Johnson County EMS Physicians' Committee Minutes

November 15, 2016 6:30PM; 11881 S Sunset Dr.

Members present: Dr. Barnett, Chair (CMH), Dr. Richardson (SMMC), Dr. Jacobsen (JOCO EMS Medical Director), Dr. Ruthstrom (JOCO EMS Deputy Medical Director), Dr. Bowser (SLS), Dr. Fishman (OPRMC), Dr. Brovont (OPRMC), Dr. Millard (SJMC), Dr. Pierson (MMC)

Others in attendance: Mark Terry (Med-Act), Brad Cusick (OPFD), Natalie Hartig (Med-Act), Melody Morales (QA Manager for JOCO EMS), Kevin Joles (OFD), Greg Zarobsky (AMR), Matt….. (AMR), Matt Epperson (Shawnee Fire Department)

Members absent: Dr. Moncure (KUMC), Dr. Policky (OPRMC), Dr. Allin (KUMC), Dr. Miller(MMC)

TOPIC	PRESENTER	DISCUSSION	ACTION	STATUS
Approval of minutes from 7/14/16	Dr. Barnett	Motion made by Dr. Bowser to approve minutes from 7/14/16 meeting, seconded by Dr. Richardson. Motion passed.	Approved	Completed
Standing Items:				
Committee Meetings	Dr. Jacobsen	• Johnson County and Wyandotte County Medical Societies have merged • Angela Bedell has contacted us and we will be meeting with her regarding process for meeting locations/times, etc. • We will update the committee with new information	Information Only	
JOCO EMS System Cardiac Arrest Registry	Dr. Jacobsen	• CARES data shown to group compared to 2015 national data • Utstein Survival rate for Johnson County 2016 YTD is 57.9% which is above the national average • Question asked about how to increase bystander CPR rates ➢ Discussion about pulsepoint	Information Only	
Medical Director Program Update	Dr. Jacobsen	EMS Case Manager • We have hired an EMS Case Manager. She is a master's prepared SW. • She is starting Nov. 28th and will be a loaned FTE from the department of mental health • She will help to work with high utilizers	Information Only	

		MyRC • MyRC just signed an agreement with LACHIE which will further help our efforts to identify high utilizers in the EMS system Hospital Agreements • Children's Mercy KS had issues with the peer review agreement. The amendments have been made an as soon as all hospitals sign the amended agreement, all hospitals in the county will be in the medical director program. Peer Review • County Legal has received comments and feedback from all the different departments and is making those changes and will be sent out once completed		
New Business:				
Preview of Proposed Protocol Changes for 2017	Dr. Jacobsen	ACS (pg. 18) Proposed wording: • Consider **Fentanyl Citrate** for suspected cardiac related chest pain IV/IO/IM repeat additional doses PRN in 5 minutes or administer intranasal and repeat x1 PRN in 10 minutes • Consider **Nitroglycerin** for suspected cardiac related chest pain and repeat every 5 minutes PRN (BP $\geq$ 100 systolic) for chest or other cardiac related discomfort. If inferior wall MI is suspected, place patient in supine position and use caution if administering nitroglycerin without an IV in place • Added a "Pain Management in ACS" protocol • Removed criteria of administering Nitroglycerin x 2 before the administration of Fentanyl Citrate. Changed wording and order of	Will change language to reflect to NOT give nitroglycerin to inferior wall MI patients	

