"The Epicenter of the Epicenter": NYC and Contemplations on Crisis Standards of Care During the COVID-19 Pandemic

Michael Redlener, MD, FAEMS

September 24, 2020

Conflicts and Caveats

- My views are informed by experience, but they are my own
- No financial conflicts of interest

About

- I wear many hats…
  - Associate Medical Director of an Emergency Department in Manhattan, Mount Sinai West
  - EMS Medical Director for Quality, Mount Sinai Health System
  - Medical Director for EMS and Disaster Preparedness, Mount Sinai Morningside/West Residency
  - NYC Regional Emergency Medical Advisory Committee (REMAC) Chair of Quality Improvement/Assurance Committee
  - NEMSQA
  - NAEMSP

During the Pandemic

- ED Operations
- EMS Policy
- Ethics of Pandemic Decision-Making

New York City

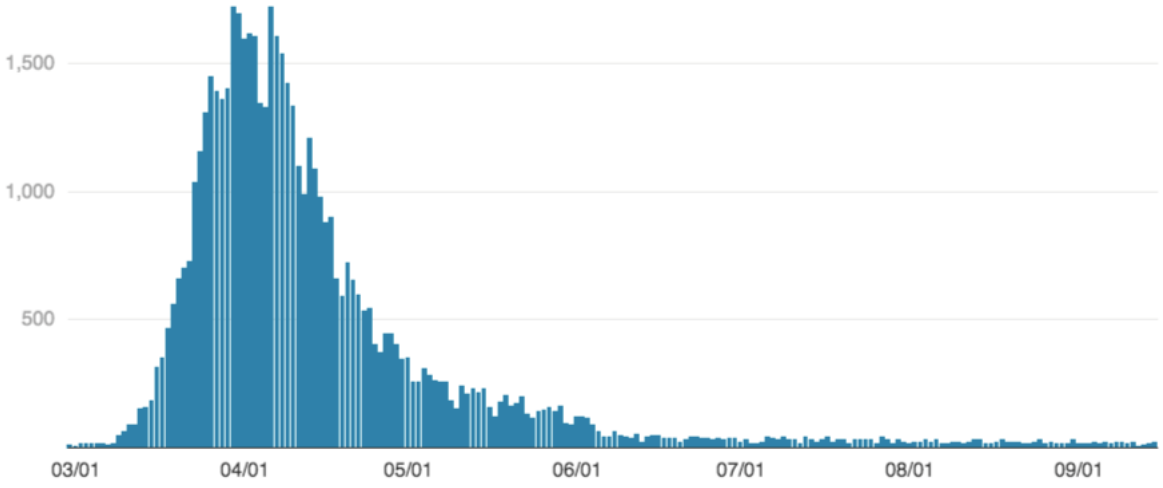
Cases, Hospitalizations and Deaths

Measure	*Number of NYC Residents*
Cases	**236,253**
Hospitalizations	**57,618**
Confirmed deaths* Deaths following a positive COVID-19 laboratory test	**19,153**
Probable deaths Cause of death reported as "COVID-19" or equivalent, but no positive laboratory test	**4,627**
Updated:	***September 22, at 12:40 p.m.***

**Due to data collection differences, the City's reported total of confirmed deaths for any given day is usually different than the State's data about NYC deaths. For more information, visit our Github repository.*

Get the data • Created with Datawrapper

Cases **Hospitalizations** Deaths



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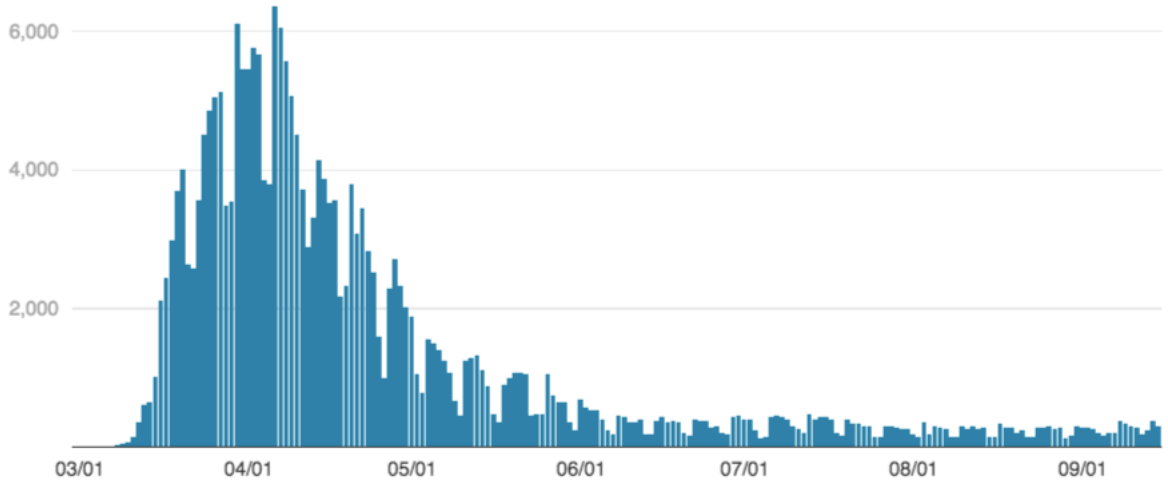
New York City

