STATE OF MICHIGAN
DEPARTMENT OF HEALTH AND HUMAN SERVICES
LANSING

GRETCHEN WHITMER
GOVERNOR

ELIZABETH HERTEL
DIRECTOR

MICHIGAN EMS COORDINATION COMMITTEE MEETING
Friday, November 18, 2022
9:30 a.m.
Lansing Community College Downtown
Gannon Building – Michigan Room
411 N. Grand Avenue
Lansing, MI 48933
Click here to join the meeting
1 248-509-0316 Phone Conference ID: 160 638 762#

Call to Order: The meeting was called to order at 9:34 a.m. by Dr. Edwards.

Attendance: A. Abbas (***virtual: non-voting***); Dr. C. Brent (***virtual: non-voting***); J. Brown (***virtual: non-voting***); D. Condino; K. Cummings; Dr. K.D. Edwards; Dr. M. Fill; B. Forbush; G. Flynn; W. Hart; J. Harvey (***virtual: non-voting***); N. Ishioka (***virtual: non-voting***); F. Jalloul (***virtual: non-voting***); B. Kincaid; L. Martin (***virtual: non-voting***); K. Miller; S. Myers; M. Nye; R. Ortiz; D. Pratt (***virtual: non-voting***)A. Sledge (***virtual: non-voting***); E. Smith; Dr. R. Smith (***virtual: non-voting***); T. Sorensen; B. Trevithick; J. MacDonald for G. Wadaga; K. Wilkinson; Dr. S. Wise (***virtual: non-voting***); Representative J. Yaroch (***virtual: non-voting***).

Absent: R. Cronkright; Senator McBroom; A. Sundberg.

BETP Representatives: J. Ingersoll; S. Kerr; Dr. W. Fales; E. Bergquist; N. Babb; E. Worden; K. Kuhl; L. Ryal; J. Wagner; D. Flory; J. Youngblood; A. Pantaleo; A. Kinney; T. Forbush; E. Hendy; Dr. S. Mishra; A. Morrison; K. Putman; D. Detro-Fisher; E. Baker; K. Piette; T. Frascone; S. Minaudo; D. Burke; R. Rudzki, A. Biliti; T. First.

Guests:
In person: Dr. McGraw, OCMCA; Dr. Wagner Saginaw-Tuscola MCA; Rob Warnemuende, Saginaw-Tuscola MCA; Jason Bestard, Detroit Fire; Dr. M. Whitt; Geza Csiki, Detroit Fire; Angela Madden, MAAS.

Virtual: Dr. R. Dunne, DEMCA; Michael Bentley, Kalamazoo County MCA; Damon Gorelick, DEMCA; Carol Robinet, Superior; Dr. Krohmer; Bob Miljan, HEMS; Dr. Domeier, Washtenaw Livingston MCA; Luke Bowen, Macomb County MCA; Dr. S. Sandoval, UM; Matthew Ball; Kevin Henderson, Washtenaw Livingston MCA; Dr. D. Strong, Henry Ford Health System; Andrew Brown, Medstar; Dr. Reece, Hurley; Adam Massingill.

Approval of Agenda: Motion to approve the agenda (Wilkinson, Trevithick). Motion carried.

Approval of Minutes: Motion to approve the minutes from 10/07/2022 (Myers, Wilkinson). Motion carried.

Announcements: None
Communications: None
Public Comment on Agenda Items: None
Old Business & Committee Reports:
COVID-19 – E. Bergquist

- Emily spoke about the COVID-19 protocols that are retiring. The state versions of those will no longer be valid, but MCAs can have local protocols, as there is one that is being used by some systems regarding staffing. The protocols that aren't being rescinded will be part of the new suite in some form.

EMS Systems/Strategic Planning Update – E. Bergquist

- Grant Making Update
    - Emily spoke about general information about this program. Anyone planning on doing this, please apply in EgRAMS. Additionally, applicant entities must have a Unique Entity ID (UEI) registered at SAM.gov, and a Vendor Reference Number registered at the SIGMA Vendor Self Service website. When this goes live, it will be 30 days. Any deadlines are hard stops, please plan accordingly. Emily advised once it goes live, EMS staff will no longer be able to answer questions and explained. Emily went over who will be able to apply. She spoke about next steps and answered questions for the group. The group asked many questions.
        - The grant period would end September 30. She would recommend talking to your regional MCAs.
        - Bill Hart spoke about the importance of not leaving these funds on the table.
        - Student outcomes can be monitored by the department. Additional reporting will not be expected by those who are already reporting to the department, such as rosters and annual report. Financial reporting will be required.
        - Jean Ingersoll listed off the outcomes in the draft grant document.
            - Enrollment of students in education programs
            - Retention of students throughout education programs (low attrition)
            - Success of students attempting licensing/certification exams
            - Students/candidates/new licensees associating/working for an EMS agencies
- Protocol Update – K. Kuhl
    - Krisy reported. One and five have been released. Other ones are close to being ready for release. January 1st is still the goal. There are already two protocols in One and Five that errors were discovered in and those will be noted. Major

changes will be noted on a spreadsheet. Bruce Trevithick asked if track changes will be provided for the public comment and Krisy addressed.

- Rep. Yaroch brought up the sexual assault protocol that was recently released. He is concerned about political agenda in protocols. He said it is important that treatment is science based. He discussed potential concerns with the protocol. Emily advised the protocols did go through QATF, and they worked on it for four months. The protocol containing Plan B is not a 911 protocol, it is a community integrated paramedic protocol that will be utilized by specific MCAs. Emily discussed the protocol and encouraged everyone to review protocol. Rep. Yaroch said his issue is with the press release, not the protocol itself. **Not everyone has seen the press release.** Rep. Yaroch spoke about the compromising the trust people have in EMS. Dr. Brent read from the press release. Rep. Yaroch advised this feedback will also be provided to the Governor's office. Emily discussed the media attention that she has been responding to about this matter and said the EMS community has been handling this subject with professionalism and grace and she thanked everyone. This went out in the MIHAN.

Emergency Preparedness Update – Dr. Edwards

- The state is hosting a NDLS course 12/5-12/7. There will be regional spots and is a high-end training.
- Burn surge training has two new classes scheduled for 2/14 and 5/9 in 2023 in a virtual in person format. This increases the volume of those that can be trained. There is a new website www.michiganburn.org that has been updated and changed. He encouraged everyone to take a look.
- Dr. Edwards spoke briefly about CHEMPACK and MEDRUN.
  - Mark One kits are being phased out and replaced with DuoDotes.
  - Expiring products are being tested and the expiration date extended when possible.
    - Medication must be at least 90% or greater efficacy of its original formula to receive an extension.
    - Pralidoxime is holding up well in testing, so it is more likely to see pralidoxime auto injector than Mark One kits or DuoDotes.
- The planning committee met this past week for the Special Pathogen Response Network (SPRN) conference currently planned for the spring.

Systems of Care Report – E. Worden

- Presentation: Identified Documentation Gaps ~ Doug Burke
  - This is attached to these minutes.

- Bruce asked if there was a way to automate this based on primary impression. Emily said it is different from vendor to vendor. She discussed documentation and potential areas where it could be wrong. Kevin Putman discussed prepopulating facility capabilities. The group discussed. Emily advised if you enjoy this conversation, please message Nicole Babb to be added to the Data Subcommittee email list.

