

Heart Failure MCQs



Heart Failure: 30 Original MCQs

PEBC Pharmacist Qualifying Examination Part I (MCQ) - practice bank

Written by MapleRxPrep Team. Prepared 2026-10-23. Independent study aid. Not affiliated with or endorsed by PEBC.

Study aid, not medical advice. Check official sources before any patient decision.

How to use this bank

- 30 original questions, mostly short patient cases. Each has one best answer. The letter in brackets after the number is the difficulty: E = easy, M = medium, H = hard.
- Try all questions first. The answer key, with explanations and sources, starts on a new page at the end.
- All patients are made up. All questions are new and written from Canadian official sources (Health Canada product monographs, CCS guide, NACI, ISMP Canada), with secondary US pages for US points. They are not copied from any course, textbook or PEBC material.
- Doses and rules follow Canadian sources. When Canada and the US differ, the Canadian answer is the one to choose.
- Blueprint tags use PEBC Blueprint Ver. 03-2026 areas (1A Clinical Care, 1B Distribution, 3 Communication and Collaboration, 5 Professionalism). Check each tag against the official PEBC blueprint.

Question colours

 Easy (E)  Medium (M)  Hard (H)

PART A - QUESTIONS (no answers in this part)



Question 1 - Easy

Mrs. Tran, 66, has HFrEF (LVEF 32%). She feels fine sitting still. She becomes short of breath after walking about 50 metres on flat ground or when she dresses, and she must rest between household chores. Which NYHA functional class describes her best?

- A Class I
- B Class II
- C Class III
- D Class IV

Question 2 - Medium

Mr. Haddad, 59, has newly diagnosed HFrEF (LVEF 28%, NYHA II). He has no swelling. BP 118/74 mmHg, heart rate 84 bpm in sinus rhythm, K 4.3 mmol/L, eGFR 72 mL/min/1.73 m². He takes only furosemide 20 mg daily. Which plan best matches Canadian guideline advice?

- A Start an ARNI, a beta-blocker, an MRA and an SGLT2 inhibitor soon at low doses; raise every 2 to 4 weeks
- B Adjust the loop diuretic alone for 6 months, then add one new drug class every 6 months, checking labs at each step
- C Start ivabradine and digoxin first, because heart rate control must come before the other classes, and add the rest later
- D Start all four classes at full target doses on day 1 to save time, and stop the diuretic at the same visit
- E Start hydralazine with isosorbide dinitrate first and keep the other classes for later

Question 3 - Medium

Ms. Okafor, 58, sees her family doctor for 3 months of ankle swelling, tiredness and breathlessness on stairs. She has no known heart disease and is not in the emergency department. Her NT-proBNP is 210 pg/mL. How should this result be read?

- A Normal result; no further testing is needed
- B In the grey zone (300 to 900), so repeat it in 6 months and decide then
- C Heart failure is proven by this number, so start an ARNI today without any imaging
- D Above the outpatient cut-off, so HF is likely; arrange an echocardiogram
- E NT-proBNP cannot be used in outpatients; only a BNP result is valid for this decision

Question 4 - Hard

Mr. Lee, 71, has HFrEF (NYHA II). He takes eplerenone 25 mg daily, sacubitril/valsartan 49/51 mg twice daily, carvedilol 12.5 mg twice daily and empagliflozin 10 mg daily. A walk-in clinic prescribes clarithromycin 500 mg twice daily for 7 days for pneumonia. What is the main problem with this prescription?

- A Clarithromycin lowers potassium, which makes the carvedilol less effective in heart failure
- B Clarithromycin is a strong CYP3A4 inhibitor; eplerenone must not be used with those drugs
- C Clarithromycin raises blood sugar a lot, which cancels the benefit of the empagliflozin
- D Clarithromycin is cleared by the kidney, so it needs a lower dose with sacubitril/valsartan
- E There is no problem; all four heart failure drugs can be taken safely with clarithromycin

Question 5 - Easy

Mr. Ferreira, 60, had a heart attack 3 months ago. An echocardiogram shows LVEF 30%. He has no breathlessness, swelling or tiredness and walks 5 km a day. Which description fits best?

- A HFpEF with preserved EF, ACC/AHA stage A (risk factors only)
- B HFmrEF with mildly reduced EF, NYHA class II symptoms
- C HFrEF with reduced EF, NYHA class III symptoms
- D HFnrEF with non-reduced EF, ACC/AHA stage C (symptomatic)
- E Asymptomatic LV systolic dysfunction, ACC/AHA stage B

Question 6 - Medium

Mr. Novak, 69, started sacubitril/valsartan 49/51 mg twice daily two months ago. His family doctor sends a new prescription for candesartan 8 mg daily because home BP is 138/84 mmHg. What is the main problem with this prescription?

- A Candesartan lowers BP too little to be useful together with sacubitril/valsartan in heart failure patients
- B Candesartan is usually avoided in patients who have HFrEF
- C Candesartan duplicates the angiotensin receptor blocker already in sacubitril/valsartan
- D Candesartan can raise potassium more than other drugs, so it is not used with heart failure drugs
- E Candesartan must be taken at night, which clashes with the twice-daily sacubitril/valsartan

Question 7 - Easy

Ms. Haidari, 31, has HFrEF. She takes sacubitril/valsartan 49/51 mg twice daily, carvedilol and furosemide. She tells the pharmacist she took a home pregnancy test this morning and it was positive. What is the best response?

- A Continue all drugs unchanged, because stopping may worsen her heart failure, until her first obstetric visit
- B Contact her prescriber the same day, because sacubitril/valsartan is contraindicated in pregnancy
- C Switch sacubitril/valsartan to ramipril, because ACE inhibitors are considered safe in pregnancy
- D Halve the sacubitril/valsartan dose until delivery, to lower the amount reaching the baby
- E Tell her to stop all heart failure drugs today, including carvedilol, and wait

Question 8 - Medium

Ms. Ibrahim, 63, has HFrEF. She has taken carvedilol 3.125 mg twice daily for 2 weeks, with ramipril and furosemide 40 mg daily. She reports dizziness 1 to 2 hours after each dose. BP is 94/58 mmHg, her weight is steady and she has no new swelling. A new prescription arrives to increase carvedilol to 6.25 mg twice daily today. Which statement best describes the situation?

