / Rivotril, baclofen / Lioresal)
7. Gives incorrect explanation: **(unsolved)**
 - carbamazepine decreases metabolism OR increases INR
 - warfarin does may have to be decreased
8. Recommends unacceptable option(s): **(unsolved)**
 - continue monitoring INR monthly (no increased frequency)
 - change to phenytoin (with or without monitoring)
 - discontinue warfarin
9. Correctly documents consultation / outcome on prescription / answer sheet.
10. Indicates will “Fill as written” WITHOUT advising to monitor INR more frequently. **(unsolved)**

RATINGS (to be based on standard rating guidelines and Assessor Information above):

Communications

- 4=Acceptable
- 3=Acceptable/Marginal
- 2=Unacceptable/Marginal
- 1=Unacceptable

Outcome

- 4=Problem Solved
- 3=Solved/Marginal
- 2=Uncertain
- 1=Unsolved

Performance

- 4=Acceptable
- 3=Acceptable/Marginal
- 2=Unacceptable/Marginal
- 1=Unacceptable

Misinformation Yes No

Risk to Patient Yes No