		medications to reflect Fentanyl Citrate can be administered along with Nitroglycerin for ACS. • Changed BP limit for Nitroglycerin administration to (BP ≥ 100 systolic) • Dr. Pierson gave his opinion on nitro and agreed that this approach would be acceptable. • Question asked about the last sentence in regard to nitro stating, "If inferior wall MI is suspected, place patient in supine position and use caution if administering nitroglycerin without an IV in place." • Dr. Pierson recommends not giving nitro to inferior wall MI • We will also add a contraindication to the nitro formulary **Authorization of Protocols (pg. 4)** • Proposed wording: Please download the Johnson County Protocol App for the most up-to-date protocols. It is the responsibility of the individual provider to maintain the most current Johnson County EMS protocols. This book may contain errors and may not be the most up-to-date version. The latest, most accurate version is maintained on the Johnson County Protocol App and may be downloaded. **Cardiac Arrest & Resuscitation Protocol (pg. 28)** **Proposed wording:** **<u>Out-of-hospital Termination of Resuscitation (Non-traumatic Cardiac Arrest):</u>** • Use the Termination of Resuscitation Checklist • Discontinuation of resuscitative efforts may be implemented without Medical Control contact if **<u>ALL</u>** of the following criteria have been met in a **WITNESSED ARREST**: ➢ Adequate EMS provider chest compressions were administered ➢ Adequate oxygenation or ventilation as described in IPAP ➢ ETCO2 < 10 mm Hg ➢ IV or IO access has been achieved ➢ Defibrillation and rhythm appropriate medication have been administered according to protocol5 minutes has lapsed since last	Approved Approved	

		dose of Epinephrine ➢ No ROSC at any point in the arrest ➢ No persistently recurring or refractory v-fib/v-tach or any continued neurological activity (such as eye opening or motor responses) ➢ Persistent asystole or agonal rhythm is present and no reversible causes are identified ➢ A minimum of **40** minutes of EMS resuscitation has occurred. ➢ If the patient is a minor, the parent/guardian is agreeable to discontinuing efforts. • Discontinuation of resuscitative efforts may be implemented without Medical Control contact if **ALL** of the following criteria have been met in an **UNWITNESSED ARREST**: ➢ Adequate EMS provider chest compressions were administered ➢ Adequate oxygenation or ventilation as described in IPAP ➢ ETCO2 < 10 mm Hg ➢ IV or IO access has been achieved ➢ Defibrillation and rhythm appropriate medication have been administered according to protocol ➢ 5 minutes has lapsed since last dose of Epinephrine ➢ No ROSC at any point in the arrest ➢ No persistently recurring or refractory v-fib/v-tach or any continued neurological activity (such as eye opening or motor responses) ➢ Persistent asystole or agonal rhythm is present and no reversible causes are identified ➢ A minimum of **25** minutes of EMS resuscitation has occurred. ➢ If the patient is a minor, the parent/guardian is agreeable to discontinuing efforts. • Changed the CPR duration to 40 minutes for WITNESSED arrests • Added criteria of ETCO2 < 10 mm Hg as indicative of extremely poor prognosis • Changed TOR Checklist to reflect the same changes		

		• Defined "unwitnessed" and "witnessed" arrest in the Glossary of Terms • Removed "<u>*sustained* </u>ROSC" and replaced with any ROSC, at any time. **Cardiac Arrest and Resuscitation Protocol (pg. 23)** • Changed wording to reflect that if a Cardiac Arrest occurs and there is a valid, recognized Advance Directive resuscitation should be initiated if "any family member or legal guardian **<u>insists</u>** on emergency care". **Cardiac Arrest and Resuscitation Protocol (pg. 24)** Proposed wording: **<u>Cardiac Arrest when Resuscitation is Indicated:</u>** • Initiate treatment in accordance with <u>*Appendix H: Adult Cardiac Arrest Protocol*</u> if indicated and utilize AED in accordance with <u>*Appendix A: AED Protocol*</u>*.* • Utilize the Adult or Pediatric Cardiac Arrest Checklist ➢ Utilize the Adult Cardiac Arrest Checklist for adults and any pediatric patients whose height exceeds the length based tape system ➢ Utilize the Pediatric Cardiac Arrest Checklist for any pediatric patients who are able to be measured by the length based tape system. • When utilizing a mechanical compression device for chest compressions, application should not cause delay in providing chest compressions ➢ Mechanical compression device may be applied after 20 minutes of resuscitation if available. However, exceptional circumstances may warrant earlier application. • Changed wording to reflect mechanical CPR device may be applied at 20 minutes if available. **Appendix H (pg. 145-146)** Proposed wording: **<u>Principles of High Quality CPR:</u>**	Approved Approved	

