

2019 CARDIAC ARREST DATA NEW CA DOCUMENTATION PRIORITIES IN 2020

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CA STUDY POPULATION DEFINED

Reviewed all cardiac arrests for 2019

Query included data fields that demonstrated:

- Cardiac arrest listed as primary impression
- CPR documented as a Procedure
- ROSC mentioned in the disposition
- Any use of the Cardiac Arrest Situation Tool in Image Trend



DEFINITIONS

- Queried for documentation of return of spontaneous circulation (ROSC)
- Sustained ROSC: Surviving to an inpatient bed (different than the commonly used >20 minutes)
- Cerebral Performance Category (CPC) Scores obtained from Cares Registry



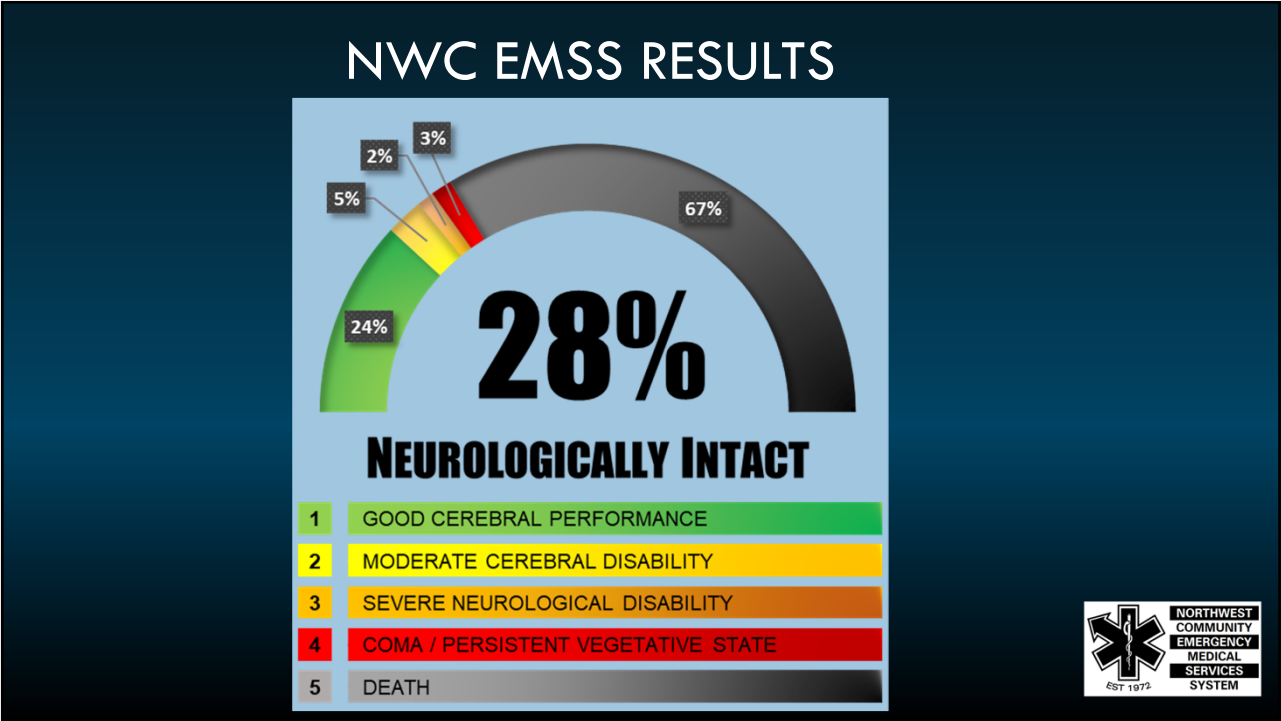
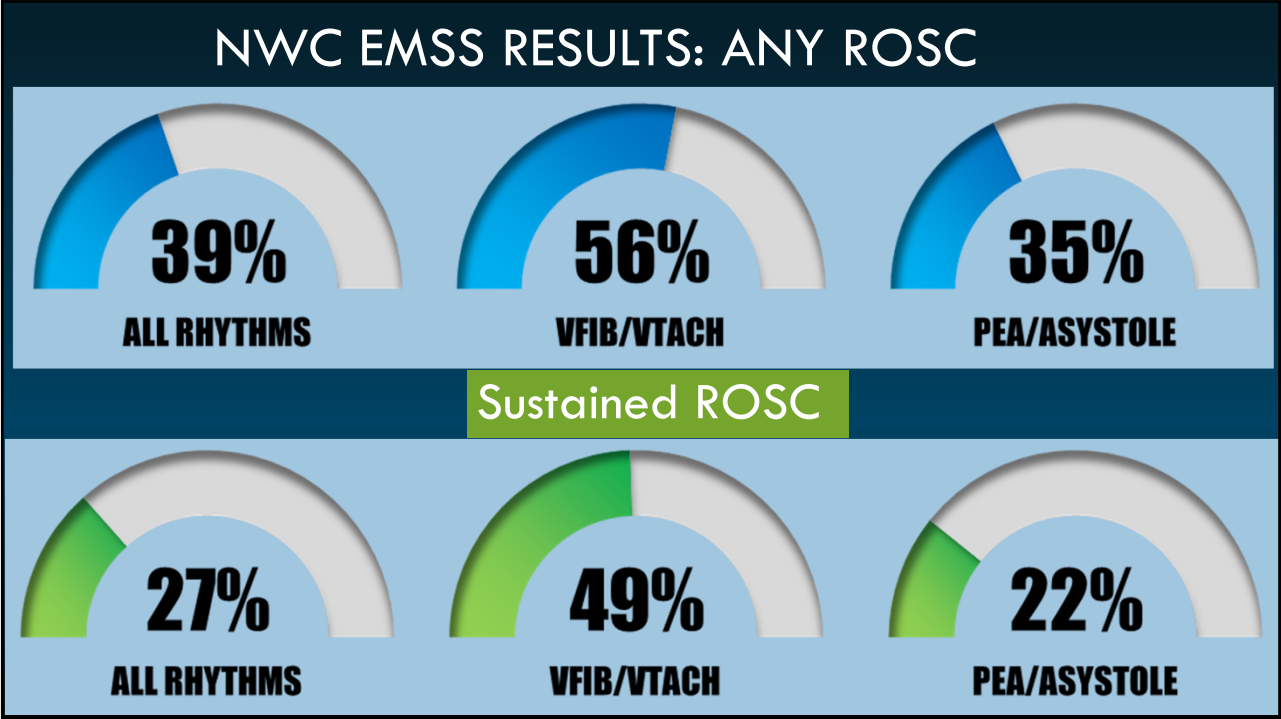
NWC EMSS DATA