- The division name changed to EMS and Systems of Care.
- Virtual visits are going well.
- STAC position has been filled.
- Conditional offer has been extended for the Region One Systems of Care Coordinator.
- Work on the annual reports will begin in January.
- Draft Systems of Care rules have been submitted to the Regulatory Affairs office.

State 911 Administrator Report – J. Harvey

- The State Emergency Operations Center (SEOC) was officially deactivated on Nov 10 in response to the COVID-19 pandemic. Having been opened 986 days, it is the longest SEOC activation in Michigan's history for a single event.
- NG911 network and the Michigan Public Safety Communications System (MPSCS) are working on providing remote options for telecommunicators. This does not mean we will have telecommunicators working from home but that doesn't mean some PSAPs will not explore the idea. Remote capabilities would also provide opportunity for satellite locations or other shared spaces as a cost savings and recruitment tool for PSAPs. As a reminder, Washington DC and Maine are two areas that have already successfully instituted 911 call taking.
- The 988 soft launch occurred in July. No update on producing any educational information for the public yet on calling 911 v 988, this is still being developed. The statewide 988 stakeholder workgroup has been brought back together and are beginning to meet again to discuss next steps for 988 in Michigan.
- T-Mobile has announced they have begun providing true i3/NG911 Real Time Text (RTT) to PSAPs in 24 states (Michigan being one). RTT is a voice call to 911 with a texting solution that allows texting in real time back and forth between the caller and 911, as well as voice and hearing carryover. RTT allows each participant to actively see keystrokes as they are being typed and provides multimedia functionality.
    - The FCC made this a requirement of the carriers prior to the technology being fully capable of accepting these types of calls. Today, all PSAP's receive RTT messages, however, to make this work, the carriers have been using a legacy network gateway to dumb the delivery down to a Teletypewriter (TTY) call. The call is treated like a TTY call by the PSAPs CPE (or legacy TTY device) with hearing and voice carryover ability. RTT *native* delivery is a *true* NG911/i3 delivery of the call directly to the PSAP without having to dumb the system down to TTY, meaning its fully IP, allowing both parties to communicate simultaneously, with

voice & hearing carryover, and multimedia capabilities without the extra step in between.
    - Each carrier is going to have to launch native RTT for their network to be capable of sending the calls natively. Each PSAP is going to have to work with the carriers to get the function switched to the new modernized version. There is no time frame provided as to when all of Michigan PSAPs and the carriers will be fully converted.
    - This is not replacing TTY. RTT is only used for wireless calls, so TTY is still necessary for landlines.
- Michigan's application for the Federal Cybersecurity Grant was submitted. There are no updates on the status of the application at this time. Joni will follow up more on this as the process progresses.
- The state 911 plan is being updated. This is Joni's first time participating in this process. It was last updated in 2019 so there will be some updates but minor ones. In an effort to improve coordination and collaboration between the state 911 operations, the state radio system, and the state alert and warning system, our goal in overall governance is to align the State 911 Plan and the Statewide Interoperability Communications Plan (SCIP). The SCIP is developed by the Interoperability Board which falls under the realm of the MPSCS. This has not been done in the past. The SCIP is also in the process of being updated.
- The 911 Training Subcommittee has officially opened up discussions on revisiting the current training requirements for 911 telecommunicators in Michigan. There will be a workgroup created to assist the state 911 office on this endeavor. The goal is to have these updated no later than December 31, 2025, however she is hopeful this will be achieved much sooner. It has been 10 years since the requirements were last reviewed.
- Her office is working with Michigan Department of Education Office of Career and Technical Education to establish 911 telecommunications curriculum in the schools so when the students graduate, they will be meet the state of Michigan's certification standards as a designated 911 telecommunicator. She is also working with the Oakland County Dispatch Academy which is a part of the Oakland Community College on how we can expand this program into colleges across the state. As an alternative idea, communications could possibly be included in other degree programs such as Criminal Justice if a degree program specifically for communications is not established.
- Just a reminder 3G network decommissioning started in February 2022 and will be complete in December.

EMS Medical Director Report – Dr. Fales

- Dr. Fales presented slides.
    - Shock refractory ventricular fibrillation scenario.
        - The group discussed.

Committee Reports:

- Quality Assurance – Dr. Edwards
    - The next meeting is Monday, November 21, and gave a synopsis of the agenda. He spoke about the great things that have been coming through QATF the last few months.
- Ambulance Operations – M. Nye
    - They have not met.
- Medical Control Authority – D. Condino
    - They have not met. Emily discussed the MCA Assessment survey development.
- Ethics and Compliance – K. Cummings
    - They have not met.
- Education – K. Wilkinson
    - EMS-312 Initial Education Program Instructional Requirements
    - EMS-316b EMS Continuing Education Programs: Application Process
        - **Motion to approve both policies (Trevithick, Sorensen). Approved.**
- Bylaws – B. Trevithick
    - Subcommittee nominations
        - Air Medical (NEW)
        - Safety (NEW)
        - Miscellaneous
            - **Motion to approve the rosters presented (Kincaid, Wilkinson). Approved.**
    - There is still an opening for Rural-Eastern UP. There are new openings for Ambulance Operations, MCA, and Education. Let Nicole know if you have suggestions. The committee meets on 11/29. They will be looking at tweaks to the Bylaws and creation of a communication subcommittee.
- Data – B. Kincaid
    - Bonnie Kincaid reported there are a lot of things going on with data. The committee is really working on moving things forward, which is really great. The reports for today were sent out in the agenda packet, and she advised Johnny Wagner or Kevin Putman would answer any questions.
- Legislative – B. Trevithick
    - The legislative session ends at the end of the year which means everything we have addressed that hasn't gone through will die at the end of the session and may come up again.
    - He spoke about a new bill that is not expected to go anywhere.
- Rural – G. Wadaga
    - They have not met.

- Pediatric Emergency Medicine – S. Mishra
    - CoPEM met on 10/13/2022.
        - Our Family Representative provided an update from the national FAN (Family Advisory Network) meeting, addressing the need to include children and youth with special health care needs, including behavioral health concerns, more robustly in all EMSC projects.
            - This is being done in our program and plans outlined in the competitive grant to address this moving forward.
            - Autism spectrum disorder training, acceptance, and preparedness – education planned for 2023 – 27.
    - EMS for Children Competitive grant – successfully submitted 11.3.2022
            - Thank you to many here who supported the application to HRSA with data, letter of support and other forms of collaboration and participation in workgroups, projects, and education
            - News of award – anticipated after the new year, maybe early spring 2023.
    - EMSC Survey – annual – opens in January
            - Acknowledge the burnout and staffing crisis out there. Michigan will not be pushing as vigorously this year, but we are still required to participate. Please encourage champions and agencies to complete when they get the invite. Encourage identification of pediatric champions in agencies.
                - EDC – EMSC Data Center will be sending invites this year
    - Education opportunities update
    - Midwest EMSC Symposium – held Nov 2 and 3
        - Nov 2: Pre-Hospital provider focused. Over 545 EMS providers attended, from states even outside the Midwest states.
            - 80 Michigan EMS providers attended
            - Positive feedback received so far via the post symposium survey
        - Nov 3: Hospital/Emergency Department provider focused. First time this year.
            - 150 providers attended from the Midwest states
            - Recordings are available for providers to view now, Children's of Minnesota learning management system hosting this for us, for free.
    - Pediatric Respiratory Illness are surging
        - Resources for providers are available, being shared with Pediatric Champions directly, in Wednesday Updates and to the Healthcare Coalition leadership. Please keep your eyes out for these updates full of

resources, as well as help appoint more EMS pediatric champions to receive them and bring back to more agencies/locations.

