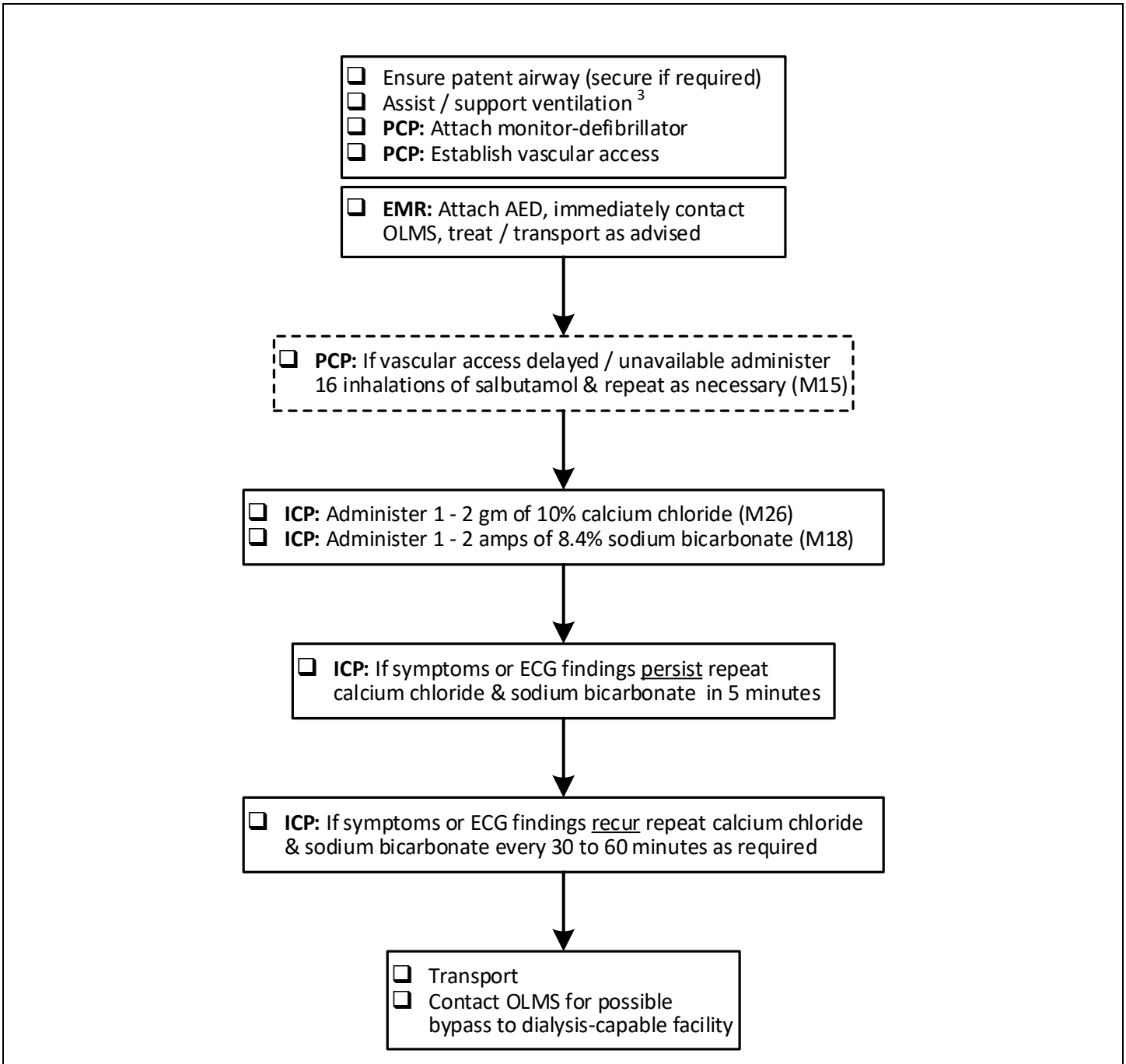
Shared health Soins communs Manitoba	E11 - HYPERKALEMIA	
	All ages	MEDICAL
Version date: 2023-11-09		Effective date: 2024-02-13 (0700)



IDENTIFIER	EMR: EMR only	PCP: PCP & ICP	ICP: ICP only	None - All providers

INDICATIONS

- Cardiac arrest in dialysis-dependent patient
- Known or suspected hyperkalemia in a non-arrested patient
- Dialysis-dependent patient with one or more of the following:
  - Missed at least one scheduled dialysis treatment [1]
  - Muscle weakness or paralysis
  - Palpitations, presyncope or syncope
  - Cardiac conduction abnormalities, arrhythmias, or electrocardiographic findings [2]

CONTRAINDICATIONS

- Cardiac arrest in a dialysis-dependent patient will be managed as per C01 or C02

NOTES

1. A patient may be asymptomatic with severe hyperkalemia. Symptoms usually involve cardiac or skeletal muscle.
2. Certain characteristic electrocardiographic (ECG) features evolve as the serum potassium level rises (appendix A). However, the absence of ECG changes does not exclude hyperkalemia.