- A Dizziness after beta-blocker doses is expected, so the dose should be increased on schedule
- B Carvedilol is causing the dizziness, so it must be stopped permanently
- C The ramipril dose should be doubled to protect her heart until the carvedilol is increased
- D Carvedilol works faster on an empty stomach, which would also reduce the dizziness
- E The increase should wait until the dizziness and low BP are assessed

Question 9 - Easy

Mr. Kowalski, 62, is starting carvedilol 3.125 mg twice daily for HFrEF. Which counselling point is most important?

- A Take it with food, to slow absorption and reduce dizziness
- B Take it on an empty stomach so that more of the drug is absorbed into the blood
- C Take both tablets together once in the morning to make the schedule easier to remember
- D Expect to feel clearly better within a few days; stop it if you do not
- E Stop it if you feel any dizziness

Question 10 - Hard

Mr. Alvarez, 64, has HFrEF. His ramipril was stopped 6 months ago because of a dry, annoying cough; he never had swelling of the lips, tongue or face. The cardiologist now prescribes sacubitril/valsartan 24/26 mg twice daily. He takes no other ACEi or ARB. What is the best pharmacist action?

- A Refuse, because any past ACEi intolerance is a contraindication to sacubitril/valsartan
- B Dispense it but tell him to wait 36 hours from today before the first dose, to be safe
- C Dispense it but raise the start to 97/103 mg twice daily, since he tolerated an ACEi before
- D Dispense it; cough is not angioedema and no ACEi has been taken for months
- E Contact the prescriber and ask for an ARB trial first, because he did not tolerate an ACEi

Question 11 - Easy

Mrs. Wong, 74, has HFrEF and has just started spironolactone 12.5 mg daily. K 4.6 mmol/L, eGFR 48. She tells you she bought a potassium chloride salt substitute to follow her doctor's "less salt" advice and she drinks orange juice every morning. What is the most important counselling point?

- A Use the potassium salt substitute freely, since it lowers sodium; keep the orange juice as well
- B Stop the spironolactone now, since the salt substitute makes it unnecessary; recheck in a month
- C Avoid potassium salt substitutes and supplements; limit high-potassium foods and juices
- D Add a potassium supplement to balance the water pill; keep drinking orange juice every morning
- E Drink much more fluid every day; use the potassium salt substitute only at dinner

Question 12 - Medium

Mr. Patel, 67, takes empagliflozin 10 mg daily, furosemide 40 mg daily, ramipril 5 mg twice daily and bisoprolol 5 mg daily for HFrEF. He phones: two days of vomiting and watery diarrhea, cannot keep fluids down, dizzy on standing, dark urine, weight down 2 kg, no swelling. What is the best advice?

- A Call the prescriber today; empagliflozin is usually paused until he drinks again
- B Continue all drugs unchanged; recheck in three days if the vomiting persists
- C Take an extra furosemide dose today to flush out the illness; keep the empagliflozin
- D Double the empagliflozin dose once he can eat again; this makes up for missed doses
- E Stop only the bisoprolol; continue the empagliflozin and everything else unchanged

Question 13 - Medium

Ms. Silva, 70, started empagliflozin 10 mg daily for HFrEF 3 weeks ago. She reports 2 days of vaginal itching and thick white discharge. She has no fever, no pain or swelling of the genital or perineal area, and she is eating and drinking normally. What is the best response?

- A This may be necrotizing fasciitis; send her to the emergency department now
- B The infection means the drug is unsafe for her; ask the prescriber to stop empagliflozin permanently
- C The dose is too low to clear the infection; increase the empagliflozin dose
- D A known SGLT2 inhibitor effect; monitor her and arrange treatment
- E This is unrelated to her medication; no action is needed

Question 14 - Hard

Mr. Gagnon, 66, has HFrEF and takes empagliflozin 10 mg daily. He is booked for an elective knee replacement in 5 days. He will fast before surgery and eat little at first afterwards. What is the best plan?

- A Continue empagliflozin right through surgery and the fasting period, because it protects his heart
- B Interrupt it at least 3 days before surgery; restart once eating, drinking and clinically stable
- C Skip only the morning-of-surgery dose and restart it that evening once he is back on the ward
- D Stop it 2 weeks before surgery and restart it 2 weeks after he is discharged home
- E Stop it on admission and restart it as soon as he wakes from anesthesia

Question 15 - Easy

Mr. Bernard, 72, has HFrEF and takes furosemide, ramipril, bisoprolol and spironolactone. He asks for naproxen for knee pain. What is the best advice?

- A Naproxen is acceptable if he takes it with food and only for a short time, such as one week
- B Ibuprofen is safer than naproxen in heart failure, so use that instead
- C Naproxen is acceptable if the prescriber agrees to skip a furosemide dose on those days
- D Take naproxen and eat extra salt to protect the kidneys
- E Avoid naproxen and ibuprofen, and ask the prescriber about another pain option

Question 16 - Medium

Mr. Sandhu, 64, has type 2 diabetes (A1c 8.3% on metformin) and HFrEF, NYHA II, treated with sacubitril/valsartan, carvedilol, spironolactone and dapagliflozin. A new prescription for pioglitazone 15 mg daily arrives. Which statement about this prescription is correct?

- A Pioglitazone is contraindicated in NYHA class III and IV heart failure, but allowed in class I and II
- B Pioglitazone is allowed if he limits his salt intake and watches for ankle swelling
- C Pioglitazone is preferred in heart failure because it does not cause low blood sugar
- D Pioglitazone is contraindicated in heart failure of any NYHA class
- E Pioglitazone is allowed when the furosemide dose is doubled to prevent fluid build-up

Question 17 - Easy

Mr. Pereira, 69, is newly diagnosed with heart failure and was told to weigh himself every day. He asks when he should call. Which advice is correct?