Cases Hospitalizations Deaths



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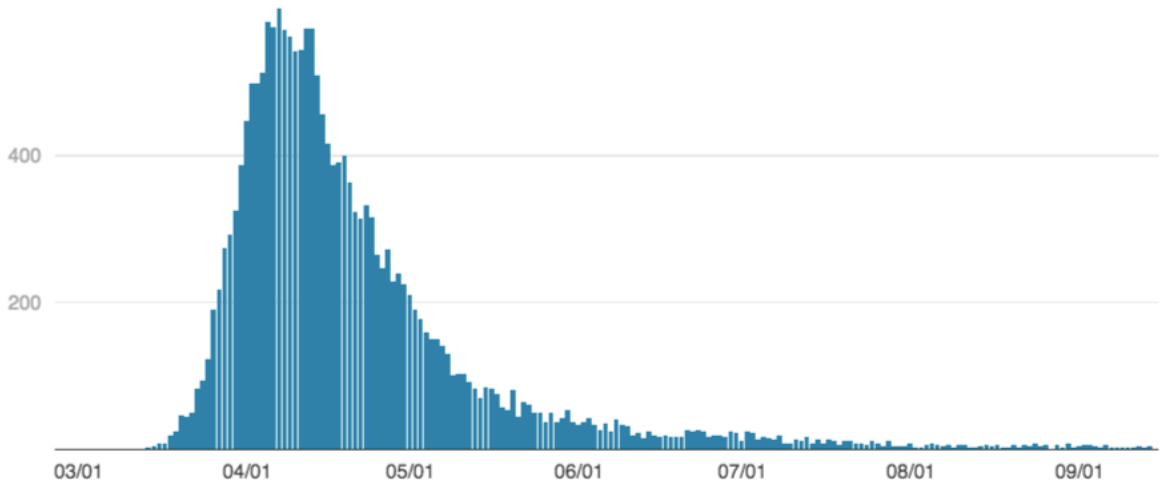
Cases Hospitalizations **Deaths**



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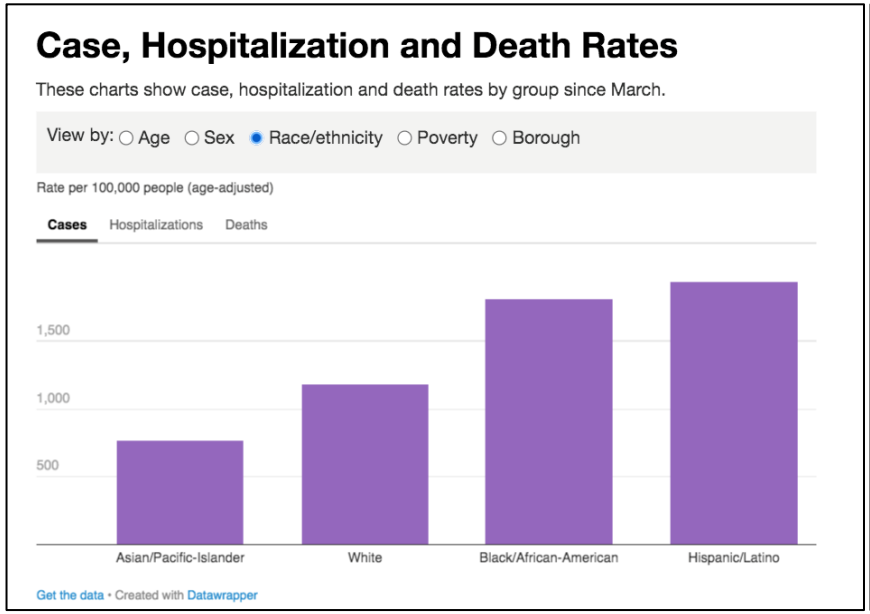
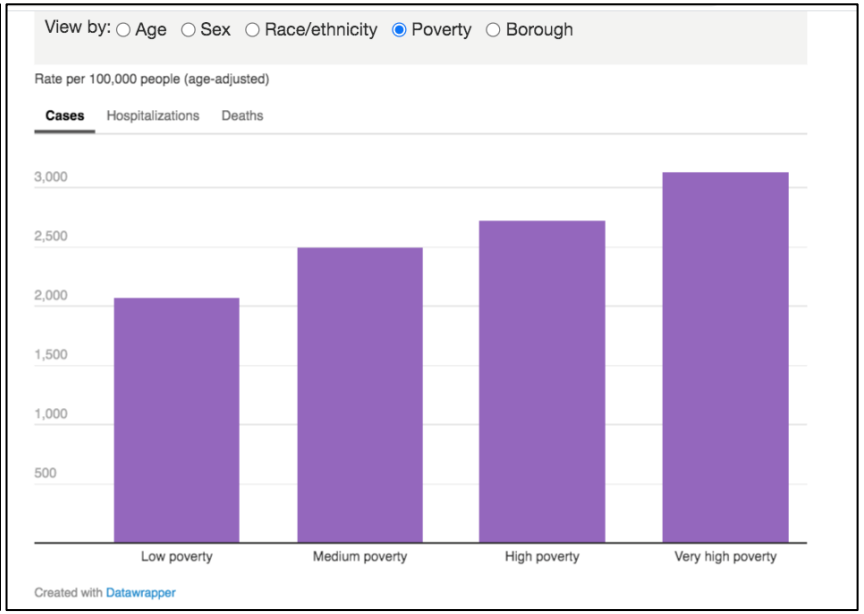
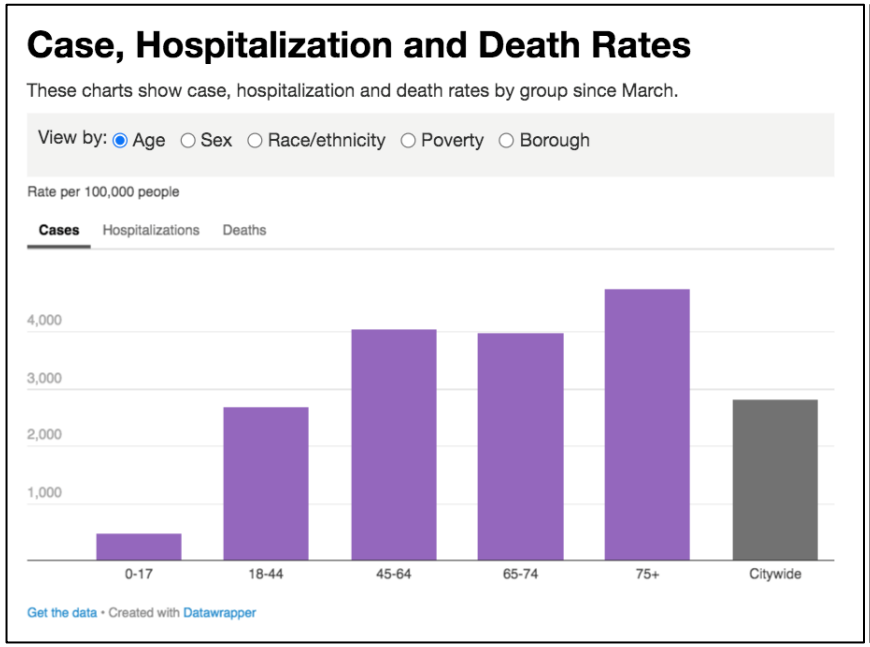
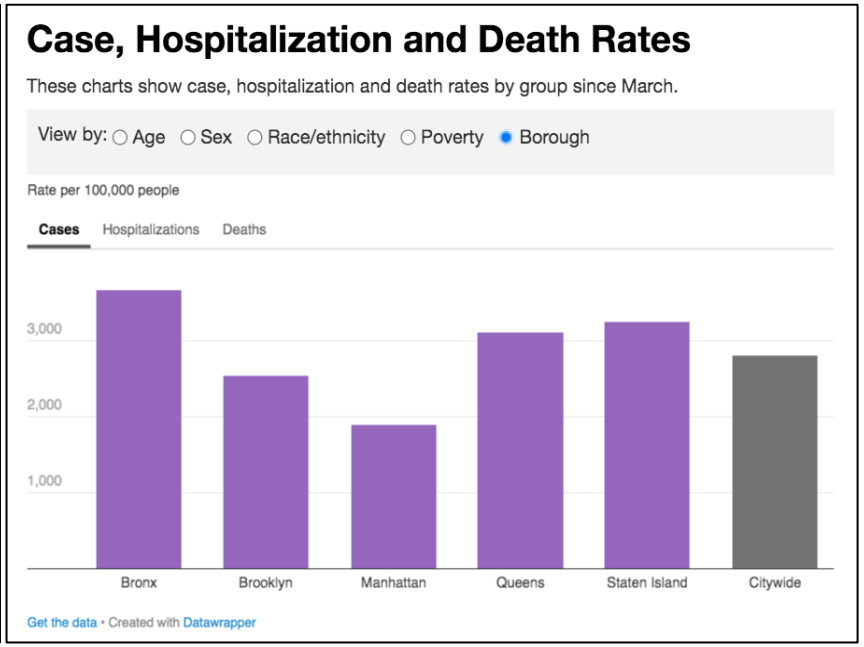
New York City



