

Assessment and objective map

Hyperkalemia in Heart and Kidney Care: Confirm, Respond, and Preserve Treatment

Provider review edition. Three matched baseline items, six formative case decisions and six final questions. Baseline is ungraded; do not reveal its answers before teaching. Final passing setting is provisional: integer correct ≥ 4 of 6. Preserve first attempts separately from retries.

Opening questions: K1, K3, K5

Case decisions

KC1A | Objective 1 | At Evelyn's first call she is stable, and the potassium of 5.7 is hemolyzed. Which action best addresses the current uncertainty?

- A. Arrange prompt properly collected repeat testing, assess symptoms, renal function and recent changes, and assign a clinician to act on the result.
- B. Permanently stop all RAAS inhibitors because a hemolyzed result still establishes drug intolerance.
- C. Ignore the value because hemolysis proves that the patient's potassium is normal.
- D. Wait until the next routine three-month visit if no symptoms develop.

Best answer: A. Possible sampling artifact needs verification and clinical triage. A result-review owner and escalation plan prevent a repeat order from becoming a missed abnormal result.

B: One potentially unreliable measurement does not establish persistent intolerance or justify permanent withdrawal.

C: Hemolysis can elevate measured potassium, but does not prove the patient's true potassium is normal.

D: Lack of symptoms is not a reliable safety test. A new abnormal value needs prompt assessment and confirmation.

KC1B | Objective 1 | Evelyn now has new weakness and a nonhemolyzed potassium of 6.6 mmol/L. Which action is most appropriate?

- A. Repeat the outpatient potassium tomorrow because the ECG is reassuring.
- B. Arrange emergency assessment and monitored treatment now; confirmation must not delay urgent care.
- C. Start an oral potassium binder at home and repeat testing after the first dose.
- D. Hold losartan and reassess symptoms by telephone in two days.

Best answer: B. Confirmed severe hyperkalemia with new weakness requires emergency assessment. An ECG without typical changes does not make outpatient delay safe.

A: A normal-looking ECG cannot reliably exclude dangerous hyperkalemia. Waiting is unsafe in this presentation.

C: An oral binder is not a substitute for emergency stabilization and monitoring. Both newer US binder labels exclude emergency treatment of life-threatening hyperkalemia.

D: A medication hold alone does not address the immediate arrhythmia risk or the need for monitored treatment.

KC2A | Objective 2 | Which initial plan best fits Sofia's stable presentation and newly identified exposures?

- A. Add spironolactone now to strengthen kidney protection.
- B. Permanently stop the ARB before reviewing other contributors.
- C. Address reversible contributors, reassess promptly and individualize potassium-lowering measures while reviewing whether the ARB can safely continue.
- D. Recommend avoiding every fruit and vegetable without changing medicines or arranging laboratory review.

Best answer: C. This applies a cause-directed approach with monitoring. Uncontrolled hyperkalemia despite treatment may still require dose reduction or interruption.

A: Adding a potassium-raising drug during unresolved hyperkalemia is not an appropriate first response.

B: An ARB may require interruption if potassium is uncontrolled, but unnecessary permanent withdrawal can lose an established indication.

D: Broad food restriction misses potentially reversible medication and additive sources and can undermine nutrition; dietary advice should be individualized.

KC2B | Objective 2 | A colleague says the discontinuation cohort proves that an ARB must never be held. What is the best response?

- A. The association supports reassessment of avoidable withdrawal, but does not prove causation or override uncontrolled hyperkalemia.
- B. The mortality association establishes that continuation is safe at any potassium level.
- C. The study proves that potassium binders reduce mortality.
- D. Because it was observational, no care-process question can reasonably be informed by it.

Best answer: A. Observational evidence can identify a problem worth addressing while leaving confounding and individual safety decisions unresolved.

B: Severe or uncontrolled hyperkalemia still requires appropriate intervention, including medication interruption when indicated.

C: This cohort did not randomize binder treatment and cannot establish that claim.

D: Its limitations prevent causal conclusions, not all thoughtful use in needs assessment.

KC3A | Objective 2 | Margaret asks whether the binder trials prove a survival benefit. Which answer is most accurate?

- A. They prove that adding either binder lowers mortality in all patients with CKD.
- B. Their effect sizes establish that one binder is superior to the other.
- C. REALIZE-K's potassium endpoint eliminates concern about its worsening-HF event imbalance.
- D. They support potassium control and selected MRA optimization, but do not establish a mortality benefit or a head-to-head ranking.

Best answer: D. Appraise the selected run-in populations, biochemical/treatment endpoints and safety findings separately. Neither trial provides a head-to-head binder comparison.

A: The populations and endpoints do not support that broad mortality claim.

B: These were separate trials with different designs and populations, not a direct comparison.

C: A favorable primary endpoint does not cancel a safety signal. REALIZE-K was not powered to settle clinical outcomes.

KC3B | Objective 3 | Which plan best addresses Margaret's next medication decision and the transition home?

- A. Resume every prior medicine automatically when the next prescription refill is due.
- B. Document "follow up with primary care" and leave testing to the next routine appointment.
- C. Specify each medication decision and reason, the laboratory date, named result reviewer and backup, restart criteria, patient contact and urgent escalation plan.
- D. Provide a laboratory order and assume the specialist will see the result.

Best answer: C. A closed handoff turns a temporary safety response into an accountable reassessment instead of an indefinite unreviewed discontinuation.

A: Restart requires review of the indication, potassium, renal function, blood pressure and contributing illness; a refill date is not a clinical criterion.

B: A general referral does not establish who will review an abnormal result or when.