- Air Medical – K. Wilkinson
    - They did not meet.
- EMS Safety – E. Bergquist – No update.
- Critical Care Ad Hoc – E. Bergquist – No update.

Recruitment and Retention Work Group – K. Cummings

- They met this month. They discussed CE credits available for working in certain categories. Dynamic rosters for course completion are in place, this is helping to speed up testing. They spoke about the grants. He said this is pivotal for recruitment and retention and gave kudos. He believes this will be an important piece to address workforce shortages.
- They discussed workforce shortage assessment. Ken Cummings asked the group if they feel it would be beneficial to do this. Emily said the boilerplate language says the survey must be done.
    - Greg Flynn is interested in participating in survey development questions. He and Ralph Ortiz spoke about surveying younger generations (high school) was discussed.
    - Debbie Condino and Kolby Miller discussed survey recipients. Surveying those that left may start a rabbit hole.
        - Young people
        - One to people who left
        - People still here…why and what are the positives?
    - Greg Flynn said this may be a bit much for the department to handle. Emily said there are other MDHHS teams outside of Bureau of Emergency Preparedness, EMS and Systems of Care that can work on this.
    - Ken Cummings discussed sending people to a struggling agency to provide relief for staffing issues, as it is a real time dilemma.

Community Integrated Paramedicine (CIP) – K. Kuhl

- Draft Language for Review-still in process – No update.

New Business:

Cedar Area Fire and Rescue: Conditional Upgrade Report

- Derek Flory went over the report for the group. They plan to go to a full upgrade before their conditional upgrade expires. This is informational and does not require action.

Public Comment:

- Dan Munroe from Perry Area Fire spoke about using grant resources to help those that don't pass.
- Jeff Butcher from LCC spoke about things that could be available to increase success. He said their program has developed a council that did a study. One thing they discovered is high school counselors don't understand EMS and they are meeting with them next month.

Membership Round Table Report:

- Naomi Ishioka spoke about the assistance EMS has provided over the last month with the critically ill pediatric patients. She advised if you would like pediatric training to reach out to her and she will try to connect you with resources.
- Representative Yaroch asked about the 10 credit hours for working and Emily said the intention is to get the form changed. This is his last meeting with EMSCC, and he said goodbye. He will be the legislative director for Rep. Elect Jamie Green. He is looking for a new champion for EMS. Dr. Edwards thanked Rep. Yaroch and spoke about the level of his engagement and participation.
- Andrea Abbas announced that MCRH still has seats open in their event later this month.
- Bruce Trevithick wished everyone Happy Holidays
- Bonnie Kincaid spoke about the systems of care conference. This is Bonnie's last EMSCC meeting.
- Debbie Condino wished everyone Happy Holidays
- Bill Hart spoke about the Governor's press release.
- Bill Forbush reported he is retiring from Alpena, but he will be working part-time, and he is staying on EMSCC.
- Ralph Ortiz spoke about a test taking class.
- Nicole Babb reported the letters for next term have been sent to the Director's office and are not back yet.
- Dr. Edwards thanked LCC for hosting today and wished everyone a happy Apple Cider Day and Thanksgiving.

Adjournment: Motion to adjourn at 12:36 p.m. (Kincaid, Smith). Adjourned.

Sexual Assault

Note to Responders: Victims of sexual assault commonly require psychological support.

- Respect all stress they may be enduring and be thoughtful with your speech and movement.
- Touching may be traumatic. Be clear and communicate what you are doing and any procedures or physical assessments that are completed.

I. Treat any life-threatening injuries or other emergencies first and according to protocol.

II. Patients with signs or symptoms of strangulation are at significant risk for complications. Be keenly aware of signs and symptoms of tracheal injury including:
   a. Signs
      i. Any mention of the patient being choked, choking, or period of being unable to breathe.
      ii. Any injury to the neck
         1. Redness
         2. Scratches
         3. Rope marks
         4. Bruising (especially thumb prints)
         5. Red eyes
   b. Symptoms
      i. Spasms of the neck/throat
      ii. Incontinence of bowel or bladder

III. During treatment, attempt to maintain evidence, refer to **Crime Scene Management Protocol**.
   a. Do not cut through tears or stains. Only cleanse skin when necessary to provide immediate treatment.
   b. Any clothes that have been removed from the patient, should be bagged in paper bags and brought with the patient to the hospital, if possible.
   c. Explain to the patient why they should not eat, drink, smoke, bathe, change clothing, or go to the bathroom. If they must urinate, ask that they not wipe.
   d. If the patient desires and/or mandatory reporting is indicated, notify law enforcement if they are not present.
   e. Any incident involving a minor or a vulnerable adult is a mandatory reporting event.

IV. At the request of the patient, further assessment and treatment may be delayed for law enforcement arrival only if no life-threatening situation is present.

V. During transport, allow the patient to choose the preferable attendant, if possible.

VI. Do not communicate details of a sexual assault over an open radio channel. Use telephone or other secure electronic communication.

VII. If the patient declines transport to the hospital:
   a. Advise patients of risks and document according to the **REFUSAL OF CARE, ADULT AND MINOR, PROTOCOL**

b. Encourage patients to seek follow-up care at a local specialized treatment center
c. If law enforcement is not present, and the patient refuses law enforcement contact, advise patient that evidence of assault is best collected within 72 hours
d. Advise of available resources by seeking treatment or assistance, such as:
    i. MCA Specific resources, if available
    ii. Michigan's sexual assault hotline 1-855-VOICES4 (1-855-864-2374)
    iii. Links to local resources: https://www.michigan.gov/mdhhs/safety-injury-prev/domestic-violence/find-services-in-your-area
    iv. Community Paramedic referral, if available and the patient consents
    v. If unaware of local resources, and law enforcement is not available, contact Medical Control 

VIII. Documentation
a. Excited utterances, which are statements that patients make while under stress from the event, should be noted as direct quotes from the patient
b. Thorough and accurate documentation of the incident is integral for continuity of care and the legal process
c. In the case of refusals, risks documented should be specific to the type of injury and assault that occurred

Sexual Assault Follow Up (Optional)

I. Indications

A. Patients who have had a sexual assault, do not have acute injury, and have been referred for follow-up.
B. Patients who have experienced a sexual assault and refuse transportation to the hospital or other follow-up resources but consented to CP follow-up.