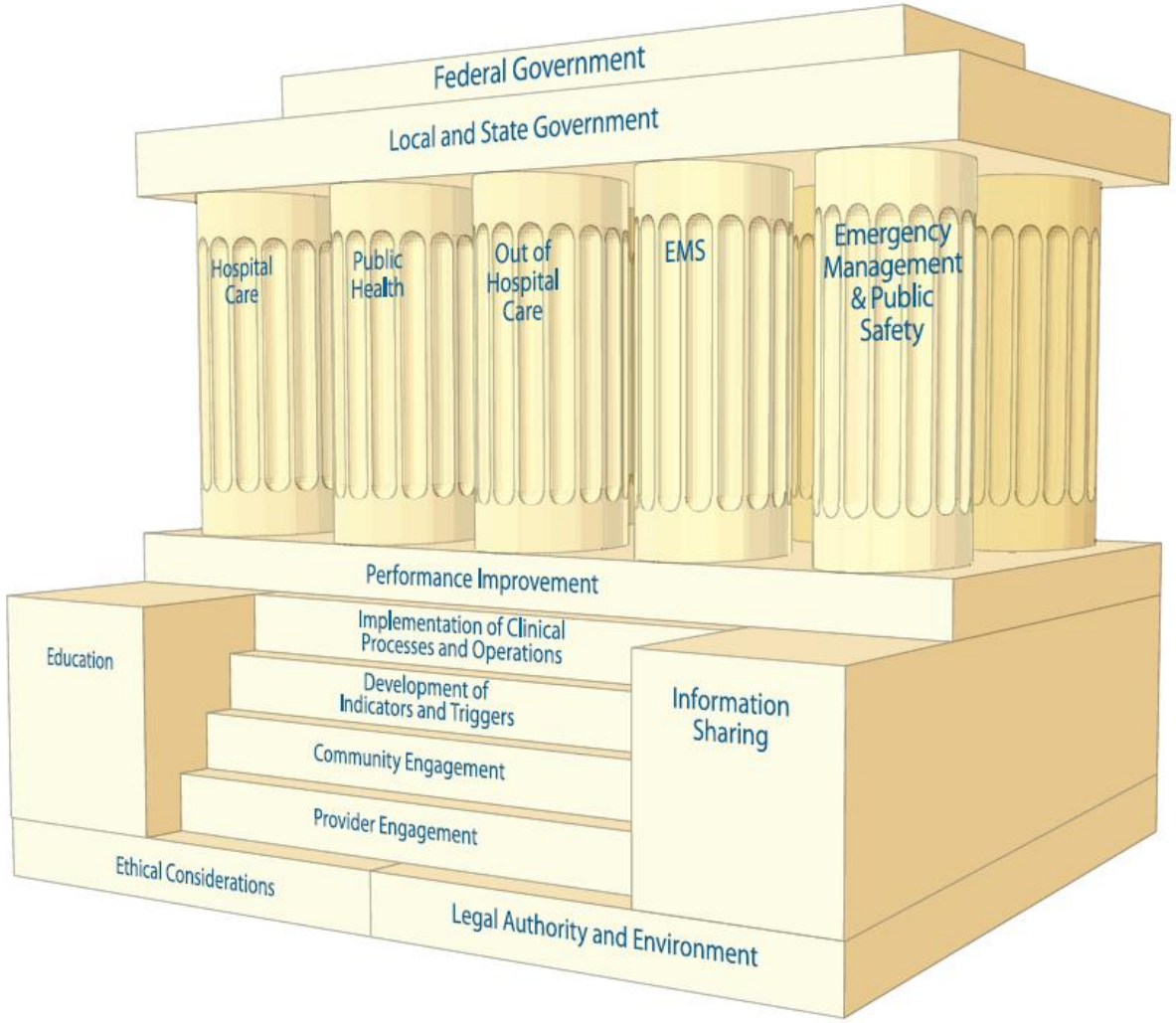






New York City:

National Academies of Science (IOM): Crisis Standards of Care



Ethical concepts to consider in CSC

- Fairness
- Duty to Care
- Duty to Steward Resources
- Transparency
- Consistency
- Proportionality
- Accountability