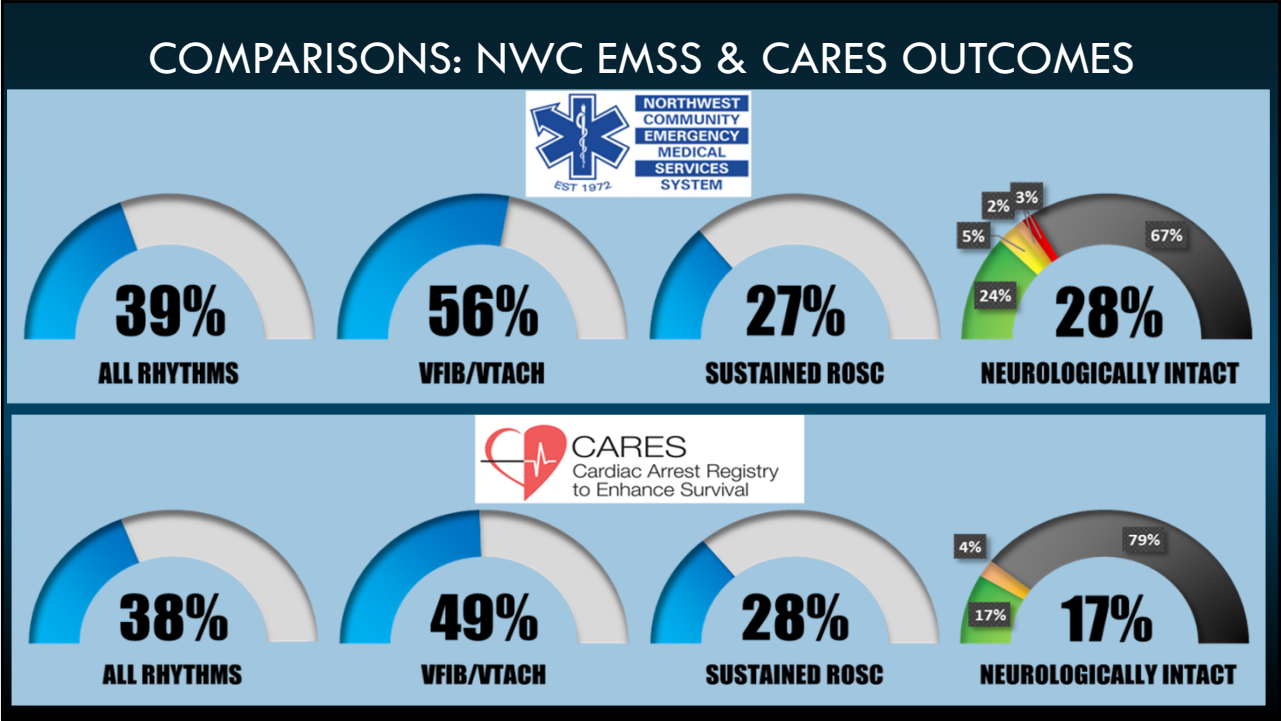
624 total OHCA identified (2019)