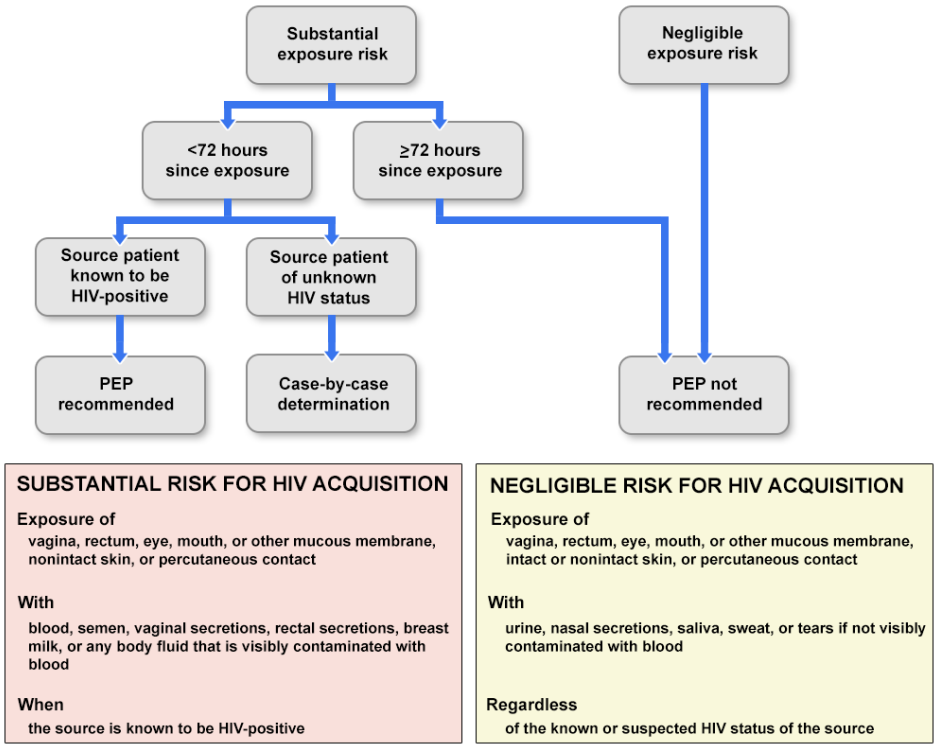
*NOTE: Providing a follow up care does not preclude other treatment protocols nor the need for transportation to an emergency department. Oxygenation, ventilation, and treatment of injury are the primary goals of treatment. Transport to a specialty facility or follow up with specialty care is preferred.

II. Procedure

A. Assess patient and treat according to Patient Assessment and other indicated protocols (if any).
B. Be sensitive to the patient's emotional state. Protecting the patient's privacy and respecting the patient's beliefs regarding emergency contraception must be prioritized.
C. Medications should be offered to appropriate patients who do not have other contraindications. The offer must include an objective explanation of the benefits and risks of use, as outlined in the medications being provided.
D. For patients at risk of sexually transmitted infections, regardless of timeframe:
    a. Administer ceftriaxone 500 mg IM
    b. Administer doxycycline 100 mg AND facilitate prescription for 100 mg BID for 7 days
    c. For male patients, administer metronidazole 2 g PO
    d. For female patients:
        i. Administer metronidazole 500 mg PO AND
        ii. Facilitate prescription for 500 mg PO BID for 7 days
    e. Access patient's vaccination status of HPV and Hepatitis B. If patient is not vaccinated, refer patient for vaccination.

E. For patients whose assault was within 72 hours:

a. Evaluate for HIV risk



b. Advise patient of benefit of timely Post Exposure Prophylaxis (PEP) and follow up for 28-day prescription, along with referral to infectious disease clinic, if available.

F. For patients at risk of pregnancy, within 3 days (72 hours) of assault

a. If the CP has a religious objection to emergency contraception, offer information on emergency contraception. If the patient requests access to emergency contraception, facilitate access to emergency contraception.

b. Otherwise, offer emergency contraception, including risks and complications

i. Provide fact sheet to patient

ii. If patient consents, administer levonorgestrel 1.5 mg PO

iii. Advise patient that efficacy is greatly reduced if there is vomiting within 2 hours of taking medicine, and they should follow up with a physician if this happens

G. Document in Patient Care Record the education provided, medications administered, the patient's if any declination occurs, and referrals or specific resources offered to the patient.

H. Reiterate to the patient the need for follow-up care and remind of available resources, including:
   a. Sexual Assault Nurse Examiner or Sexual Assault Response Teams
   b. Any available literature for local resources

Statewide Trauma System

Identified documentation gaps:

Administrative Rules

R 325.131 Triage and transport.

Rule 7. (1) The department, with the advice and recommendations of the state trauma advisory subcommittee and emergency medical services coordinating committee, shall develop recommendations, based on standards that are incorporated by reference in these rules, pursuant to R 325.129(2) (1), R 325.136, R 325.137, and R 325.138 for protocols which are established and adopted by local medical control, for the triage, transport, and inter-facility transfer of adult and pediatric trauma patients to appropriate trauma care facilities.

(2) The standards that are incorporated by reference in these rules, pursuant to R 325.129(2) (1), R 325.136, R325.137, and R 325.138 for the triage, transport, and the inter-facility transfer of trauma patients provide recommended minimum standards of care for protocols which are established and adopted by local medical control that must be utilized in the transfer care for trauma patients. On an annual basis, or as needed, the department shall review and update these recommended minimum standards with the advice and recommendations of the state trauma advisory subcommittee and emergency medical services coordinating committee.

R 325.129 Powers and duties of department

R 325.136 Destination protocols

R 325.137 Trauma patient inter-facility transfer protocols

R 325.138 Criteria for transfer protocols; criteria

Michigan

TRAUMA AND ENVIRONMENTAL

ADULT / PEDIATRIC TRAUMA

2.1

TRAUMA TRIAGE DESTINATION DECISIONS

Any **ADULT** trauma patient meeting the Physiologic or Anatomic criteria should be transported to the closest appropriate Level 1 or Level 2 trauma center if within 45 minutes, otherwise transport to an appropriate Level 3 (preferred) or Level 4 trauma center if the patient can arrive within 45 minutes. Any **PEDIATRIC** trauma patient meeting the Physiologic or Anatomic criteria should be transported to the closest appropriate Level 1 or Level 2 **PEDIATRIC** trauma center if within 45 minutes, otherwise transport to an appropriate Level 1 or Level 2 adult trauma center if the patient can arrive within 45 minutes, otherwise transport to an appropriate Level 3 (preferred) or Level 4 trauma center if the patient can arrive within 45 minutes. If none of these are available transport to the closest facility. Appropriate centers are determined by the Medical Control Authority as indicated in the **Trauma Triage Supplement**. Notify the trauma center as soon as possible, including inclusion criteria and ETA.

EMS documentation that will drive performance improvement, and system assessment

Connecting the dots:

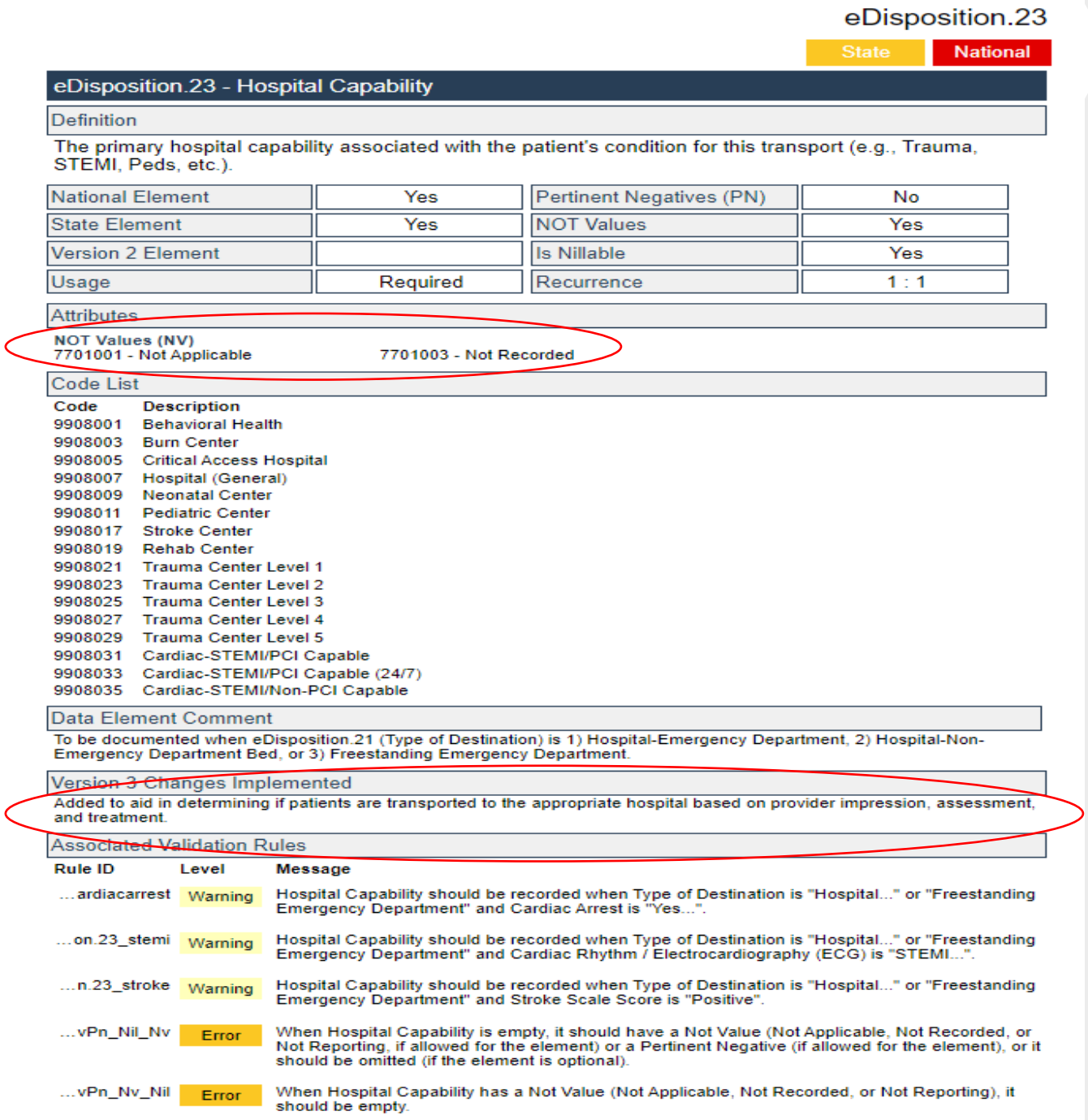
When deciding on the most appropriate destination for your patient, there should be 3 data elements completed.

1. Destination: (Sparrow Hospital)
   The “where”!
2. Reason for Choosing Destination: (Protocol, Patient Choice, Closest etc.)
   The “why”!
3. Hospital Capability: (Level I Trauma Center, Comprehensive Stroke Center etc.)
   The “what”! (What resources the hospital have available to care for the patient on your cot!)

eDisposition.23

Hospital Capability
NEMSIS v3.4.0
Data Dictionary definition:

The primary hospital capability associated with the patient's condition for this transport (e.g., Trauma, STEMI, Peds, etc.)



eDisposition.23

State National

eDisposition.23 - Hospital Capability

Definition

The primary hospital capability associated with the patient's condition for this transport (e.g., Trauma, STEMI, Peds, etc.).

National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element		Is Nillable	Yes
Usage	Required	Recurrence	1 : 1

Attributes

NOT Values (NV)
7701001 - Not Applicable 7701003 - Not Recorded

Code List

Code	Description
9908001	Behavioral Health
9908003	Burn Center
9908005	Critical Access Hospital
9908007	Hospital (General)
9908009	Neonatal Center
9908011	Pediatric Center
9908017	Stroke Center
9908019	Rehab Center
9908021	Trauma Center Level 1
9908023	Trauma Center Level 2
9908025	Trauma Center Level 3
9908027	Trauma Center Level 4
9908029	Trauma Center Level 5
9908031	Cardiac-STEMI/PCI Capable
9908033	Cardiac-STEMI/PCI Capable (24/7)
9908035	Cardiac-STEMI/Non-PCI Capable

Data Element Comment

To be documented when eDisposition.21 (Type of Destination) is 1) Hospital-Emergency Department, 2) Hospital-Non-Emergency Department Bed, or 3) Freestanding Emergency Department.

Version 3 Changes Implemented

Added to aid in determining if patients are transported to the appropriate hospital based on provider impression, assessment, and treatment.

Associated Validation Rules

Rule ID	Level	Message
...ardiacarrest	Warning	Hospital Capability should be recorded when Type of Destination is "Hospital..." or "Freestanding Emergency Department" and Cardiac Arrest is "Yes...".
...on.23_stemi	Warning	Hospital Capability should be recorded when Type of Destination is "Hospital..." or "Freestanding Emergency Department" and Cardiac Rhythm / Electrocardiography (ECG) is "STEMI...".
...n.23_stroke	Warning	Hospital Capability should be recorded when Type of Destination is "Hospital..." or "Freestanding Emergency Department" and Stroke Scale Score is "Positive".
...vPn_Nil_Nv	Error	When Hospital Capability is empty, it should have a Not Value (Not Applicable, Not Recorded, or Not Reporting, if allowed for the element) or a Pertinent Negative (if allowed for the element), or it should be omitted (if the element is optional).
...vPn_Nv_Nil	Error	When Hospital Capability has a Not Value (Not Applicable, Not Recorded, or Not Reporting), it should be empty.

eDisposition.23

Hospital Capability
NEMSIS v3.5.0
Data Dictionary definition:

The primary hospital capability associated with the patient's condition for this transport (e.g., Trauma, STEMI, Peds, etc.)

eDisposition.23

State National

eDisposition.23 - Hospital Capability

Definition

The primary hospital capability associated with the patient's condition for this transport (e.g., Trauma, STEMI, Peds, etc.).

National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element		Is Nillable	Yes
Usage	Required	Recurrence	1 : M

Attributes

NOT Values (NV)
7701001 - Not Applicable 7701003 - Not Recorded

CorrelationID
Data Type: String **minLength:** 2 **maxLength:** 255

Code List

Code	Description
9908001	Behavioral Health
9908003	Burn Center
9908005	Critical Access Hospital
9908007	Hospital (General)
9908009	Neonatal Center
9908011	Pediatric Center
9908019	Rehab Center
9908021	Trauma Center Level 1
9908023	Trauma Center Level 2
9908025	Trauma Center Level 3
9908027	Trauma Center Level 4
9908029	Trauma Center Level 5
9908031	Cardiac-STEMI/PCI Capable
9908033	Cardiac-STEMI/PCI Capable (24/7)
9908035	Cardiac-STEMI/Non-PCI Capable
9908037	Stroke-Acute Stroke Ready Hospital (ASRH)
9908039	Stroke-Primary Stroke Center (PSC)
9908041	Stroke-Thrombectomy-Capable Stroke Center (TSC)
9908043	Stroke-Comprehensive Stroke Center (CSC)
9908045	Cancer Center
9908047	Labor and Delivery

New

Data Element Comment

To be documented when eDisposition.21 (Type of Destination) is 1) Hospital-Emergency Department, 2) Hospital-Non-Emergency Department Bed, or 3) Freestanding Emergency Department.