Crisis Standards of Care

Incident demand/resource imbalance increases →
Risk of morbidity/mortality to patient increases →
← Recovery

	Conventional	Contingency	Crisis
Space	Usual patient care space fully utilized	Patient care areas re-purposed (PACU, monitored units for ICU-level care)	Facility damaged/unsafe or non-patient care areas (classrooms, etc.) used for patient care
Staff	Usual staff called in and utilized	Staff extension (brief deferrals of non-emergent service, supervision of broader group of patients, change in responsibilities, documentation, etc.)	Trained staff unavailable or unable to acequately care for volume of patients even with extension techniques
Supplies	Cached and usual supplies used	Conservation, adaptation, and substitution of supplies with occasional re-use of select supplies	Critical supplies lacking, possible re-allocation of life-sustaining resources
Standard of care	Usual care	Functionally equivalent care	Crisis standards of care[a]

Normal operating conditions

Extreme operating conditions

Indicator: potential for crisis standards[b]

Trigger: crisis standards of care[c]

FIGURE 2-2
Allocation of specific resources along the care capacity continuum.
NOTE: ICU = intensive care unit; PACU = postanesthesia care unit.
[a] Unless temporary, requires state empowerment, clinical guidance, and protection for triage decisions and authorization for alternate care sites/techniques. Once situational awareness achieved, triage decisions should be as systematic and integrated into institutional process, review, and documentation as possible.
[b] Institutions consider impact on the community of resource use (consider "greatest good" versus individual patient needs—e.g., conserve resources when possible), but patient-centered decision making is still the focus.
[c] Institutions (and providers) must make triage decisions—balancing the availability of resources to others and the individual patient's needs—shift to community-centered decision making.
SOURCE: IOM, 2009, p. 53.

Crisis Standards of Care for EMS

TABLE 6-1
Potential EMS Response Adaptations Under Conventional, Contingency, and Crisis Conditions[a]

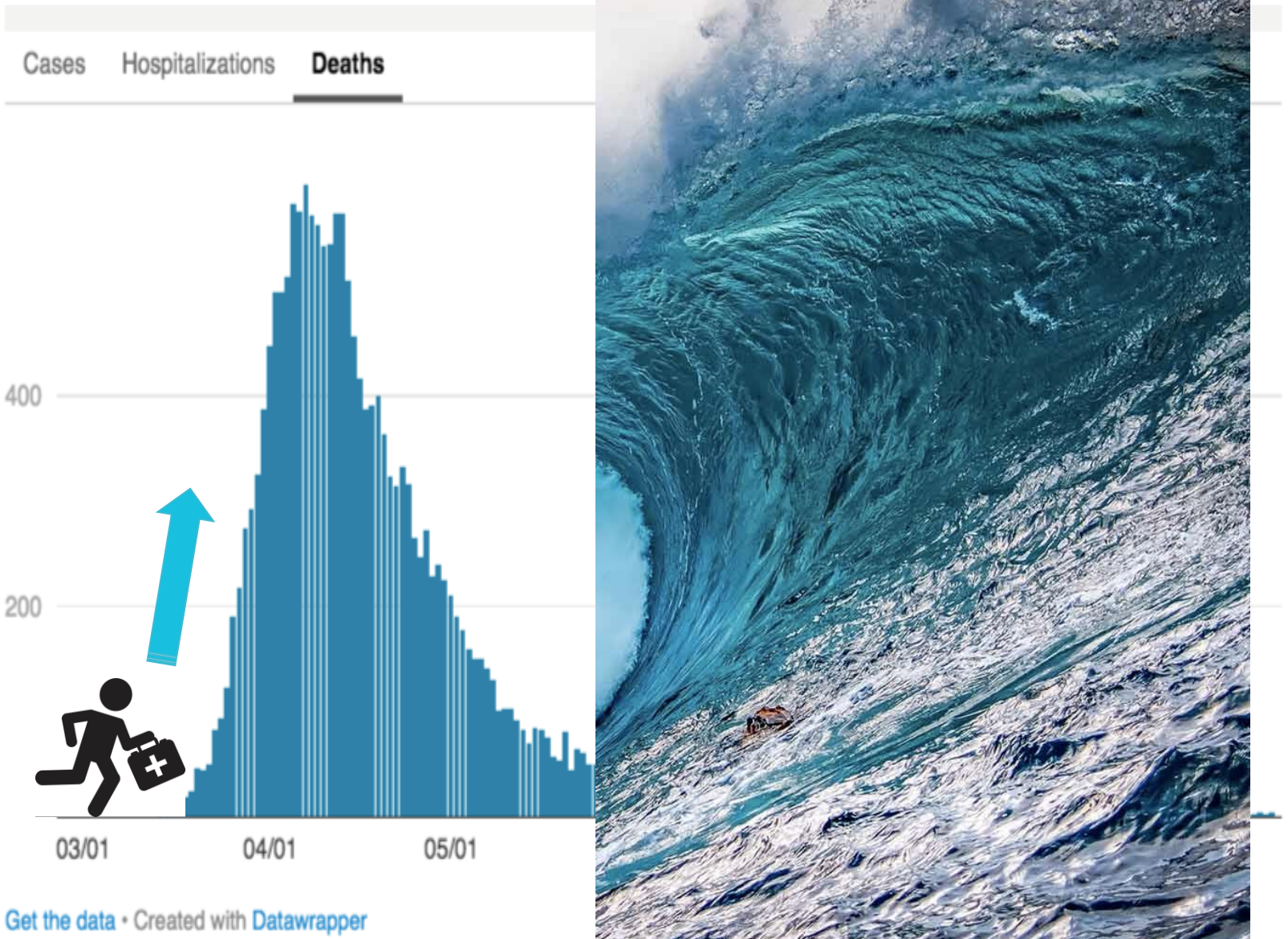
	Conventional	Contingency	Crisis[b]
Dispatch	• Consider initial auto-answer during times of high call volume for medical emergencies	• Prioritize calls according to potential threat to life; "pend" apparently non-life-threatening calls (note this requires a medically trained dispatcher, not available at many public safety answering points [PSAPs])	• Decline response to calls without evident potential threat to life (also requires a medically trained dispatcher)
Response	• Modify resource assignments (e.g., only fire/rescue dispatched to motor vehicle crashes unless EMS are clearly required, single-agency EMS responses if fire agencies are overtaxed) • Seek mutual-aid assistance from surrounding areas	• Modify resource assignments to a greater extent • Change EMS assignments to closest available unit rather than advanced life support (ALS)/basic life support (BLS) • Consider staffing configuration changes (e.g., from two paramedics to one paramedic plus one emergency medical technician [EMT]-B) • Consider requests for disaster assistance	• Request EMS units from emergency management (if possible) • Consider use of National Guard ambulances or other assets • Utilize scheduled BLS providers to answer emergency calls • Change staffing to one medical provider, one driver • Further modify resource assignments as possible • Attempt no resuscitation of cardiac arrests (except ventricular fibrillation [VF] witnessed by EMS)
Patient assessment	• Allow patients with very minor injuries to use their own transportation	• Encourage patients with minor injury/illness to use their own transportation	• Assess patients and decline to transport those without significant injury/illness (according to guidance from EMS medical director)
Transportation	• Transport patients to the closest appropriate facility (rather than the facility of the patient's choice)	• Consider batched transports—answer subsequent call(s) before transporting stable patients to the hospital	• Decline transports as above; employ batch transports as needed