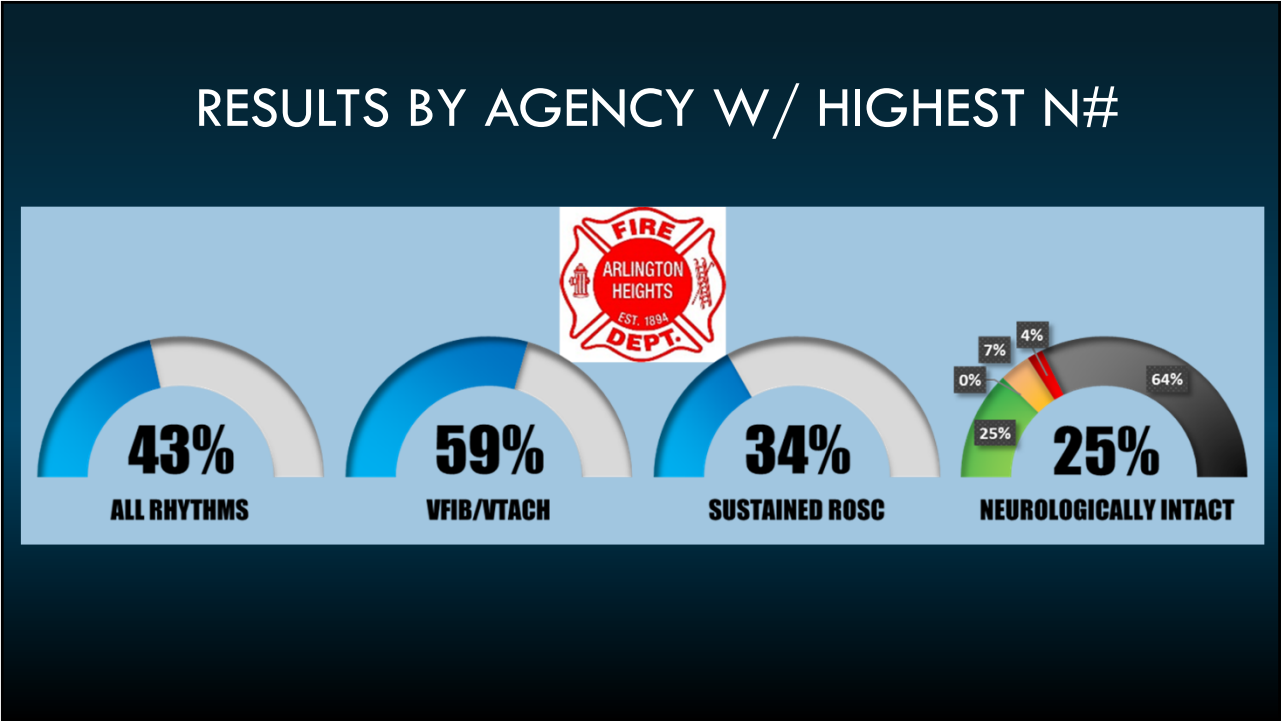
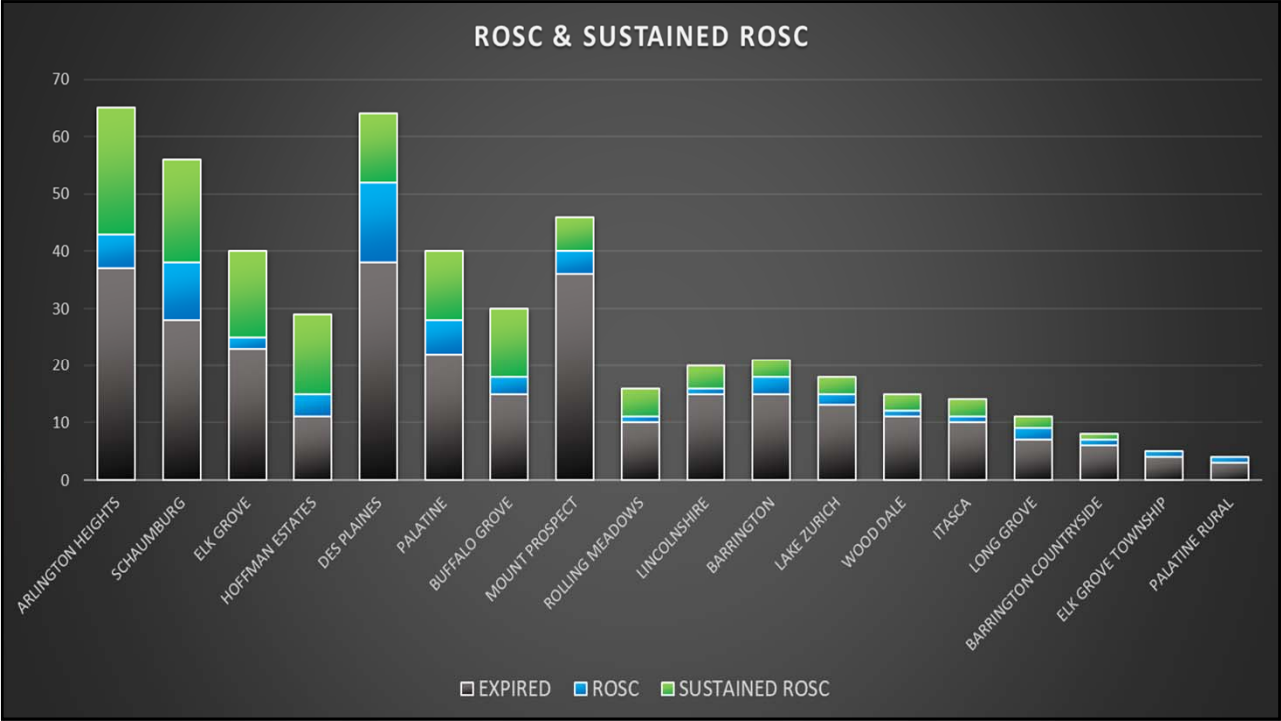
- 23 excluded for being a DNR (do not resuscitate)
- 20 excluded for being a traumatic cause
- 4 excluded for duplicate reports or Mutual Aid
- 5 excluded for being Obvious Death (triple 0)
- 70 excluded due to lack of final hospital outcomes