- A Call the care team if weight rises more than 2 kg in 2 days, even if he feels well
- B Contact the team only if he gains more than 2 kg over a full week
- C Weigh himself only on days when his ankles look swollen or he feels breathless
- D Contact the team only if he gains more than 5 kg in total since the diagnosis
- E Ignore weight changes unless he is also short of breath even while resting in a chair

Question 18 - Hard

Mrs. Roy is in hospital with acute decompensated HF. She received furosemide 40 mg IV on day 1. Over 24 hours her weight fell only 0.3 kg and urine output was 2 L. She is still congested. SBP 118 mmHg, K 3.9 mmol/L. According to the CCS decision-support chart, what is the best next step?

- A Continue the same dose of furosemide and reassess again in 24 hours
- B Reduce the dose by 25% to 50% because she is still congested after a weak response
- C Increase the loop diuretic dose by about 50%, then reassess in 24 hours
- D Stop IV furosemide and use oral spironolactone alone to relieve her congestion
- E Start a dobutamine infusion at once because her diuresis was poor

Question 19 - Medium

Mrs. Dubois, 68, has HFrEF (LVEF 30%), sinus rhythm, and takes ivabradine 5 mg twice daily plus carvedilol, ramipril and spironolactone. A walk-in clinic prescribes verapamil 80 mg three times daily for palpitations. Which statement about this prescription is correct?

- A Verapamil and diltiazem are allowed with ivabradine if the pulse is checked next week
- B Verapamil and diltiazem are contraindicated with ivabradine
- C Verapamil is allowed with ivabradine at a lower ivabradine dose (2.5 mg twice daily)
- D Verapamil is contraindicated with ivabradine only if taken at the same time; 6 hours apart is allowed
- E Verapamil is allowed with ivabradine if she stops carvedilol, to avoid too much slowing of the heart

Question 20 - Hard

Mrs. Lavoie, 79, has HFrEF (LVEF 30%, NYHA III), sinus rhythm, resting heart rate 80 bpm on a maximally tolerated beta-blocker. A prescription arrives for ivabradine 5 mg twice daily (new start). Which statement is correct?

- A 5 mg twice daily is the right start, because she meets the heart rate criterion
- B 7.5 mg twice daily is the right start, because she is not yet at the target dose
- C 2.5 mg once daily is the right start, to be safe
- D Ivabradine cannot be used in people over age 75
- E At age 75 and older the starting dose is 2.5 mg twice daily

Question 21 - Medium

Mr. Chen, 70, was hospitalized for worsening HF 3 weeks ago. He is now stable on standard therapy. SBP 112 mmHg, eGFR 48. His cardiologist's new prescription is vericiguat 10 mg once daily. Which statement is correct?

- A The recommended starting dose is 2.5 mg once daily with food
- B 10 mg is the right start, taken on an empty stomach for better absorption
- C 10 mg is the right start, because his eGFR requires the highest dose
- D Vericiguat is not used after a hospital stay for worsening heart failure
- E 5 mg twice daily is the right start, to speed up the benefit

Question 22 - Hard

Mr. Ahmed, 66, takes vericiguat 5 mg daily (being titrated), sacubitril/valsartan, carvedilol and spironolactone. SBP 104 mmHg. His family doctor prescribes sildenafil 50 mg as needed for erectile dysfunction. Which statement is correct?

- A Sildenafil is considered safe with all heart failure drugs, including vericiguat
- B Sildenafil 25 mg is allowed with vericiguat, because a half dose lowers the BP risk
- C Sildenafil is not recommended with vericiguat only if both are taken within 12 hours
- D Sildenafil is not recommended with vericiguat (limited experience, low BP risk)
- E Sildenafil is allowed with vericiguat if vericiguat is stopped on the night he uses it

Question 23 - Hard

Mr. Morin, 62, has HFrEF (LVEF 25%, NYHA III) despite a beta-blocker, SGLT2 inhibitor and diuretic. His ARNI was stopped because of worsening kidney function, and an ARB then caused potassium 5.9 mmol/L. Spironolactone is not an option for the same reason. Heart rate is 68 bpm in sinus rhythm, with no atrial fibrillation. Which add-on drug combination is best supported?

- A Ivabradine alone
- B Digoxin alone, because it lowers the risk of death in HFrEF
- C Hydralazine with isosorbide dinitrate
- D Diltiazem plus amlodipine
- E Spironolactone with a potassium supplement

Question 24 - Easy

Mr. Dunn, 77, takes digoxin 0.125 mg daily and furosemide 40 mg twice daily. He has nausea, vomiting and blurred, yellowish vision. Which factor most likely raised his risk of digoxin toxicity?

- A Taking his daily multivitamin with breakfast
- B A high-sodium diet with extra salt at meals
- C High serum magnesium from long-term antacid use
- D Slightly high potassium, which depresses the heart rhythm and slows the pulse
- E Low potassium (hypokalemia) from the loop diuretic

Question 25 - Medium

Mrs. Petrov, 73, has HFrEF with atrial fibrillation and takes digoxin 0.125 mg daily. A cardiologist prescribes amiodarone for rhythm control. What is the most important pharmacist action?

- A Alert the prescriber that amiodarone can raise digoxin levels; monitor for toxicity
- B Tell the prescriber there is no important interaction between amiodarone and digoxin
- C Tell her to double the digoxin dose while amiodarone is being started
- D Tell her to take amiodarone and digoxin 4 hours apart, because spacing the two doses removes the interaction
- E Tell her to stop digoxin without telling the cardiologist or her family doctor

Question 26 - Easy

Mr. Roberts, 74, with known heart failure phones at 9 p.m. He has been short of breath even while sitting still since this afternoon and cannot lie flat. An extra furosemide tablet did not help. What is the best advice?

- A Take another extra furosemide tablet and recheck how he feels in the morning
- B Seek emergency care now (call 911 or go to the emergency department)
- C Book an urgent visit with the family doctor later in the week
- D Drink less water and wait for the breathing to improve overnight
- E Take an ibuprofen tablet for the discomfort and rest in a chair

Question 27 - Medium

Mr. Fraser, 68, has HFrEF. He has never had a pneumococcal vaccine. Which Canadian (NACI) recommendation applies?