		♦ Chest compressions: ➢ Push hard, push fast (at least 100/ minute), ensure full chest recoil, and uninterrupted or minimal interruptions in chest compressions (< 10 seconds) ➢ Chest compressions are centered around 2 minute cycles of 200 compressions ➢ If possible, the person providing compressions should be switched every 2 minutes. ➢ Mechanical compression device may be applied after 20 minutes of resuscitation if available. However, exceptional circumstances may warrant earlier application. • Added bullet to reflect mechanical CPR device may be applied at 20 minutes if available. • Also added to the Adult Cardiac Arrest Flow chart **Cardiac Arrest and Resuscitation Protocol (pg. 24)** Proposed wording: **<u>Cardiac Arrest when Resuscitation is Indicated:</u>** • Defibrillation guidelines: ➢ All electrical therapy is to be administered at 200 J or at the clinically equivalent biphasic energy level. ➢ Do not delay defibrillation when indicated to perform other procedures. ➢ <u>Double sequential defibrillation:</u> can be considered in adults **AFTER** 5 unsuccessful single defibrillations (AED shocks count toward total) and at least one dose of epinephrine and one dose of anti-arrhythmic are administered. • Added double sequential defibrillation as an option for cardiac arrest patients after 5 unsuccessful single defibrillations. • Added to Adult Cardiac Arrest Flow • Dr. Pierson thinks this protocol addition is an acceptable approach • Discussion around availability of second defibrillation unit • Suggestion around looking at the wording of "can be considered" or "may be considered" and making it consistent with wording throughout	Change wording in CA checklist to be "consider double sequential defibrillation" and list requirements for performing double sequential defibrillation	

protocol book

Cardiac Arrest Checklist (pg. 155)

- Added change compressors every 2 minutes
- Added Lidocaine for refractory v-fib/v-tach as option
- Added Double Sequential Defibrillation
- Added bullet to reflect mechanical CPR device application at 20 minutes if available
- Added bullet to collect bystander contact information
- Suggestion made to change wording in checklist to state, "consider double sequential defibrillation" and also list out the criteria to perform double sequential defibrillation

Termination of Resuscitation Checklist (pg. 157)

- Changed wording for duration to state "EMS" resuscitation instead of "ALS resuscitation"
- Changed wording to "No ROSC at any point in the arrest" instead of "No Sustained ROSC at any points in the arrest"
- Unwitnessed versus Witnessed cardiac arrest added

Approved

Appendix J (pg.148)

Proposed Change:

Phillips HeartSafe MRx

Will change grouping to peds and adults instead of grouping based on rhythms

Rhythm	**Energy Level**
V-Fib/pulseless Vtach Adult	200 J
V-Fib/pulseless Vtach Peds	4 J/kg
Unstable Narrow Regular Complex Tachycardia Adult	200 J **Sync**

Unstable Narrow Regular Complex Tachycardia Peds	4 J/kg **Sync**
Atrial Fib/A flutter Adult (Ventricular rate >150)	200 J **Sync**
Unstable Sustained V Tach Adult	200 J **Sync**
Unstable Sustained V Tach Peds	4 J/kg **Sync**

- Changed defibrillation and cardioversion doses for pediatrics to 4J/Kg for all synchronized cardioversion and defibrillation.
- Deleted subsequent energy levels
- Suggestion made to group the peds and adults together vs. grouping based on rhythms

COMFORT CARE PROTOCOL

- Proposed protocol shown to group
- Added Comfort Care Protocol
- Ativan under Delirium/Hallucinations is listed twice, will delete
- Do providers know what peri-arrest means?