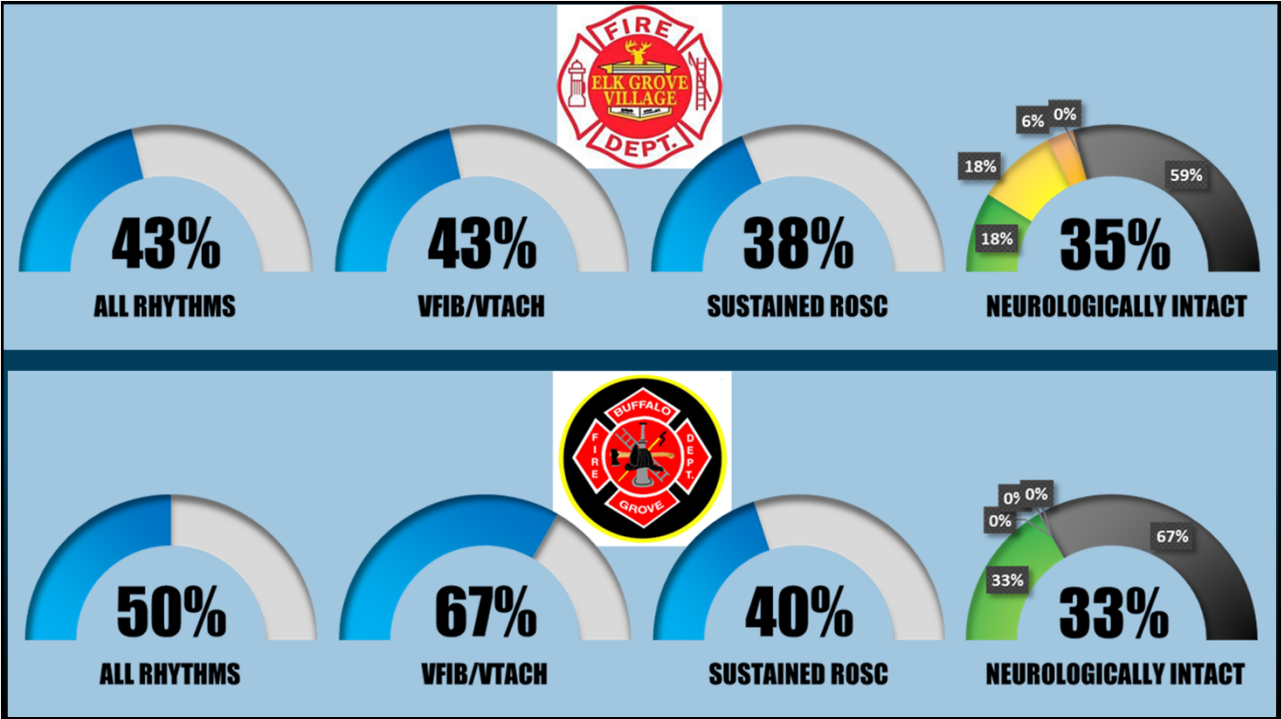
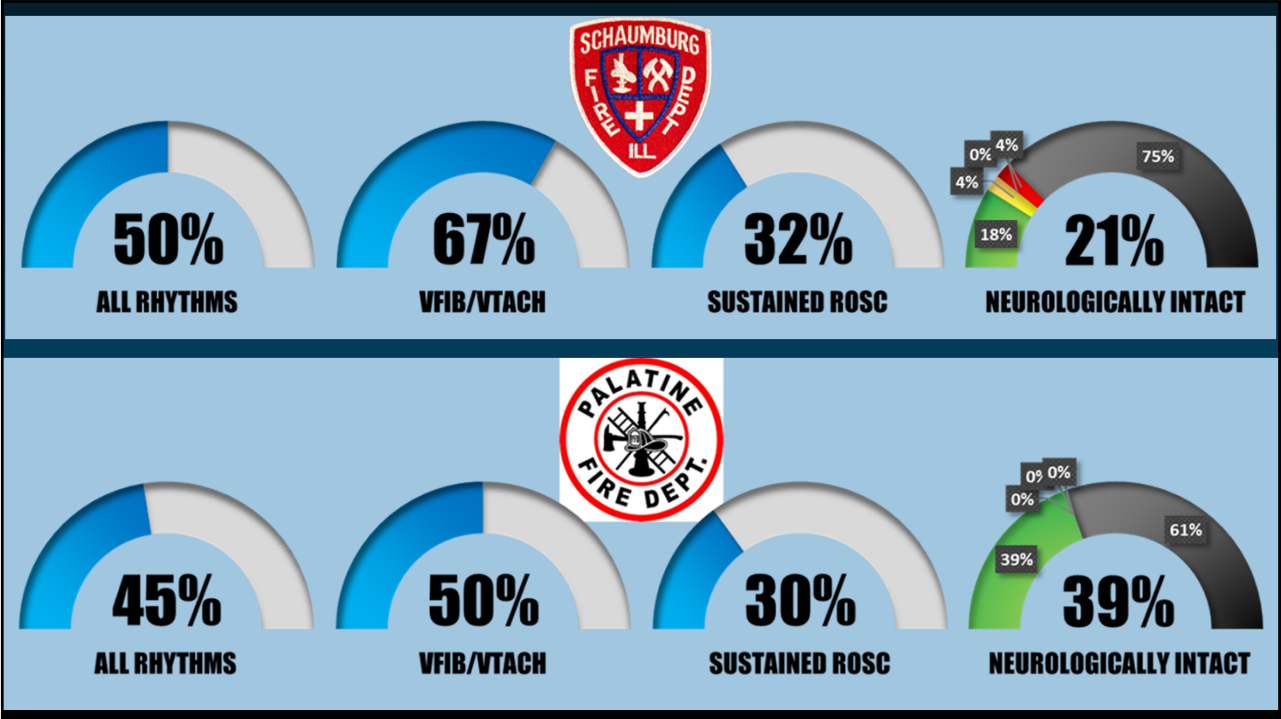
N = 502 cases included and reviewed