[a] EMS volumes will fluctuate significantly over time; thus, conventional, contingency, and crisis conditions may all occur in a single operational period. Dispatchers must therefore have excellent situational awareness of resources and deployment of personnel to provide the best service possible at a given time and have practice in managing these scenarios.
[b] Crisis adaptations often require state or at least city declarations of emergency, as well as relief from usual staffing and response requirements of the state (often through a governor's emergency order).

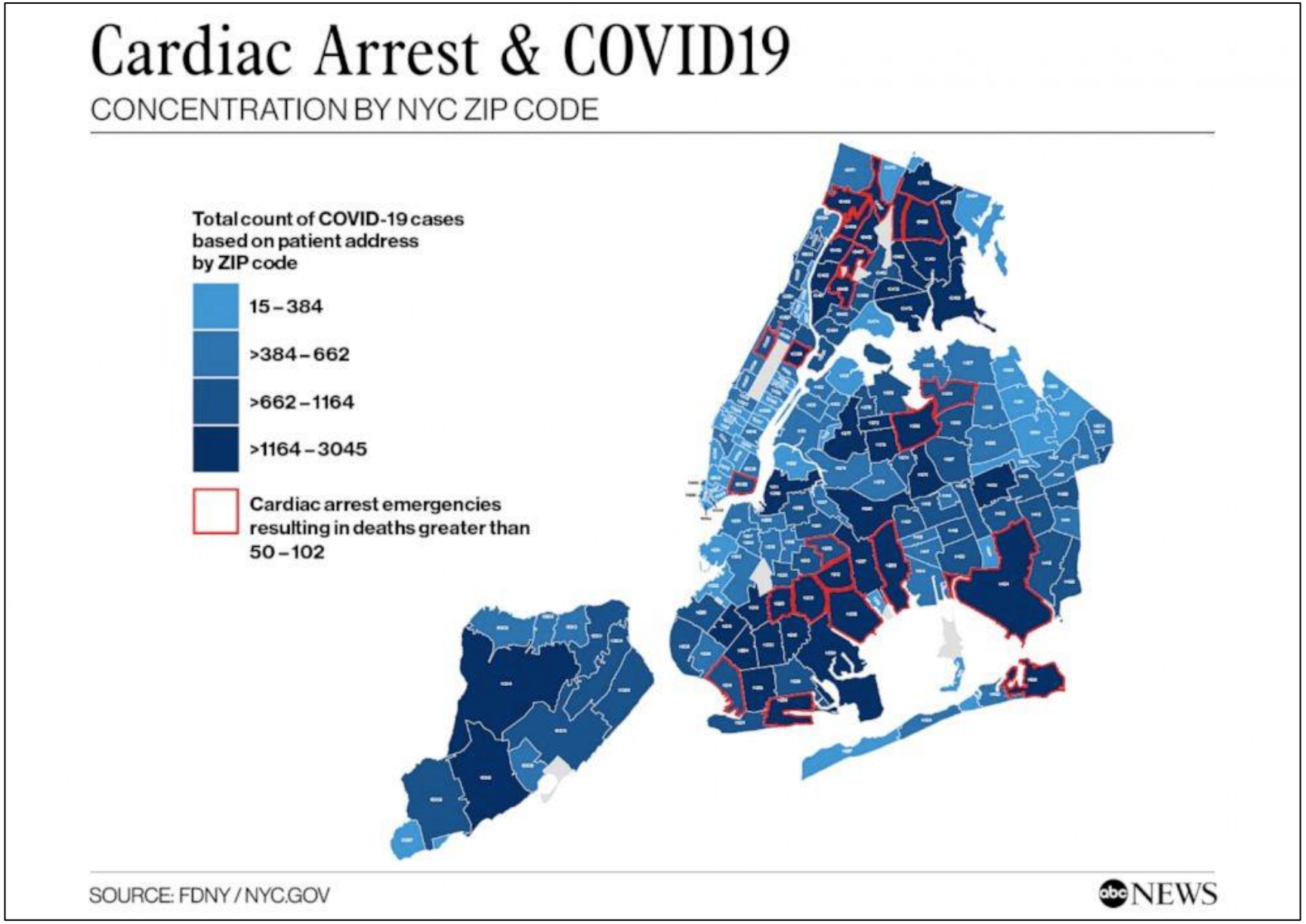
NYC COVID Related Policy Changes

- **January 31st**, NYC REMAC, Advisory 2020-01: Informational Guidance on nCoV-19 with PPE recommendations.
- **February 14,** NYS DOH BEMS, policy statement 20-03: Interim PSAP guidance on identifying potential COVID19 patients.
- **March 6th,** NYC REMAC, Advisory 2020-03: Recommended use of mist limiting nebulizers and requiring utilization of N95s, eye protection and gowns when providing aerosolizing treatments.
- **March 17th**, NYC REMAC, Advisory 2020-04: Recommended COVID19 PPE Standards.
- **March 19th**, NYS DOH BEMS, policy statement 20-05: Recommended the limited use of aerosolizing treatments and requiring utilization of N95s, eye protection and gowns when providing aerosolizing treatments.
- **March 20th**, NYS DOH BEMS, policy statement 20-04 (*Updated*): Guidance on EMS provider exposure and return to work.
- **March 22nd**, NYS DOH BEMS, policy statement 20-06: EMS Viral Pandemic Triage Protocol.
- **March 25th**, NYC REMAC, Advisory 2020-06: Emergency extension of NYC REMAC credentialing for all Paramedics. Provisions for emergency reissuance of REMAC credentials for expired NYC REMAC certifications with agency medical director endorsement.
- **March 30th**, NYC REMAC, Advisory 2020-07: Temporary lowering of ambulance staffing standards. BLS ambulances may be staffed with an EMT and CFR, ALS ambulances may be staffed with an EMT and Paramedic.
- **Marcy 31st**, NYC REMAC, Advisory 2020-08: Temporary cardiac arrest standards for disaster response. Prohibited transport of non-trauma and blunt trauma cardiac arrest patients without ROSC and allowed for pronounced patients to be left in the custody of law enforcement.
- **April 1st**, NYC REMAC: Advisory 2020-09: Regional Implementation of NYS DOH BEMS 20-06.
- **April 1st**, NYS DOH BEMS, policy statement 20-07: EMT and Paramedic original and recertification courses suspended in order to comply with stay at home orders for social distancing.