- A Pneu-C-13 followed by Pneu-P-23 8 weeks later
- B Pneu-P-23 alone
- C No pneumococcal vaccine until age 75
- D One dose of Pneu-C-20 or Pneu-C-21
- E Pneumococcal vaccines are contraindicated in heart failure

Question 28 - Medium

(Pharmacy practice) A new prescription for sacubitril/valsartan 49/51 mg twice daily arrives from a cardiologist for Mr. Greene. His profile shows ramipril 5 mg twice daily last filled 10 days ago, with no note that it was stopped. He says he took ramipril this morning. Which safety check matters most before dispensing?

- A That the doses are taken 12 hours apart from his ramipril
- B That a note about the ramipril is added to his profile
- C That ramipril is stopped and 36 hours have passed since the last dose
- D That the prescription is cancelled, because he is still on ramipril
- E That ramipril is taken only in the morning and sacubitril/valsartan only in the evening

Question 29 - Hard

(Safety and professionalism) A pharmacist finds that Ms. Park, 70, picked up spironolactone yesterday. The label says 25 mg, but the vial holds 100 mg tablets. She has eGFR 45 and takes an ARNI. She took one tablet this morning and is at home. What is the best first step?

- A Wait for her next refill, quietly exchange the vial, document it and report it later, to avoid worrying her
- B Phone her now: stop the tablets, check symptoms, arrange assessment and the right product, then disclose, document and report
- C Phone her now: ask her to bring the vial back, give the right product, document it and report it, without explaining why
- D Tell her at her next visit: check her symptoms, give the right product, disclose, document and report
- E Report it to a medication safety program first; phone her, check symptoms and give the right product once the report is complete

Question 30 - Easy

(Communication) Mr. Yilmaz, 80, has limited English and has just been started on eight heart failure medicines. Which approach best confirms that he understands his instructions?

- A Ask "Do you understand?" and accept a nod or a yes as confirmation of understanding
- B Give a long printed leaflet in English and no discussion at the counter
- C Speak louder and faster so the instructions are finished quickly
- D Give all of the instructions to the pharmacy technician to explain
- E Use plain words and ask him to explain how he will take each medicine

 Study aid, not medical advice. Check official sources before any patient decision.

PART B - ANSWER KEY



⚠️ **Study aid, not medical advice. Check official sources before any patient decision.**

Source tags are listed at the end. "Canada" sources come first in each item, then "US".

🔑 Q1 [E] Answer C (Class III)

✅ **Why:** NYHA III = symptoms with less than ordinary activity (marked limit), comfortable at rest. Walking 50 m or dressing causes symptoms. Health Canada drug labels use NYHA classes (for example ivabradine NYHA II-III) [Canada: S5]; NYHA class wording: US/secondary [U8].

❌ **A:** Class I = symptoms only with more than ordinary activity. **B:** Class II = symptoms with ordinary activity, slight limit. **D:** Class IV = symptoms at rest, which she does not have.

🕒 **Blueprint:** 1A Clinical Care (assessment). Likely exam angle: classify function from a story. Note: NYHA definitions come from a secondary US page; they were not confirmed against the primary NYHA text, and Canadian labels do not define the classes.

🔑 Q2 [M] Answer A

✅ **Why:** CCS 2021: start standard therapies (ARNI or ACEi/ARB, beta-blocker, MRA, SGLT2 inhibitor) as soon as possible and titrate every 2 to 4 weeks to target or maximum tolerated dose over 3 to 6 months; use the lowest loop diuretic dose that keeps the patient dry [Canada: S2 p10].

❌ **B:** delays life-saving drugs for months; a diuretic only relieves congestion. **C:** ivabradine and digoxin are add-ons for persistent symptoms, not first. **D:** full target doses at the start risk hypotension and kidney or potassium problems; the guide says start low and titrate. **E:** hydralazine/ISDN is for patients who cannot take ARNI/ACEi/ARB or as an extra in selected patients [S2 p10, p13].

🕒 **Blueprint:** 1A Clinical Care (care plan). Likely exam angle: foundation therapy and titration speed. Note: this is the 2021 CCS guide, which is still the latest CCS HFrEF guideline (checked October 2026).

🔑 Q3 [M] Answer D

✅ **Why:** outpatient cut-offs for "HF likely": NT-proBNP above 125 pg/mL or BNP above 50 pg/mL, then do an echocardiogram [Canada: S2 p5]. 210 is above 125.

❌ **A:** wrong; it is above the cut-off. **B:** 300 to 900 is the acute (emergency) grey zone, not for a stable outpatient [S2 p1, p17]. **C:** a natriuretic peptide supports the need for an echo; it does not prove the diagnosis or choose a drug. **E:** NT-proBNP or BNP can both be used (BNP above 50 for outpatients).

📄 Natriuretic peptides are not available in every Canadian jurisdiction [S2 p5].

🕒 **Blueprint:** 1A Clinical Care (lab interpretation). Likely exam angle: outpatient vs acute cut-offs.

Q4 [H] Answer B

✓ **Why:** eplerenone is contraindicated with strong CYP3A4 inhibitors, and clarithromycin is named in the Canadian label [Canada: S10]. The prescriber should choose an antibiotic that does not strongly inhibit CYP3A4.

✗ A, C, D: these are not the interaction named in the label; the problem is the CYP3A4 block, not potassium, blood sugar or kidney clearance. E: wrong, because the label contraindicates the combination.

 **Blueprint:** 1A Clinical Care (monitor and manage interactions). Likely exam angle: strong CYP3A4 inhibitor with an MRA.

Q5 [E] Answer E

✓ **Why:** HFrEF means LVEF 40% or less with heart failure [Canada: S2 p2]; HFmrEF (non-reduced) means LVEF above 40% [Canada: S1 p2]. With a damaged heart but no symptoms, the ACC/AHA stage is B (pre-HF) [US/secondary: U7; stage wording from secondary summaries].