   Rhythm abnormalities usually occur when the serum potassium reaches a level of approximately 7.0 mEq/l but can appear at lower levels if the rise in potassium is sudden. Patients can rapidly progress from an apparently normal ECG to cardiac arrest.
3. Respiratory acidosis from hypoventilation causes potassium to move from the intracellular to extracellular environment raising the serum level. Hyperventilation can temporarily lower it by shifting potassium back into cells.
4. In the non-arrested patient, administer calcium chloride & sodium bicarbonate by slow push over 2 to 3 minutes with continuous cardiac monitoring.
5. Sodium bicarbonate is not compatible with calcium salts (flush intravenous tubing well between administration of calcium and bicarbonate).

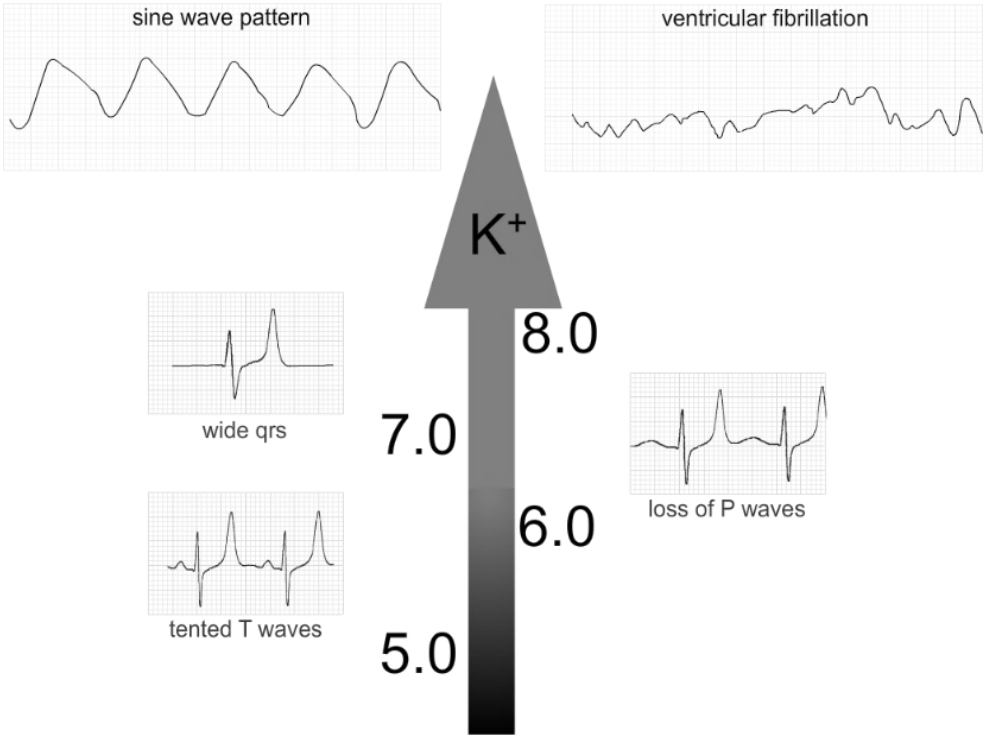
LINKS

C01 - BASIC CARDIAC ARREST
C02 - ADVANCED CARDIAC ARREST
M15 - SALBUTAMOL
M18 - SODIUM BICARBONATE
M26 - CALCIUM CHLORIDE

APPROVED BY	
	
Medical Director - EMS	Associate Medical Director - EMS

VERSION CHANGES (refer to X05 for change tracking)
• New (replaces M10) • Removal of insulin & dextrose from prehospital treatment

APPENDIX A: ELECTROCARDIOGRAPHIC FEATURES OF HYPERKALEMIA



Serum potassium (mEq/l)	Usual ECG Features [5]
5.5 - 6.5	• Peaked (tented) T waves
6.5 - 7.5	• Loss of P waves
7.0 - 8.0	• Widening of QRS complex
> 8.0	• Sine wave

Common Rhythm Abnormalities [2]

- ☐ Bundle branch block
- ☐ Sinus bradycardia / arrest
- ☐ Idioventricular rhythms
- ☐ Sine wave pattern
- ☐ Ventricular tachycardia
- ☐ Ventricular fibrillation
- ☐ Asystole