Stroke Center classifications based on Join Commission stroke certification:
https://www.jointcommission.org/facts_about_joint_commission_stroke_certification/

Version 3 Changes Implemented

Added to aid in determining if patients are transported to the appropriate hospital based on provider impression, assessment, and treatment.

2021 Statewide Query using Biospatial

eDisposition.23 Hospital Capabilities

2,020,332 **Total Records**

Query:

Type of Service Requested:

911 Response (Scene)

Incident/Patient Dispositions:

Treated, Transported by this EMS Unit

N=838,191

415,827/838,191 (49%) Hospital General

27,675/838,191 (3%) Trauma Center I, II, III, IV

15,451/838,191 (2%) All other

379,238/838,191 (46%) the “Hospital Capability” was left blank

*Added to the query:

Trauma Triage Criteria:

Physiologic, Anatomic, Mechanism of Injury

N=28,648

28,648/838,191 (3.4%) Met Trauma Triage Criteria

3,270/28,648 (11%) Injured patients who met Trauma Triage Criteria where the provider chose a Level of Trauma Center: I, II, III, IV

Last 5 years
Statewide

1,156,399 - Treated and Transported by this Unit	
23,390 / 1,156,399 (2%)	Met Trauma Triage criteria (Anatomic, Physiologic, Mechanism of Injury)
2,100 / 1,156,399 (.002%)	Level I – IV Trauma Center was documented in the “Hospital Capability/Designation” data element
335,113 / 1,156,399 (29%)	1 of 22 “Hospital Capability” options were chosen
821,286 / 1,156,399 (71%)	NO “Hospital Capability” was chosen, it was left blank

Perspective!

There are 272 licensed transporting agencies in the State of Michigan.

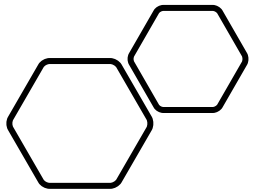
217/272 (80%) agencies are currently choosing 1 of the 22 available options within the “Hospital Capability – Hospital Designation” element.

55/272 (20%) agencies have no records over the last 5 years where the “Hospital Capability – Hospital Designation” element has an option chosen, indicating it may not be turned on within their organization’s software.

25 = ESO
24 = Image Trend
2 = ? Unknown
1 = Traumasoft
1 = American Medical Response
1 = Zoll
1 = Sansio

Opportunities!

- Confirm the software vendor has the field available for entry.
- Rules that mandate an entry enhance documentation.
- Develop education that supports the “where” (Destination), “why” (Reason for choosing destination), and “what” (Hospital Capability – the resources available to treat the patient you have on your cot) in order to assess that the time sensitive patients are going to the right facility the first time.
- Right Patient, Right Place, Right Time has to start with EMS



Questions?

Shock Refractory Ventricular Fibrillation will Eventually “Straighten Out”

- 45 YO male collapses on a treadmill
- Immediate bystander CPR started by family
- First responders arrive and perform high-quality CPR and rapid defibrillation x2 before ALS arrival
- ALS arrives and initiate full ACLS care including 5 additional defibrillation shocks, epinephrine, and lidocaine per protocol
  - ETCO2 remains in mid 40s, patient occasionally breathing
- Despite high-quality B/ACLS care patient remains in VF
- What should be done next?
  - Transport, Terminate, Continue Standard Resuscitation, Something else?

DOSE-VF Trial

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Defibrillation Strategies for Refractory Ventricular Fibrillation

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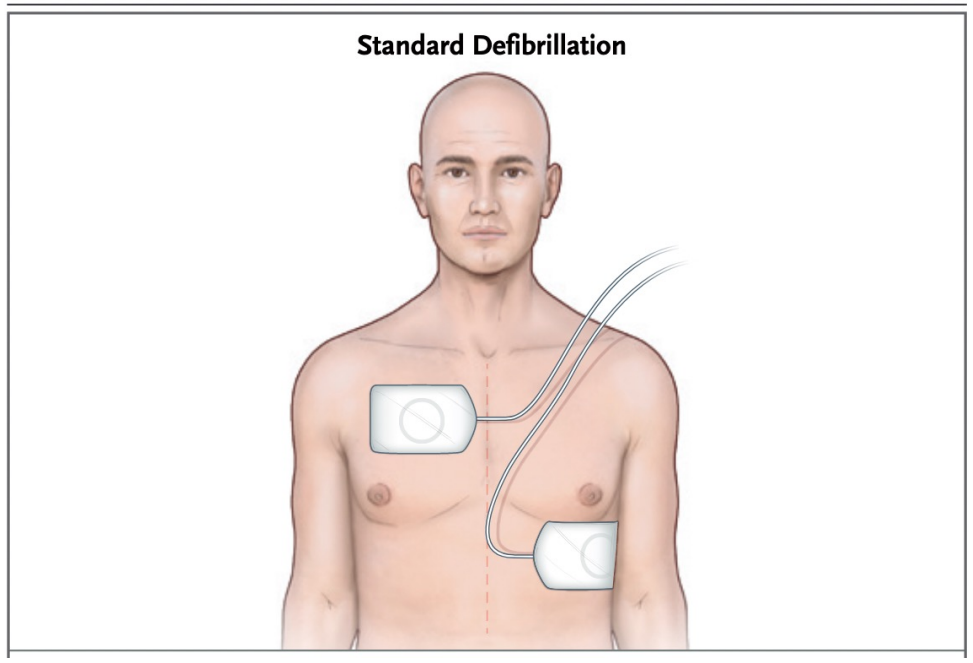
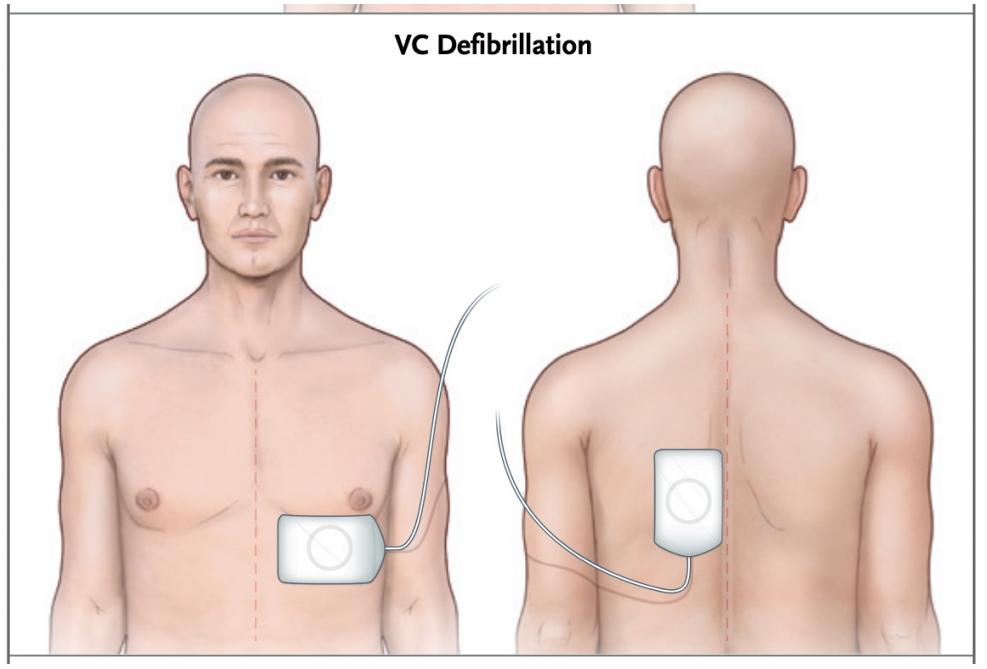
ABSTRACT