✗ A: LVEF 30% is not preserved, and he has structural disease. B: he has no symptoms and LVEF is not 41-49%. C: NYHA III needs marked symptoms. D: HFmrEF is LVEF above 40%, and stage C needs symptoms.

 **Blueprint:** 1A Clinical Care (assessment). Likely exam angle: EF categories and staging. Note: ACC/AHA stages are a US system (Canada's CCS guide does not use them); primary ACC/AHA text was not opened (blocked earlier).

Q6 [M] Answer C

✓ **Why:** sacubitril/valsartan should not be given with any other drug containing an ARB, because it already blocks the angiotensin II receptor [Canada: S3, Dosage 4.2, Drug interactions].

✗ A: the issue is duplicate blockade, which raises hypotension, potassium and kidney risk, not too little BP effect. B and D: candesartan is an accepted HF drug when an ARNI is not available or not tolerated [S1 p4]; it just must not be added to an ARNI. E: there is no such timing rule.

 **Blueprint:** 1B Distribution (prescription review); also 1A Clinical Care. Likely exam angle: duplicate RAAS blockade at verification.

Q7 [E] Answer B

✓ **Why:** sacubitril/valsartan has a boxed warning for fetal injury and is contraindicated in pregnancy [Canada: S3]. She needs a same-day prescriber review of the full regimen. Carvedilol has no pregnancy studies and may cause fetal or newborn bradycardia and hypoglycemia, so even it needs a prescriber decision [S11].

✗ A: unsafe delay. C: ACE inhibitors also injure or kill the developing fetus and are contraindicated in pregnancy [S14]. D: any dose exposes the fetus. E: stopping everything abruptly is unsafe; for example carvedilol should be tapered over about 2 weeks if possible [S11].

 **Blueprint:** 1A Clinical Care (implement and adjust care). Likely exam angle: RAAS drugs in pregnancy.

Q8 [M] Answer E

✓ **Why:** carvedilol label: before each increase, check for worsening HF or vasodilation (dizziness, low BP); dizziness or low BP may respond to a lower diuretic dose; if not, lower carvedilol; do not increase again until symptoms are stable (2 weeks after a decrease) [Canada: S11].

✗ **A:** raising the dose while she is symptomatic goes against the label. **B:** stopping permanently is not needed; initial difficulty does not stop later titration. **C:** more ramipril would lower BP further. **D:** carvedilol should be taken with food to reduce dizziness.

🕒 **Blueprint:** 1A Clinical Care (monitor). Likely exam angle: when to pause beta-blocker titration.

Q9 [E] Answer A

✓ **Why:** take with food to slow absorption and lower the risk of dizziness/low BP, which can occur within 2 hours of a dose, especially at start and dose increases [Canada: S11].

✗ **B:** the opposite. **C:** it is a twice-daily drug. **D:** benefits build over months and transient worsening can happen; stopping because it "does not work" quickly is wrong. **E:** mild dizziness is common early; the patient should report it, not stop on their own (carvedilol should be reduced gradually) [S11].

🕒 **Blueprint:** 1A Clinical Care (counselling). Likely exam angle: administration with food.

Q10 [H] Answer D

✓ **Why:** the Canadian contraindications are an ACEi within 36 hours, a history of angioedema with an ACEi or ARB, and hereditary or idiopathic angioedema [Canada: S3]. A dry cough is not on that list, and ramipril stopped 6 months ago, so no waiting period applies. The label allows 24/26 mg twice daily as a start for patients not already on guideline-dose ACEi/ARB; the dose itself is not what this question tests [S3].

✗ **A:** only angioedema (not cough) is a contraindication. **B:** the 36-hour gap is already far exceeded. **C:** 97/103 mg is the target dose, not a starting dose. **E:** no ARB trial is required first.

🕒 **Blueprint:** 1A Clinical Care (care plan). Likely exam angle: separating cough from angioedema. Note: the statement "cough is not a contraindication" is based on the absence of cough from the label's contraindication list.

Q11 [E] Answer C

✓ **Why:** spironolactone label: avoid potassium supplements, salt substitutes and foods high in potassium (bananas, prunes, raisins, orange juice) [Canada: S9]. Keep blood tests (MRA monitoring) [S10 for eplerenone: potassium within the first week and at one month].

✗ **A:** potassium-based substitutes and orange juice raise hyperkalemia risk. **B:** spironolactone helps survival in HFrEF [S2 p7]; the problem is the potassium sources. **D:** supplements and high-potassium foods are to be avoided. **E:** extra fluid does not fix the potassium problem, and using the substitute at dinner still adds potassium.

🕒 **Blueprint:** 1A Clinical Care (counselling). Likely exam angle: salt substitutes with MRA or ARNI.

Q12 [M] Answer A

✓ **Why:** the empagliflozin label warns about intercurrent illness that leads to volume depletion (such as gastrointestinal illness), says to consider temporary interruption until the depletion is corrected, and warns that nausea and vomiting can signal ketoacidosis [Canada: S8]. He has dizziness, dark urine and 2 kg weight loss.

✗ **B:** delay risks kidney injury, low BP and ketoacidosis. **C:** extra diuretic worsens dehydration. **D:** never double a dose; the HF dose is 10 mg daily. **E:** bisoprolol is not the problem; stopping only it ignores the volume loss.

📄 **Note:** whether to also pause the diuretic and ramipril during illness is common practice; exact wording was not found in the sources used (unconfirmed), so the question tests only the SGLT2 inhibitor.

🕒 **Blueprint:** 1A Clinical Care (monitor, manage adverse effects). Likely exam angle: sick-day counselling.

Q13 [M] Answer D

✓ **Why:** empagliflozin increases the risk of genital mycotic infections; "monitor and treat as appropriate". Necrotizing fasciitis of the perineum (Fournier's gangrene) should be suspected with pain, tenderness, redness, swelling in the genital/perineal area, fever or malaise [Canada: S8]. She has itching and discharge only.

✗ **A:** no pain, swelling or fever, so the emergency pathway is not needed now. **B:** permanent withdrawal is not what the label says for a simple yeast infection. **C:** never increase the dose; it would not treat infection. **E:** it is a labelled adverse effect.