- **April 1st**, NYS DOH BEMS, policy statement 20-07: EMS providers whose certification had expired between September 1, 2019 and March 30, 2020 were automatically recertified, at their previous level of certification. An additional one (1) year was added to their original expiration date. Any person whose certification expired between January 1, 2019 and August 31, 2019, and who completed an online application form before June 1, 2020,was issued provisional certification, at the last level of certification held. All provisional certifications expire on December 31, 2020. Any person whose certification expired between January 1, 2015 and December 31, 2018, and who completed an online application form before June 1, 2020, was issued provisional certification at the EMT-Basic level, Bureau of Emergency Medical Services.
- **April 17th,** NYS DOH BEMS, COVID 19 Public Health Emergency EMS Cardiac Arrest Standards of Care: Prescribed applying rhythm analysis prior to initiating resuscitation efforts. Resuscitation efforts imitated based on rhythm presented.
- **April 23rd,** NYC REMAC, Advisory 2020-10: Regional implementation of NYS DOH BEMS EMS Cardiac Arrest Standards of Care protocol.
- **April 23rd,** NYC REMAC, Advisory 2020-11: Rescinded REMAC Advisory 2020-10 regionally implementing the NYS DOH COVID 19 Public Health Emergency EMS Cardiac Arrest Standards of Care.
- **April 27th**, NYC REMAC, Advisory, 2020-12: Rescind REMAC Advisory 2020-09, regional implementation of NYS DOH BEMS 20-06.

Looking Up the Curve



Cardiac Arrest in NYC



Cardiac Arrest in NYC

N.Y.C.'s 911 System Is Overwhelmed. 'I'm Terrified,' a Paramedic Says.

With coronavirus cases mounting, emergency workers are making life-or-death decisions about who goes to a hospital, and who is left behind.

abc NEWS | CORONAVIRUS HEALTH & SCIENCE

In the 'epicenter of the epicenter,' were early heart attacks a missed coronavirus warning?

New data, reviewed by ABC News, shows virus followed cardiac arrest calls.

By **Aaron Katersky**, **Sasha Pezenik**, **Eden David** , and **Dr. L. Nedda Dastmalchi**

April 27, 2020, 4:21 AM • 10 min read

Cardiac Arrest: Policy Changes for TOR March 31, 2020

THE REGIONAL EMERGENCY MEDICAL SERVICES COUNCIL OF NEW YORK CITY, INC.

Est. 1974

NYC REMAC			
Advisory No.	2020-08		
Title:	**TEMPORARY Cardiac Arrest Standards for Disaster Response**		
Issue Date:	March 31, 2020		
Effective Date:	Immediate		
Supersedes:	n/a	Page:	1 of 1

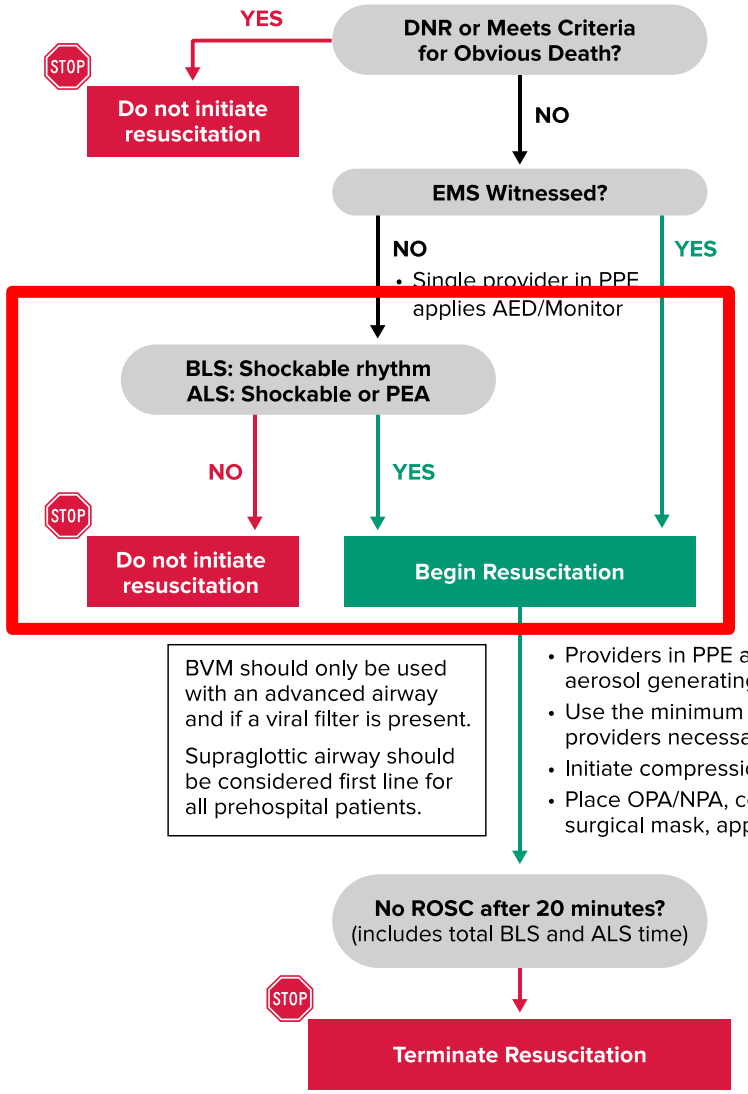
In order to ensure the safety of our providers while also providing care to our patients, the following changes have been made in the **Cardiac Arrest** procedure:

- **No** adult non-traumatic or blunt traumatic cardiac arrest is to be transported to a hospital with manual or mechanical compressions in progress without either return of spontaneous circulation (ROSC) or a direct order from a medical control physician unless there is imminent physical danger to the EMS providers on the scene.
- In the event a resuscitation is terminated, and the body is in public view, the body can be left in the custody of NYPD.

Cardiac Arrest: Policy Changes for TOR April 20, 2020

COVID-19 Public Health Emergency

EMS Cardiac Arrest Standards of Care



No Resuscitation of NON-SHOCKABLE RHYTHMS!

THE REGIONAL EMERGENCY MEDICAL SERVICES COUNCIL OF NEW YORK CITY, INC.

NYC REMAC

Advisory No.	2020-11		
Title:	**Clarified: Cardiac Arrest Standards for Disaster Response**		
Issue Date:	April 23, 2020		
Effective Date:	Immediate		
Supersedes:	2020-10	Page:	1 of 1

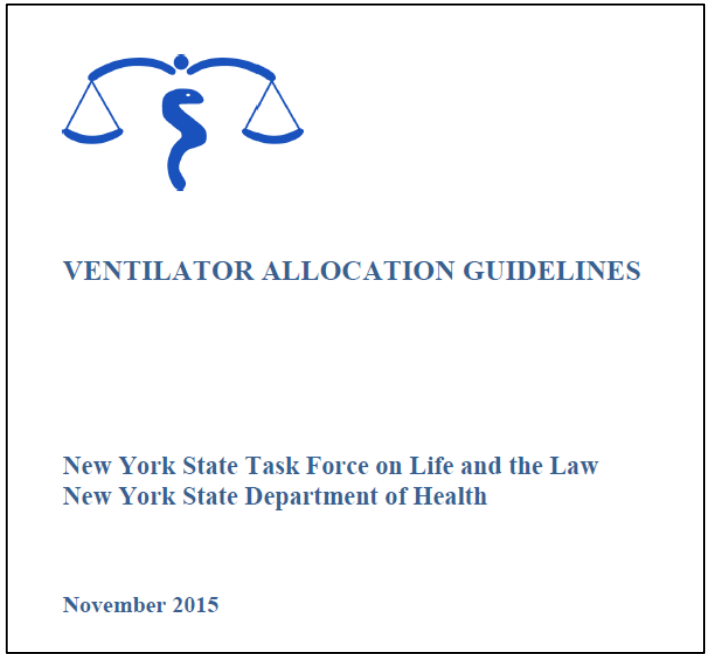
The purpose of this advisory is to clarify various cardiac arrest guidelines that have been released by NYC REMAC, FDNY EMS and BEMS.

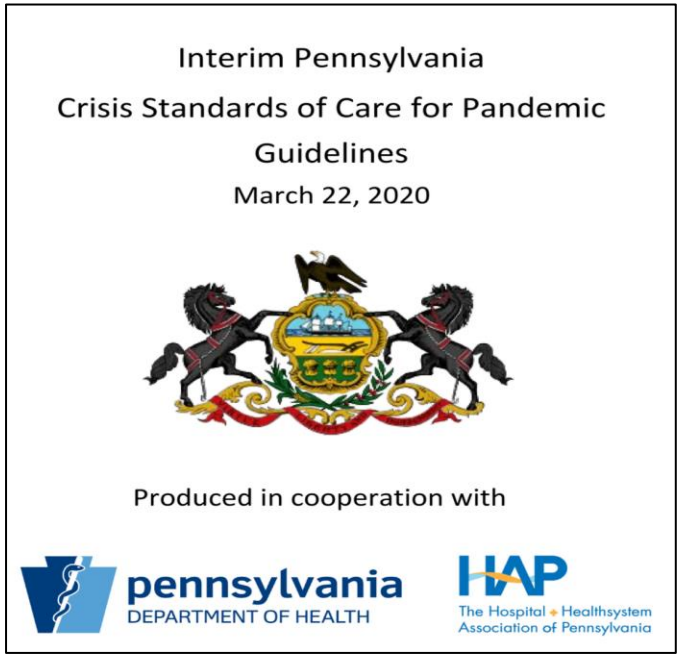
The NYS DOH BEMS requested dissemination of its Cardiac Arrest Standards of Care During the COVID-19 Pandemic Guidance Document. This guidance document provides an evidence-based approach to a crisis standard of care.

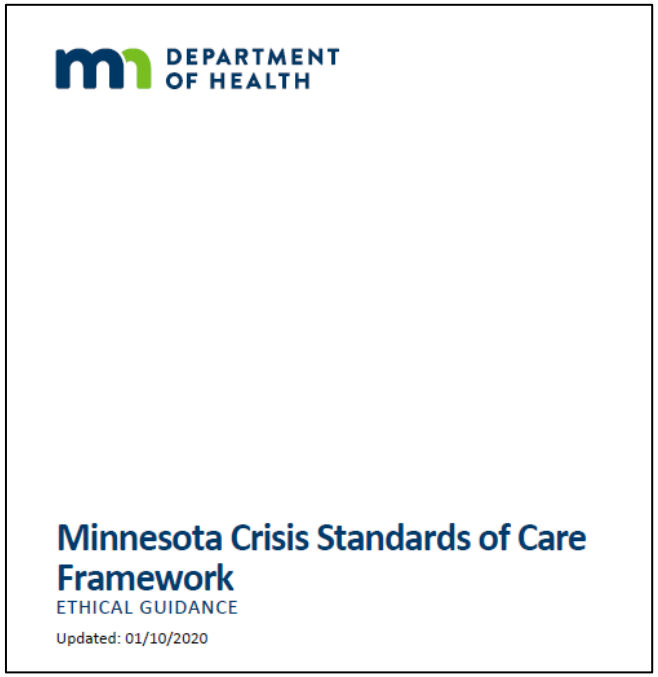
- **AT THIS TIME, THE NYC REGION IS NOT AT A LEVEL OF CRISIS THAT WOULD REQUIRE THIS STANDARD.**

The NYC Region will continue to resuscitate patients in cardiac arrest in compliance with NYC REMAC ADVISORY 2020-08.