D: An order alone does not establish result ownership, communication or a restart decision.

Final questions

K1 | Objective 1 | A patient with CKD has a repeat, nonhemolyzed potassium of 6.6 mmol/L and new muscle weakness. Her ECG does not show typical hyperkalemic changes. What is the best next step?

- A. Repeat the outpatient potassium tomorrow because the ECG is reassuring.
- B. Arrange emergency assessment and monitored treatment now; confirmation must not delay urgent care.
- C. Start an oral potassium binder at home and repeat testing after the first dose.
- D. Hold the ACE inhibitor and reassess symptoms by telephone in two days.

Best answer: B. Confirmed severe hyperkalemia with new weakness requires emergency assessment. An ECG without typical changes does not make outpatient delay safe.

A: A normal-looking ECG cannot reliably exclude dangerous hyperkalemia. Waiting is unsafe in this presentation.

C: An oral binder is not a substitute for emergency stabilization and monitoring. Both newer US binder labels exclude emergency treatment of life-threatening hyperkalemia.

D: A medication hold alone does not address the immediate arrhythmia risk or the need for monitored treatment.

K2 | Objective 1 | A clinically stable patient has an unexpected potassium of 5.7 mmol/L in a hemolyzed sample. Which response best resolves the uncertainty?

- A. Arrange prompt properly collected repeat testing, assess symptoms, renal function and recent changes, and assign a clinician to act on the result.
- B. Permanently stop all RAAS inhibitors because a hemolyzed result still establishes drug intolerance.
- C. Ignore the value because hemolysis proves that the patient's potassium is normal.
- D. Wait until the next routine three-month visit if no symptoms develop.

Best answer: A. Possible sampling artifact needs verification and clinical triage. A result-review owner and escalation plan prevent a repeat order from becoming a missed abnormal result.

B: One potentially unreliable measurement does not establish persistent intolerance or justify permanent withdrawal.

C: Hemolysis can elevate measured potassium, but does not prove the patient's true potassium is normal.

D: Lack of symptoms is not a reliable safety test. A new abnormal value needs prompt assessment and confirmation.

K3 | Objective 2 | A stable woman with albuminuric CKD has recurrent potassium of 5.5-5.6 mmol/L while taking an ARB. She recently added a potassium-containing salt substitute and frequent ibuprofen. What is the best initial strategy?

- A. Add spironolactone now to strengthen kidney protection.
- B. Permanently stop the ARB before reviewing other contributors.
- C. Address reversible contributors, reassess promptly and individualize potassium-lowering measures while reviewing whether the ARB can safely continue.
- D. Recommend avoiding every fruit and vegetable without changing medicines or arranging laboratory review.

Best answer: C. This applies a cause-directed approach with monitoring. Uncontrolled hyperkalemia despite treatment may still require dose reduction or interruption.

A: Adding a potassium-raising drug during unresolved hyperkalemia is not an appropriate first response.

B: An ARB may require interruption if potassium is uncontrolled, but unnecessary permanent withdrawal can lose an established indication.

D: Broad food restriction misses potentially reversible medication and additive sources and can undermine nutrition; dietary advice should be individualized.

K4 | Objective 2 | Which interpretation best fits DIAMOND and REALIZE-K?

- A. They prove that adding either binder lowers mortality in all patients with CKD.
- B. Their effect sizes establish that one binder is superior to the other.
- C. REALIZE-K's potassium endpoint eliminates concern about its worsening-HF event imbalance.
- D. They support potassium control and selected MRA optimization, but do not establish a mortality benefit or a head-to-head ranking.

Best answer: D. Appraise the selected run-in populations, biochemical/treatment endpoints and safety findings separately. Neither trial provides a head-to-head binder comparison.

A: The populations and endpoints do not support that broad mortality claim.

B: These were separate trials with different designs and populations, not a direct comparison.

C: A favorable primary endpoint does not cancel a safety signal. REALIZE-K was not powered to settle clinical outcomes.

K5 | Objective 3 | A patient with HFrEF and recurrent hyperkalemia is discussing a long-term binder. She has edema, low magnesium and several morning oral medicines. What should guide the choice?

- A. Use the same administration and monitoring schedule for both newer binders.
- B. Review volume and sodium concerns with SZC, magnesium and gastrointestinal concerns with patiromer, medication spacing, access and the monitoring plan.
- C. Choose by the shortest observed potassium response and use it as a home emergency rescue plan.
- D. Choose solely by which binder enabled a higher MRA dose in a separate trial.

Best answer: B. A patient-specific comparison includes both products' relevant limitations. Check current full labels and pharmacy advice; neither is an emergency rescue substitute.

A: Drug interactions, sodium content and adverse effects differ; a shared schedule can create preventable problems.

C: Observed onset does not override the emergency-use limitations or the need for urgent monitored care.

D: Cross-trial comparison cannot rank treatment. The patient's safety, preferences, access and follow-up capacity matter.

K6 | Objective 3 | After a hyperkalemia-related medication hold, which discharge handoff is most complete?

- A. Resume every prior medicine automatically when the next prescription refill is due.
- B. Document “follow up with primary care” and leave testing to the next routine appointment.
- C. Specify each medication decision and reason, the laboratory date, named result reviewer and backup, restart criteria, patient contact and urgent escalation plan.
- D. Provide a laboratory order and assume the specialist will see the result.

Best answer: C. A closed handoff turns a temporary safety response into an accountable reassessment instead of an indefinite unreviewed discontinuation.

A: Restart requires review of the indication, potassium, renal function, blood pressure and contributing illness; a refill date is not a clinical criterion.

B: A general referral does not establish who will review an abnormal result or when.

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