BACKGROUND

Despite advances in defibrillation technology, shock-refractory ventricular fibrillation remains common during out-of-hospital cardiac arrest. Double sequential external defibrillation (DSED; rapid sequential shocks from two defibrillators) and vector-change (VC) defibrillation (switching defibrillation pads to an anterior–posterior position) have been proposed as defibrillation strategies to improve outcomes in patients with refractory ventricular fibrillation.

https://www.nejm.org/doi/full/10.1056/NEJMoa2207304





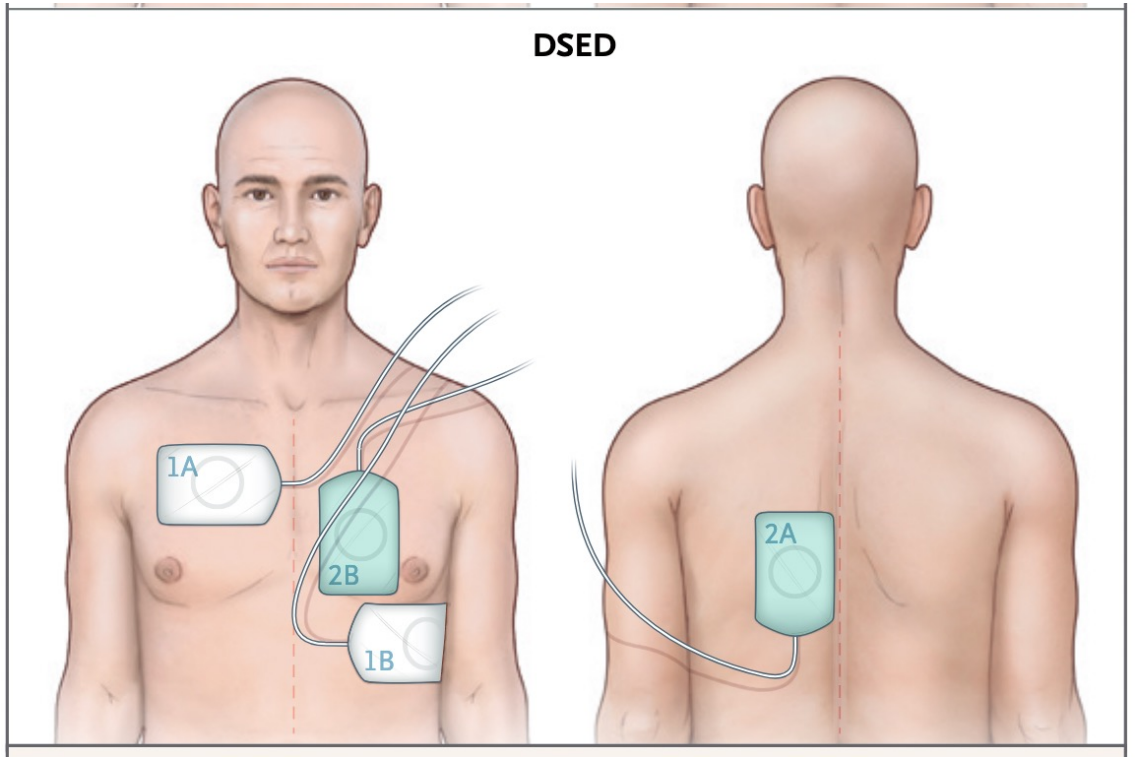


Figure 1. Pad Placement in the Three Defibrillation Strategies.

Pad placement for standard defibrillation, vector-change (VC) defibrillation, and double sequential external defibrillation (DSED) is shown. In the bottom panel, defibrillation pads 2A and 2B are those of the second defibrillator, with the pads placed in the posterior and anterior positions. For all strategies, the first three shocks occurred with pads placed in the configuration used for standard defibrillation.

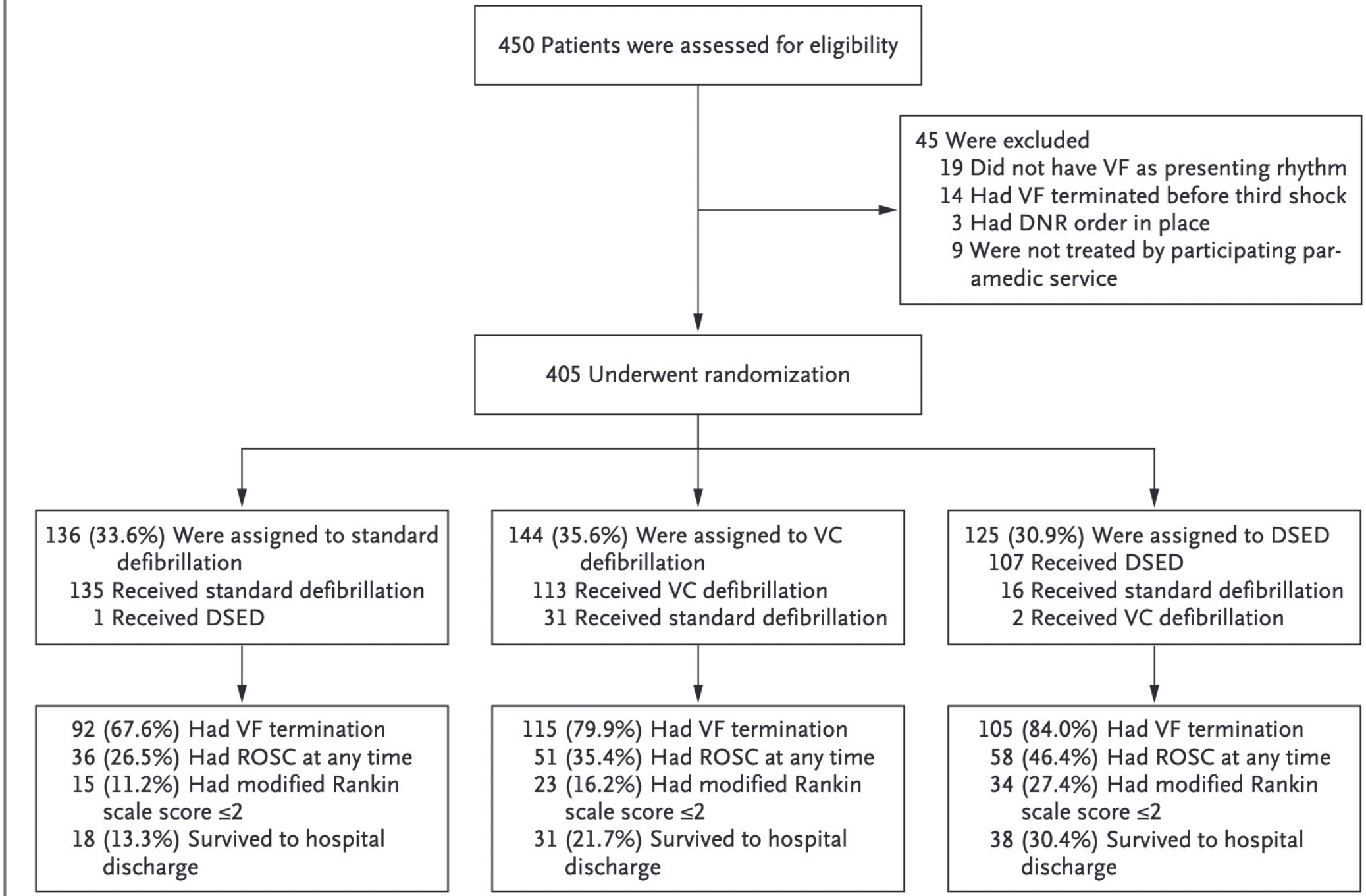
Table 1. Characteristics of the Patients.*