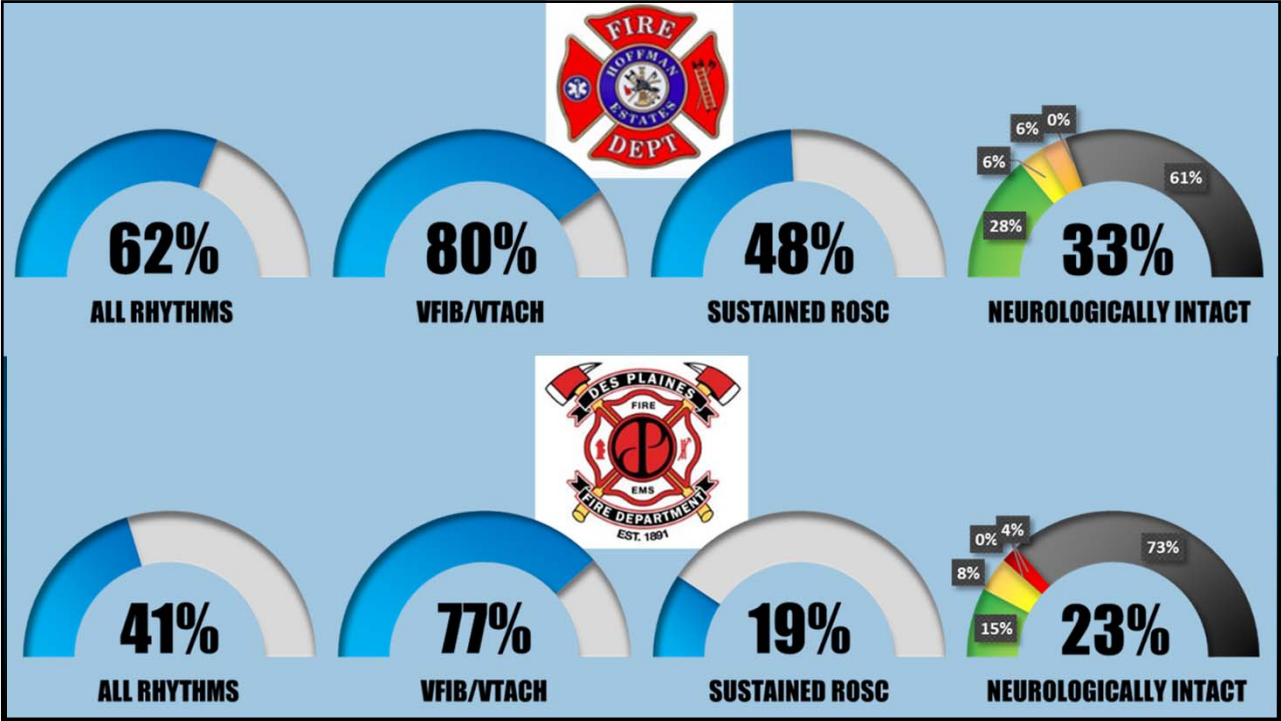















HOW DID WE GET HERE ?




Novel/
innovative EB
Protocols




Separate
Standing CA
Committee



Obtaining
meaningful
data



System buy-in;
good execution
of SOP



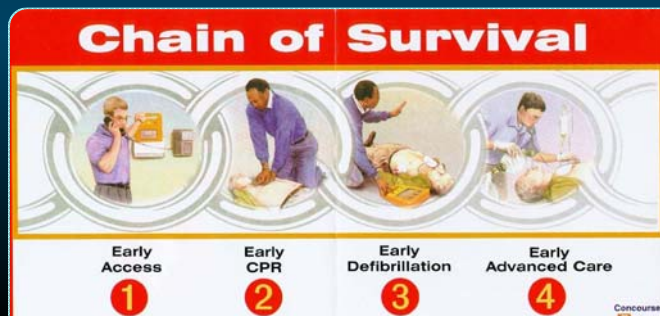
WHAT SAVES LIVES IN CARDIAC ARREST?

Early access to appropriate care

Early and effective (bystander) **CPR**

Early defibrillation when indicated

Early and expert EB EMS BLS & ALS care



FOUNDATIONS OF 2019 CA SOPS

- Maximize dispatch (EMD) involvement
- Use interventions that improve survivability
- Endorse meaningful technology
- Encourage 100% post-arrest QI review



MAXIMIZE DISPATCH INVOLVEMENT

Endorse the MPDS NO, NO, GO approach

- Is the person awake?
- Is the person breathing?
- If no, CPR is started

All of NWC EMSS dispatch centers use MPDS



NWC EMSS DISPATCH CENTERS

- Northwest Central Dispatch (NWC)
- Addison
- Red Center
- Lake Zurich
- Cen-Comm
- Du-Comm
- Nor-Comm
- All privates have their own



DATA FROM NWC DISPATCH

325/502 calls dispatched by NWC

For this report, all dispatch data came from NWC
97% of CA were identified by dispatch

226/325 provided w/ pre-arrival CPR instructions

NWC EMSS: 70.1% got pre-arrival CPR

National average: 49%



NEED FOR BYSTANDER CPR

Large numbers of trained CPR providers critical

Key difference if CPR occurs in a public location

This is where phone apps like "Pulse Point"
advertise their application

Only 10% of CA occurred in a public location

Utility of phone app limited here with dispatch
% and few public CA



CA STANDING COMMITTEE

- Committee created separate from PBPI
- Like all committees, shared Governance Model used
- Fractal Response Times are important markers
- However, CA process and outcome data are better reflections of EMS performance
- Meaningful (accurate) data and 100% QI review important to achieve outcomes that meet and exceed national benchmarks



PROCESS OF DATA COLLECTION

Over past year, data queries found to be arduous
Documentation varies between agencies and medics
To query, PCRs must have defined values and be completed consistently across all agencies

- Ex: Should procedure of manual CPR be documented ?
- Found only 34% had procedure documented properly



NWC EMSS CURRENT PROCESS

Find Field...