🕒 **Blueprint:** 1A Clinical Care (adverse effects). Likely exam angle: SGLT2 inhibitor genital infection vs red flags.

Q14 [H] Answer B

✓ **Why:** empagliflozin should be interrupted for a minimum of 3 days, when possible, before major surgery or procedures with prolonged fasting; monitor for ketoacidosis afterwards; restart only when risk factors are resolved, the patient is clinically stable and has resumed oral intake [Canada: S8].

✗ **A:** ignores ketoacidosis risk with fasting. **C:** one day is shorter than 3 days. **D:** 2 weeks is longer than needed; the label says a minimum of 3 days. **E:** restarting before he is eating and drinking again is against the label.

🕒 **Blueprint:** 1A Clinical Care (care plan, perioperative). Likely exam angle: 3-day SGLT2 hold.

Q15 [E] Answer E

✓ **Why:** Canadian NSAID labels warn that NSAIDs promote sodium retention that can exacerbate congestive heart failure and induce fluid retention and edema; they say use caution in CHF NYHA II-IV and contraindicate severe uncontrolled heart failure [Canada: S20 naproxen; S22 ibuprofen]. Pharmacist advice is to avoid them and look for another option. US (secondary): NSAIDs are class 3 Harm in HFrEF [U2].

✗ **A, B:** all oral NSAIDs, including ibuprofen, carry this risk. **C:** skipping the diuretic worsens congestion, even if a prescriber agrees to it. **D:** extra salt worsens fluid overload.

📄 **Which alternative pain medicine to choose is not covered by the sources used (unconfirmed), so the answer only says to discuss another option.**

🕒 **Blueprint:** 1A Clinical Care (counselling, drug-disease). Likely exam angle: OTC NSAID requests in HF.

Q16 [M] Answer D

✓ **Why:** Canadian pioglitazone labels (Teva-Pioglitazone; Actos): contraindicated in patients with NYHA Class I, II, III and IV heart failure [Canada: S16]. US (secondary): thiazolidinediones are listed as harmful in HF [U3].

✗ **A:** the contraindication covers NYHA class I and II as well, not only III and IV. B, E: salt limits and a higher diuretic dose do not make a contraindicated drug acceptable. C: lack of hypoglycemia does not outweigh the contraindication.

🕒 **Blueprint:** 1A Clinical Care (care plan, drug choice). Likely exam angle: diabetes drug in HF.

Q17 [E] Answer A

✓ **Why:** CCS patient action plan lists weight gain of more than 2 kg in 2 days as a warning sign, and advises weighing daily if there is fluid retention [Canada: S2 p6].

✗ **B:** a week is too slow; the CCS rule is 2 days. C: weighing only when swollen misses early fluid gain. D: 5 kg is far too late. E: weight gain is itself a warning sign.

📄 **Time-of-day details for weighing (for example morning, after the toilet) are standard teaching but they could not be re-confirmed in a source, so they are not tested.**

🕒 **Blueprint:** 1A Clinical Care (counselling, self-care). Likely exam angle: 2 kg in 2 days.

Q18 [H] Answer C

✓ **Why:** CCS acute HF diuretic chart: assess weight and urine output over 24 hours. If weight change is under 0.5 kg or urine under 3 L, increase the loop diuretic dose by about 50%; 0.5-1.5 kg and 3-5 L, continue; over 1.5 kg and over 5 L, consider reducing by 25-50% [Canada: S2 p19].

✗ **A:** that applies to a good response (0.5-1.5 kg). B: that applies to an excessive response. D: spironolactone alone does not relieve acute congestion. E: inotropes are for low output or low BP (SBP 90-100 or below), not for a poor diuretic response with SBP 118 as the first step [S2 p17-20].

🕒 **Blueprint:** 1A Clinical Care (monitor and adjust). Likely exam angle: diuretic response rules. Note: CCS 2021 acute-care chart; mainly a hospital topic.

Q19 [M] Answer B

✓ **Why:** ivabradine is contraindicated with verapamil or diltiazem (moderate CYP3A4 inhibitors that also lower heart rate) [Canada: S5].

✗ **A:** monitoring does not make a contraindicated combination safe. C: lowering the ivabradine dose does not make the combination acceptable. D: spacing the doses does not remove the interaction. E: carvedilol is not the issue.

🕒 **Blueprint:** 1A Clinical Care (interactions). Likely exam angle: rate-limiting CCB with ivabradine.

🔑 Q20 [H] Answer E

✅ **Why:** in patients aged 75 and older the lower starting dose is 2.5 mg twice daily; the usual start is 5 mg twice daily, then adjust by heart rate [Canada: S5]. Her heart rate of 80 meets the label requirement of 77 bpm or more [S5].

❌ **A:** ignores the age-based start dose. **B:** 7.5 mg twice daily is the maximum and is reached only by titration. **C:** the drug is given twice daily. **D:** age 75 or older is not a contraindication.

🕒 **Blueprint:** 1A Clinical Care (assessment, geriatric dosing). Likely exam angle: elderly starting dose.

🔑 Q21 [M] Answer A

✅ **Why:** recommended start is 2.5 mg once daily with food; double about every 2 weeks as tolerated to 10 mg once daily; do not start if SBP is below 100 mmHg [Canada: S4]. His SBP is 112 so he qualifies, but not at 10 mg.

❌ **B:** it should be taken with food. **C:** no dose change is needed for eGFR 15 or higher, and 10 mg is the target, not the start. **D:** it is intended for patients stabilized after a recent HF hospitalization. **E:** not a labelled starting dose.

🕒 **Blueprint:** 1B Distribution (prescription review); also 1A Clinical Care. Likely exam angle: verify starting dose of a new HF drug.

🔑 Q22 [H] Answer D

✅ **Why:** the vericiguat label says concomitant use with PDE-5 inhibitors such as sildenafil is not recommended in heart failure patients because of limited clinical experience, and notes a risk of hypotension [Canada: S4].