Will delete duplicate Ativan dosing under Delirium/Hallucinations

Appendix F- EMS Response/Fire-Related Incidents (pg. 136)

- Proposed protocol shown to group
- Deleted Responsibilities and Definitions Section
- Added Indications section
- Reworded Procedures Section
- Added Rehab and Hazmat Pre-entry Exclusion Criteria Section
- Deleted Rehab Levels
- Deleted Rehab Interval Guidelines
- Deleted Operational Guidelines

Will send out to group to review

		• Deleted Terminating EMS Operations **Glossary of Terms (pg. 149)** Proposed wording: **Adult**: Regarding burn and trauma routing an adult is ≥ 15 years old. Regarding medication dosing/defibrillation energy levels/medical protocols an adult is any patient whose height exceeds the length based tape system. **Pediatric Patient:** Regarding burn and trauma routing a pediatric patient is ≤ 14 years old. Regarding medication dosing/defibrillation energy levels/medical protocols a pediatric patient is any patient whose height DOES NOT exceed the length based tape system. • Specified definition of Adult based on routing vs. medical treatment • Specified definition of Pediatric based on routing vs. medical treatment • Deleted definition of Child • Recommendation to change definition of a pediatric patient to <15 years old **Glossary of Terms (pg. 151)** • Combined infant and child into pediatric category • Changed pediatric chest compression depth to ½ AP diameter	Will change pediatric definition to "<15 years old" Approved	

		Glossary of Terms (pg. 152) • Combined Infant and Child into "Pediatric" category • Added new proposed Midazolam dosing to match rest of new protocol	Approved	
		IPAP (pg. 12) • Added following wording "A patient may be transported to a facility that is closed to ambulances as long as they are informed of this status (unless it is out of service).	Approved	
		IPAP (pg. 12) • Added Appendix K titled "KC Ambulance Diversion Community Plan"		
		Appendix D- Patient Self Determination for Care (pg. 130-133) • Changed title of Appendix D to "Patient Self Determination for Care" • Combined Pre-Hospital and Out-of-Hospital DNR Request Form requirements for validity • Added TPOPP section with detailed information • Discussion around medical alert language and if this is wording in protocol like this due to a KS statute.	Will check to see if Medical Alert language is reflecting a KS statute	
		Fentanyl Citrate Formulary (pg. 81) Proposed wording: ➢ Adult: • Acute coronary syndrome, musculoskeletal, abdominal, or soft tissue pain: o Up to 200 mcg IV/IO/IM, not to exceed 100 mcg/dose, repeat additional doses in 5 min **PRN** • Added IM as a route of administration for Fentanyl Citrate	Approved Approved	

- This formulary change will be modified to reflect the above changes in the following protocols: Abdominal Pain, Acute Coronary Syndrome, and Pain Management

Approved

Fentanyl Citrate Formulary (pg. 82)

- Changed wording under contraindications to "hypersensitivity to fentanyl" instead of "hypersensitivity to opiates"
- Added hypotension as a precaution along with bradyarrhythmias
- Use caution when patient has a reported hypersensitivity to other opiates (ex. hydrocodone, oxycodone, hydromorphone, codeine, morphine)

Approved

Lidocaine Formulary (pg. 87)

Proposed wording:
Indications:

- VF/VT cardiac arrest refractory to epinephrine and defibrillation
- Sustained Ventricular Tachycardia
- Analgesia for IO placement in conscious patients

Dosage/Administration:

- Adult:
  - Cardiac Arrest – VF/VT :
    - **1 – 1.5 mg/kg IV/IO and repeat x1 PRN in 5 minutes**
  - Sustained Ventricular Tachycardia with a pulse:
    - **1 – 1.5 mg/kg IV/IO**
  - IO Access:
    - **40 mg IO slow push, then 10 mL normal saline rapid push, then administer 20 mg IO slow push**
- Pediatric:

		• Pediatric Cardiac arrest – VF/VT: o **1 – 1.5 mg/kg IV/IO and repeat x1 PRN in 5 minutes** • Sustained Ventricular Tachycardia with a pulse: ☎ **1 – 1.5 mg/kg IV/IO** • IO Access: o **0.5 mg/kg IO (max 40 mg)** • Removed indications stating lidocaine can only be used in cardiac arrests when amiodarone is contraindicated. • Changed dosing from 1mg/kg to 1-1.5 mg/kg and repeat x 1 PRN in 5 minutes for adult and pediatric dosing • Made changes in the following protocols: IPAP, Cardiac Arrest & Resuscitation, and Dysrhythmias **Midazolam Formulary (pg. 90)** Proposed wording: **Dosage/Administration:** ➢ Adult: • Treatment of seizure activity: o If no IV/IO, **10 mg IM, repeat at 5 mg every 5 min until termination of seizure activity IV/IO/IM/IN, to a max of 20 mg** o If IV/IO is established, **5 mg IV/IO, repeat at 5 mg IV/IO every 5 min to max of 20 mg** • Sedation prior to cardioversion, chemical restraint, and when needed to facilitate compliance with positive pressure ventilation, to facilitate CPAP application in an anxious patient*: o **2.5-5 mg IV/IO/IM/IN, repeat PRN in 5 minute intervals to a max total dose of 10 mg.** ** Use cautiously with elderly, debilitated, or chronically ill patients • For use with Excited Delirium Syndrome:	Will change max dose to 20 mg for excited delirium	

		○ **5-10 mg IV/IO/IM/IN, repeat PRN in 5 minute intervals to a max total dose of 10 mg.** • Combined dosing for sedation prior to cardioversion, chemical restraint, facilitating positive pressure ventilation, and facilitating CPAP application • Changed dosing for Excited Delirium Syndrome • This formulary change will be modified to reflect the above changes in the following protocols: IPAP, Dysrhythmias, Excited Delirium, Patient Restraint, Respiratory Distress, and Seizures • Discussion around changing max dose to 20 mg for Excited Delirium **Naloxone Formulary (pg. 93)** Proposed wording once this is approved for EMS Scope: **Dosage/Administration:** ➢ Adult: • BLS- Administer physician prescribed patient-use naloxone auto-injector or intranasal atomizer and may repeat every 5 minutes as needed, if additional naloxone auto-injectors/atomizers are available • Suspected Narcotic Overdose including Cardiac Arrests: ○ **0.5 – 2 mg IV/IO/IM/Intranasal titrated to reversal of respiratory depression repeated PRN to a max total dose of 4 mg** • Added wording to allow for BLS administration of physician prescribed patient-use naloxone auto-injector or intranasal atomizer • This formulary change will be modified to reflect the above changes in the following protocols: Poisoning, Cardiac Arrest & Resuscitation	Approved. Will add this if board of EMS changes scope	

		Ondansetron Formulary (pg. 97) Proposed wording: Treatment of nausea and vomiting • Removed wording that indicated administering ondansetron for prevention.	Approved	

		Ondansetron Formulary (pg. 97)
		
		Proposed wording:
		
		➢ Adult
		  • **4 - 8 mg IV/IO/IM/ODT tablet, and repeat as needed to a max total dose of 8 mg**
		➢ Pediatrics
		  • **> 2 years: 0.1 mg/kg IV/IO/IM slow over 30 seconds (max 4 mg)**
		  • **> 2 years: Peds length "white" or greater on Broselow tape: 4 mg ODT tablet one time**
		• Changed wording to ODT for Ondansetron administration route
		• Added IM as a route for administration
		• This formulary change will be modified to reflect the above changes in the following protocols: Nausea & Vomiting
			Approved	

		Specialty Team Protocols • Reviewed with group • Will work with team regarding wording about "contact medical control" in the pediatric dosing • Will remove junctional tourniquet section since we do not carry those at this time.	Will make edits around pediatric dosing and contacting medical control as well as deleting junctional tourniquet section and will send protocols out	

		• Protocols will be sent out to the group to review	to group to review	
Next meeting Date		• Feb. 21st at 6:30		
Adjournment	Dr. Barnett	Motion made to adjourn. Motion passed.	2030 hrs	