Characteristic	Standard Defibrillation (N=136)	VC Defibrillation (N=144)	DSED (N=125)
Age — yr	64.0±14.4	63.8±13.2	63.0±16.8
Male sex — no. (%)	109 (80.1)	127 (88.2)	106 (84.8)
Bystander-witnessed cardiac arrest — no. (%)	82 (60.3)	110 (76.4)	83 (66.4)
Bystander CPR performed — no. (%)	74 (54.4)	90 (62.5)	71 (56.8)
Public location of cardiac arrest — no. (%)	41 (30.1)	51 (35.4)	36 (28.8)
Median response time (IQR) — min†	7.4 (5.7–9.9)	7.4 (6.9–9.0)	7.8 (6.0–9.4)

* Plus–minus values are means ±SD. CPR denotes cardiopulmonary resuscitation, DSED double sequential external defibrillation, IQR interquartile range, and VC vector change.
† Response time is defined as the time from the 911 call to the arrival of paramedics at the scene. Data on first response by fire services personnel were excluded, since these data were not collected in the pilot study.

Table 2. Event Characteristics.*

Characteristic	Standard Defibrillation (N=136)	VC Defibrillation (N=144)	DSED (N=125)
Median time from initial call to first shock (IQR) — min†	10.2 (8.2–13.2)	10.4 (8.8–12.6)	10.2 (8.8–11.8)
Prehospital intubation — no. (%)	52 (38.2)	72 (50.0)	53 (42.4)
Preshock pause — sec‡	6.5±7.0	6.1±6.0	6.4±7.6
Postshock pause — sec§	4.8±3.9	5.2±5.8	4.5±2.2
Compression rate per minute¶	109.8±8.0	111.1±8.4	111.7±8.7
Compression depth — cm‖	6.0±1.0	5.9±1.0	5.7±0.9
Chest compression fraction — %**	83.1±8.1	80.8±8.7	79.1±9.5
No. of standard shocks	7.4±3.0	4.2±2.1	3.9±1.4
No. of shocks to first ROSC††	5.5±1.6	5.3±1.7	5.7±1.9
Antiarrhythmic drug administered — no. (%)	110 (80.9)	106 (73.6)	92 (73.6)
Amiodarone dose — mg	403.4±75.8	392.9±76.5	378.5±75.4
Lidocaine dose — mg	185.7±73.9	175.7±60.6	162.5±83.3
Median time from arrival of EMS to first antiarrhythmic drug administration (IQR) — min‡‡	11.0 (8.0–14.0)	11.6 (9.0–16.0)	11.0 (8.0–15.5)
Epinephrine administered — no. (%)	129 (94.9)	133 (92.4)	107 (85.6)
Epinephrine dose — mg	4.2±2.2	4.2±2.0	4.0±2.1
Median time from arrival of EMS to first epinephrine dose (IQR) — min‡‡	8.7 (6.0–11.5)	9.0 (6.0–14.0)	8.8 (5.4–13.4)
Median time from arrival of EMS to first ROSC (IQR) — min‡‡	14.8 (10.6–20.0)	15.8 (12.5–19.4)	14.0 (11.0–22.0)
Median time from arrival of EMS to departure from scene (IQR) — min§§	25.0 (21.3–32.2)	27.5 (23.3–33.6)	26.5 (21.0–33.8)


450 Patients were assessed for eligibility
45 Were excluded
19 Did not have VF as presenting rhythm
14 Had VF terminated before third shock
3 Had DNR order in place
9 Were not treated by participating paramedic service
405 Underwent randomization
136 (33.6%) Were assigned to standard defibrillation
135 Received standard defibrillation
1 Received DSED
144 (35.6%) Were assigned to VC defibrillation
113 Received VC defibrillation
31 Received standard defibrillation
125 (30.9%) Were assigned to DSED
107 Received DSED
16 Received standard defibrillation
2 Received VC defibrillation
92 (67.6%) Had VF termination
36 (26.5%) Had ROSC at any time
15 (11.2%) Had modified Rankin scale score ≤2
18 (13.3%) Survived to hospital discharge
115 (79.9%) Had VF termination
51 (35.4%) Had ROSC at any time
23 (16.2%) Had modified Rankin scale score ≤2
31 (21.7%) Survived to hospital discharge
105 (84.0%) Had VF termination
58 (46.4%) Had ROSC at any time
34 (27.4%) Had modified Rankin scale score ≤2
38 (30.4%) Survived to hospital discharge

Important Outcomes

Table 3. Primary and Secondary Outcomes.

Outcome	Standard Defibrillation (N=136)	VC Defibrillation (N=144)	DSED (N=125)	Adjusted Relative Risk (95% CI)*	
				DSED vs. Standard	VC vs. Standard
	number of patients/total number (percent)				
Survival to hospital discharge†	18/135 (13.3)	31/143 (21.7)	38/125 (30.4)	2.21 (1.33–3.67)	1.71 (1.01–2.88)
Termination of ventricular fibrillation	92/136 (67.6)	115/144 (79.9)	105/125 (84.0)	1.25 (1.09–1.44)	1.18 (1.03–1.36)
ROSC	36/136 (26.5)	51/144 (35.4)	58/125 (46.4)	1.72 (1.22–2.42)	1.39 (0.97–1.99)
Modified Rankin scale score ≤2†‡	15/134 (11.2)	23/142 (16.2)	34/124 (27.4)	2.21 (1.26–3.88)	1.48 (0.81–2.71)

Conclusions

- *"Among patients with refractory ventricular fibrillation, survival to hospital discharge occurred more frequently among those who received DSED or VC defibrillation than among those who received standard defibrillation."* NEJM - Cheskes, et al

- NEJM Editorial: *"additional research is needed …. such extended forms of defibrillation are not ready for usual care, although they may be considered when no further treatment options exist."* NEJM - Sasson and Haukoos

Impact on Michigan EMS

- To be determined ….. Not (yet) ready for “prime time”
- Current protocols do not specify pad placement (A/L vs A/P)
  - A/P pad placement is not contraindicated
  - Potential for use sooner than later under current protocols WITH training
    - Must not compromise quality of CPR
- Double Sequential External Defibrillation **not** *currently* authorized by protocols
  - Will be discussing value to include in new protocols
  - EMS personnel should not be routinely performing at this time
  - Stay tuned…….