❌ **A:** not supported. **B:** a lower dose is not an approved way around this. **C:** the label does not limit the advice to a 12-hour window. **E:** stopping an HF drug for an erectile-dysfunction drug is the wrong priority.

🕒 **Blueprint:** 1A Clinical Care (interactions). Likely exam angle: PDE-5 inhibitor with vericiguat or nitrates.

🔑 Q23 [H] Answer C

✅ **Why:** CCS: hydralazine plus isosorbide dinitrate is for patients with intolerance to ARNI/ACEi/ARB because of worsening renal function or hyperkalemia, or as an extra in Black patients with high symptom burden [Canada: S2 p13].

❌ **A:** ivabradine needs a resting heart rate of 77 bpm or more in the Canadian label; his is 68 [S5]. **B:** digoxin has no mortality benefit [S2 p13]; it is for AF with poor control or persistent symptoms, and his main problem is intolerance of RAAS drugs. **D:** diltiazem is harmful in HFrEF (US class 3 Harm, secondary [U2/U3]). **E:** potassium supplements with an MRA, in a patient with hyperkalemia, is dangerous [S9].

🕒 **Blueprint:** 1A Clinical Care (care plan). Likely exam angle: when H-ISDN is chosen.

🔑 Q24 [E] Answer E

✅ **Why:** with hypokalemia, digoxin toxicity may occur even at normal serum digoxin levels; hypokalemia can result from diuretics. Early toxicity symptoms include nausea, vomiting and visual disturbances (blurred or yellow vision) [Canada: S13].

❌ **A:** a multivitamin with food does not cause digoxin toxicity. **B:** sodium intake is not a listed risk. **C:** low (not high) magnesium predisposes. **D:** high potassium is not the risk; loop diuretics lower potassium, and low potassium is the factor that raises digoxin toxicity risk.

🕒 **Blueprint:** 1A Clinical Care (monitor). Likely exam angle: diuretic hypokalemia and digoxin.

🔑 Q25 [M] Answer A

✅ **Why:** the digoxin monograph lists amiodarone among drugs that raise digoxin levels or effect; amiodarone has a long half-life, so the effect can start weeks after adding it and persist after stopping [Canada: S13]. The prescriber should know and monitor for toxicity.

❌ **B:** wrong. **C:** doubling digoxin would produce toxicity. **D:** spacing does not stop a pharmacokinetic interaction. **E:** stopping without advice is unsafe in AF with HF.

🕒 **Blueprint:** 1A Clinical Care (interactions). Likely exam angle: digoxin interactions. Note: the specific dose-reduction advice is not confirmed, so the question does not ask for one.

🔑 Q26 [E] Answer B

✅ **Why:** CCS warning signs include dyspnea at rest, inability to lie flat (dyspnea when lying flat), and a prolonged symptom that does not respond; breathlessness at rest is an urgent warning sign [Canada: S2 p6]. Calling 911 or going to the emergency department is standard practice, but the words "call 911" are not in the CCS text (unconfirmed).

❌ **A:** delay with worsening symptoms is dangerous. **C:** far too slow. **D:** restricting fluid and waiting is not an emergency response. **E:** NSAIDs worsen HF [S20].

🕒 **Blueprint:** 1A Clinical Care (triage and referral). Likely exam angle: red flags needing emergency care.

🔑 Q27 [M] Answer D

✅ **Why:** NACI (Nov 15, 2024; the latest NACI adult pneumococcal statement found, checked October 2026): one dose of Pneu-C-20 or Pneu-C-21 for adults 65 and older and for adults under 65 at increased risk, including chronic heart disease requiring regular medication and follow-up (such as chronic heart failure) [Canada: S17]. CCS also advises an annual influenza vaccine and periodic pneumococcal immunization for HF [S2 p6].

❌ **A and B:** older products. Pneu-C-15 (given in series with Pneu-P-23) is a fallback only when Pneu-C-20 or Pneu-C-21 are unavailable or inaccessible. **C:** wrong; he is already eligible at 68 and by HF. **E:** false.

🕒 **Blueprint:** 1A Clinical Care (immunization). Likely exam angle: current NACI pneumococcal vaccine.

🔑 Q28 [M] Answer C

✅ **Why:** sacubitril/valsartan must not be started until 36 hours after the last ACEi dose; an ACEi plus sacubitril/valsartan together is contraindicated because of angioedema risk [Canada: S3]. Confirming this with the patient and the prescriber is part of a safe dispensing check.

❌ **A:** 12 hours is much less than 36. **B:** a note alone does not ensure the gap. **D:** cancelling removes an indicated therapy. **E:** a morning ramipril and evening ARNI schedule overlaps the washout.

🕒 **Blueprint:** 1B Distribution (reviewing prescriptions, verification). Likely exam angle: ACEi to ARNI switch at the counter.

🔑 Q29 [H] Answer B

✅ **Why:** ISMP Canada's suggested framework (adapted from CPSI Canadian Disclosure Guidelines): first attend to the affected patient and prevent harm to others, then decide on disclosure, offer a sincere apology, and report through the incident reporting system [Canada: S21]. A wrong-strength MRA (4 times higher) in a patient with reduced kidney function and an ARNI carries a potassium risk, so the patient is assessed first.

❌ **A:** concealing the error and waiting is unethical and unsafe. **C:** she must be told why, and she must be assessed and protected now. **D:** waiting until the next visit delays protection of a patient who may be at risk. **E:** attending to the patient comes first, before the report.

🕒 **Blueprint:** 5 Professionalism (patient safety). Likely exam angle: first actions after a dispensing error. Note: provincial rules on reporting differ; the question tests the general order of actions.

🔑 Q30 [E] Answer E

✅ **Why:** teach-back (asking the patient to explain in his own words) is recommended as a way to check understanding, especially with low health literacy [source: search extract of a pharmacy teach-back study, Int J Clin Pharm 2023 (S23); the full text could not be opened, so this explanation is partly unconfirmed]. Plain language and an interpreter support communication in line with the Communication and Collaboration area.

❌ **A:** a nod or "yes" does not prove understanding. **B:** a leaflet alone does not check understanding. **C:** volume does not fix a language barrier. **D:** the patient must be involved; delegating all counselling to a technician is not appropriate.