Existing Tools for Ethical Triage







Limitations of Existing Tools

- Relies on Lengthy Assessment including SOFA Score
- Focused on ICU Level Decision-Making
- Answers the Question: Who gets the last Ventilator?
- Does NOT involve the Emergency Department Approach, let alone the EMS needs.

Ethical concepts to consider in CSC

Duty to Plan: Health Care, Crisis Standards of Care, and Novel Coronavirus SARS-CoV-2

John L. Hick, MD, Hennepin Healthcare and University of Minnesota; **Dan Hanfling, MD,** In-Q-Tel; **Matthew K. Wynia, MD,** University of Colorado; and **Andrew T. Pavia, MD,** University of Utah

March 5, 2020

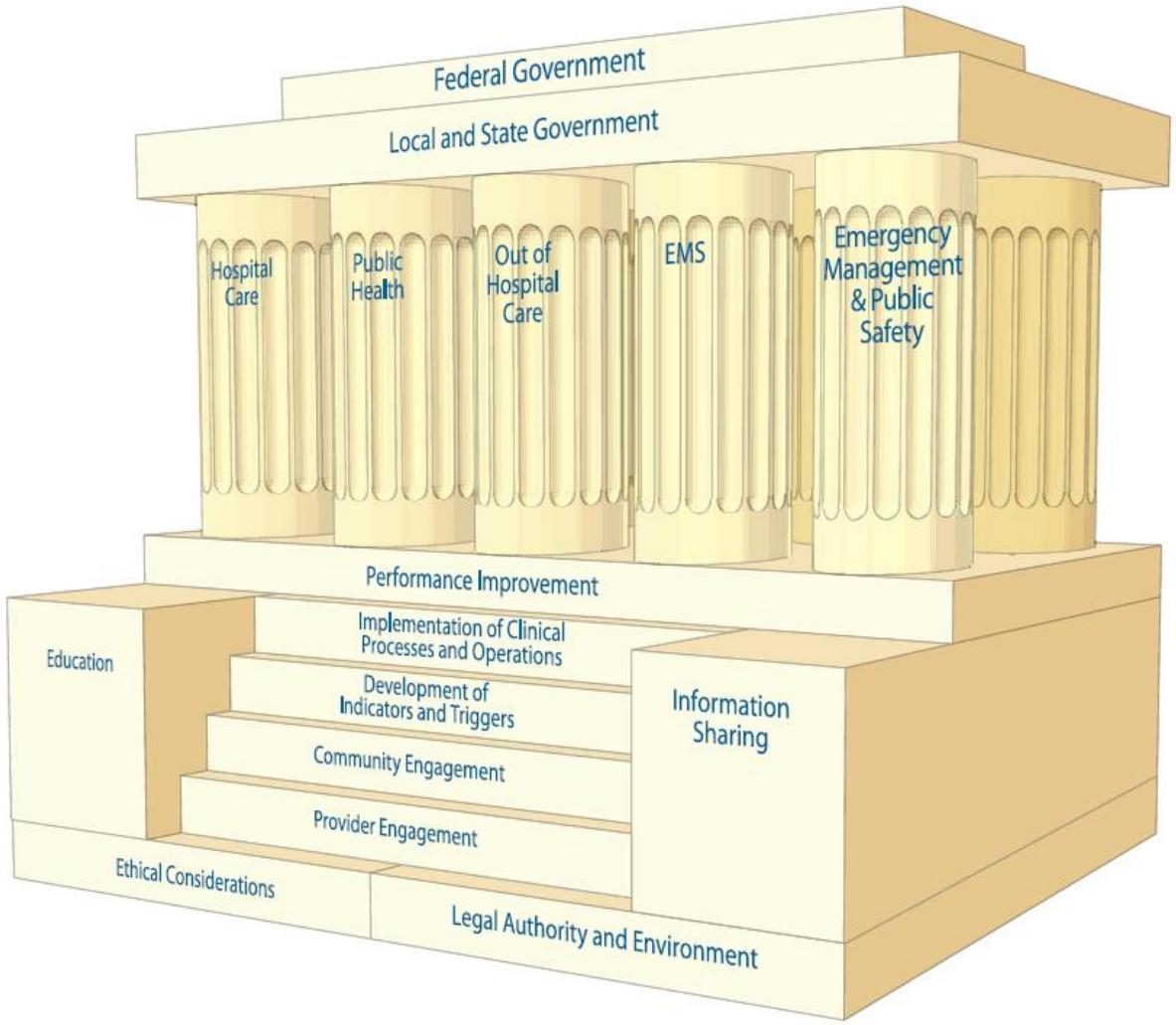
System of Systems

CSC must be applied across all levels of the health care system horizontally (virtual, outpatient, inpatient) and vertically (hospital, health care coalition, state/region, federal) with plans to maximize services and capacity while sharing information, leveraging resources, and distributing patients to ensure the greatest equity and consistency of care.

The primary aim of CSC planning is not to provide a process to make triage decisions such as withholding or reallocating potentially lifesaving resources from one person or group to another who might benefit more. The aim is to have processes in place to manage resources well enough to avoid those situations.

Health care coalitions (public health, health care, emergency management, and emergency medical ser-

Putting the pieces together



Duty to Plan

- Health System Readiness for Public Health Emergency
- System Based Crisis Standards of Care
- Key Leaders from Public Health, Government and the Medical Community
- Built before the emergency happens

Closing Thoughts

Questions/ Thoughts