! Start Here

! Visibility Filter

! Times Input

Virus Screen

! Call Entry (Complete Form)

Bedside (Basic Entry Only)

Billing

Cont. Sub. Use/Disposal/Restock

Save

Print

PDF

CAD

EMG

Transfers

Messages

Close

Visibility Filter

Was introduced prior to EMS arrival?

of Patients at Scene:

Injury Found, Possible or Suspected?

Was Pt Involved in a Motor Vehicle Accident?

Was a 12 Lead ECG Done?

Was the patient in cardiac arrest at any time?

Medium or Large Scale Incident?

Triage Classification for MCI Patient:

Timeline

Situations

JotPad

Worksheets

Vitals

Assessment

W/O Tool

Meds

AH Proc'd

Monitor

Heads Up

Airway-Sec

All

NWC EMSS CURRENT PROCESS

Find Field...

! Start Here

! Call Entry (Complete Form)

! Personnel & Unit

CAD / Dispatch

Other Agencies at Scene

Incident Address

Patient

! Patient Address & Phone

Signs & Symptoms

Medications

Allergies

Past Medical History

Trauma Information

12 Lead & STEMI

ETCO2 Wave Form Shape

! Cardiac Arrest

Stroke Information

Save

Print

PDF

CAD

EMG

Transfers

Messages

Close

Cardiac Arrest

Arrest Witnessed By:

CPR Care Provided Prior to EMS Arrival:

Who Provided CPR Prior to EMS Arrival:

Was AED Use Prior to EMS Arrival:

Was Resuscitation Attempted By EMS?

Timeline

Situations

JotPad

Worksheets

Vitals

Assessment

W/O Tool

Meds

AH Proc'd

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Airway-Sec

All

NWC EMSS CURRENT PROCESS

NEW DOCUMENTATION TOOL – TO IMPLEMENT ASAP

COMPLETION OF DATA GATHERING

Hospital outcomes essential for closing the loop

Best process to obtain this data?

CARES Registry is one solution (and IMHO the best)

- Entry into Cares by EMS providers is essential to start the process
- We were only 50% compliant a year ago

CARES and Teri Campbell are excellent resources



COMPLETION OF DATA ENTRY - 2020

- For 2020, all will enter CA data into CARES
 - Busiest FD agencies average 5 CA/month
 - ImageTrend fields now mirror CARES questions
 - Data entry should take <15 minutes/call
- This process will eliminate missing records and allow for accurate rolling (real time) data collection



ADDITIONAL PERFORMANCE MEASURES

Cares and ImageTrend only allow for outcome data
How can we obtain Quality CA performance data?
Such measures include

- Compression rate and depth
- Compression %
- Time to ETCO₂ and defib
- Significant pauses in CPR



OBTAINING PERFORMANCE MEASURES

- Physio & Zoll have cardiac arrest review programs
- Programs similar but offer different flavors
- In past 6 mos, we pushed for 100% CA review looking at multiple measures
- Data is not punitive, but informative
- EMS MDs must be aware of these programs, their functionality and their System's data



PERFORMANCE MEASURES

This year, Stryker and Zoll will sponsor classes that discuss CA review

Software is robust and allows "scrubbing" of data

Example, when ROSC is obtained CPR stops

However, software doesn't recognize ROSC so counts as a significant CPR pause in calculating data

Learning program basics is essential



2020 PERFORMANCE MEASURES

With >500 CA/yr, EMS MD can't review all reports

Agencies must review their own, but provide feedback

- Again, busiest FDs have average of 5 CA/month
- Comparison: all Fire suppression calls reviewed monthly
- True human saves from fire suppression pale in comparison to CA saves

2020: All CA measures included in 100% QI review

Goal 2020: Develop a Post-Arrest Score



OTHER AREAS OF SYSTEM INTEREST

- 3 FDs participating in an Elegard Heads up CPR trial (suspended during pandemic)
- Timing of intubation
Benoit, J.L. et al. (2019). Timing of advanced airway placement after witnessed OOH CA. *PEC*, 23(6), 838-46. doi: 10.1080/10903127.2019.1595236.
- Is our apneic oxygenation process effective?
Reviewing feedback and data now



QUESTIONS???

See videos released with May 2020 CE

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