🕒 **Blueprint:** 3 Communication and Collaboration (effective communication). Likely exam angle: teach-back.

⚠️ **Study aid, not medical advice. Check official sources before any patient decision.**

Sources and unconfirmed items



Sources (accessed 2026-10-23; Canada first, then US)

Canada

- S1. CCS/CHFS 2025 Guideline Update for Pharmacologic Management of HF With Nonreduced EF (LVEF above 40%) - Pocket Guide. https://ccs.ca/wp-content/uploads/2026/04/CCS_Pocket_Guide_HFnrEF_ENG.pdf (Virani SS, et al. Can J Cardiol 2025;41(10):1857-1874).
- S2. CCS Heart Failure 2021 Pocket Guide (HF-2021-03-P1, March 2021; copy on publications.saskatchewan.ca). <https://publications.saskatchewan.ca/api/v1/products/129458/formats/155985/download>. 2021 content.
- S3. Entresto (sacubitril/valsartan) Product Monograph, Novartis Canada, authorized 2026-02-26 (Health Canada copy). https://pdf.hres.ca/dpd_pm/00083663.PDF
- S4. Verquvo (vericiguat) Product Monograph, Bayer Inc., dated April 27, 2023 on its cover (no later version found on the Health Canada site). https://pdf.hres.ca/dpd_pm/00070443.PDF
- S5. Lancora (ivabradine) Product Monograph, Servier Canada, date of authorization 2025-05-30. https://pdf.hres.ca/dpd_pm/00080705.PDF
- S8. Jardiance (empagliflozin) Product Monograph, revision Jul 31, 2025. https://pdf.hres.ca/dpd_pm/00081256.PDF
- S9. Aldactone (spironolactone) Product Monograph, Pfizer, 2025-11-07. https://pdf.hres.ca/dpd_pm/00082356.PDF
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- S11. pms-Carvedilol Product Monograph, revision Apr 4, 2022. https://pdf.hres.ca/dpd_pm/00065327.PDF
- S13. pms-Digoxin Product Monograph, Pharmascience, revision Nov 23, 2022 (marketed; JAMP Digoxin, Dec 7, 2022, has the same points). https://pdf.hres.ca/dpd_pm/00069390.PDF
- S14. Teva-Ramipril Product Monograph, revision Oct 20, 2020. https://pdf.hres.ca/dpd_pm/00058445.PDF
- S16. Teva-Pioglitazone Product Monograph, Teva Canada, Dec 12, 2025 (current marketed label). https://pdf.hres.ca/dpd_pm/00082763.PDF. The Actos brand monograph (Takeda, last revised Jan 18, 2018, https://pdf.hres.ca/dpd_pm/00043493.PDF) carries the same contraindication.
- S17. NACI Statement on pneumococcal vaccines in adults including Pneu-C-21, Nov 15, 2024. <https://www.canada.ca/en/public-health/services/publications/vaccines-immunization/national-advisory-committee-immunization-statement-recommendations-use-pneumococcal-vaccines-adults-pneu-c-21.html>
- S20. JAMP Naproxen Product Monograph, initial authorization June 1, 2026. https://pdf.hres.ca/dpd_pm/00084895.PDF
- S21. Fuller G, Ho C. Disclosure of Medication Incidents: A Suggested Framework. ISMP Canada, Pharmacy Connection, Summer 2019. <https://www.ismp-canada.org/download/PharmacyConnection/PC2019Summer-Disclosure.pdf>
- S22. Ibuprofen Capsules 200 mg Product Monograph, Auro Pharma, authorization Feb 12, 2025, date of preparation May 23, 2025. https://pdf.hres.ca/dpd_pm/00080651.PDF
- S23. Teach-back in pharmacy practice, Int J Clin Pharm 2023 (seen only in a search extract). <https://link.springer.com/article/10.1007/s11096-023-01558-0>
- PEBC Pharmacist Qualifying Examination Blueprint Ver. 03-2026: https://pebc.ca/wp-content/uploads/pdfs/Qual%20EN/Pharmacist_Qualifying_Exam_Blueprint.pdf (file could not be read).

United States (secondary)

- U2. Guideline Central excerpt of the 2022 AHA/ACC/HFSA guideline (NSAIDs, class 3 Harm). <https://guideline.guidelinecentral.com/i/1461930/26>
- U3. Pharmacy Times, clinical overview of potentially harmful medications in heart failure (date not read). <https://pharmacytimes.com/view/clinical-overview-potentially-harmful-medications-in-heart-failure>
- U7. AJMC summary of ACC/AHA stages A-D. <https://www.ajmc.com/view/new-hf-definition-stage-updates-outlined-in-2022-acc-aha-hf-sa-guidelines>
- U8. NYHA classes, Fpnotebook (secondary). <https://fpnotebook.com/CV/Exam/NyhHrtFlrClsfctn.htm>

Unconfirmed items

- Primary 2022 AHA/ACC/HFSA guideline (Circulation 2022;145:e895-e1032, <https://www.ahajournals.org/doi/10.1161/CIR.0000000000001063>) could not be opened (access blocked); the US points use secondary pages. A newer US document exists: 2026 ACC Expert Consensus Decision Pathway on HFpEF (J Am Coll Cardiol 2026;88:1817-1846, <https://doi.org/10.1016/j.jacc.2026.06.018>); no question here depends on it.
- Blueprint: the PEBC blueprint PDF could not be read, so only the area names are given. Check each tag against the official blueprint.
- Most items were checked against Canadian sources only. The US points use secondary web pages (not the primary US guideline).
- Q12 (whether to also hold diuretic/ACEi on sick days), Q15 (which alternative analgesic), Q17 (time-of-day for weighing), Q26 ("call 911" wording), Q30 (teach-back source) are marked as unconfirmed in the key.
- CCS/CHFS 2025 (HF with non-reduced EF): two author corrections were published in Can J Cardiol, September 2026; what they changed could not be read. Only Q5 uses it (the HFnrEF definition, LVEF above 40%).

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