NEW YORK CITY COVID-19 PANDEMIC CARDIAC ARREST

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NEW YORK CITY DEMOGRAPHICS

• 5 BOROUGHS – 320 SQUARE MILES
  - MANHATTAN
  - BROOKLYN
  - QUEENS
  - THE BRONX
  - STATEN ISLAND

• 8.4 MILLION RESIDENTS (SWELLS TO 13 MILLION DURING BUSINESS HOURS)
NEW YORK CITY EMS STATISTICS

- 4,200 DAILY CALLS FOR EMS
- EQUATES TO 1.5 MILLION CALLS ANNUALLY
- APPROXIMATELY 1.1 MILLION PATIENTS TRANSPORTED
- 60 911-RECEIVING EMERGENCY DEPARTMENTS
  - 4 BURN CENTERS
  - 17 TRAUMA CENTERS (8 PEDIATRIC TRAUMA CENTERS)
  - 45 STROKE CENTERS
  - OTHER SPECIALTY CENTERS (CATH LAB, LVO, REPLANT, VENOM, HYPERBARIC)
FIRE DEPARTMENT OF NEW YORK (FDNY) PERSONNEL

• THREE-TIERED 911 SYSTEM
  - CFRS (CERTIFIED FIRST RESPONDERS) – FFS (7,000 OF 11,500 FFS)
  - 2,800 EMTS – BASIC LIFE SUPPORT
  - 1,100 PARAMEDICS – ADVANCED LIFE SUPPORT

• HIGH PRIORITY CALL SUCH AS CARDIAC ARREST WILL GET ALL THREE LEVELS OF RESPONSE WITH ADDITIONALLY AN EMS SUPERVISOR
NEW YORK CITY COVID PEAK

- March 20 – April 12, 2020 (first confirmed NYC COVID case was 3/1/20)
- Normally 4,200 calls per day – during the peak 6,700 calls per day
- Cardiac arrest calls – yearly 25,000 calls which ultimately results in approximately 8,000 confirmed cardiac arrest calls
- Normally approximately 20 to 25 confirmed cardiac arrest cases per day
- During the peak – went up to 200 cases per day
NORMAL NON-COVID PEAK CARDIAC ARREST PROTOCOL

• IF NO SIGNS OF OBVIOUS DEATH, BEGIN RESUSCITATION EFFORTS

• CONTACT OLMC (ON LINE MEDICAL CONTROL) PHYSICIAN FOR ADDITIONAL MEDICAL CONTROL ORDERS

• OLMC PHYSICIAN WILL DECIDE TERMINATION IN THE FIELD VS TRANSPORT TO THE ED
COVID PEAK CARDIAC ARREST PROTOCOLS

• OVERWHELMING VOLUME OF CARDIAC ARREST CALLS
• OLMC NOT ABLE TO PROVIDE REAL-TIME ORDERS IN A TIMELY FASHION
• EMERGENCY DEPARTMENTS ADVISED THAT DUE TO BEING OVERWHELMED THEMSELVES, ANY EMS PATIENT TRANSPORTED TO THEM WITHOUT A PULSE WOULD NOT HAVE CONTINUED RESUSCITATION EFFORTS
• COVID PROTOCOL CHANGE
  - ALL CARDIAC ARREST PATIENTS NOT MEETING OBVIOUS DEATH CRITERIA TO RECEIVE 20 MINUTES OF FULL RESUSCITATION
  - IF NO SHOCK INDICATED OR NO ROSC DURING THAT 20 MINUTE TIME FRAME OF RESUSCITATION, THEN TERMINATION WITHOUT OLMC CONTACT
• ACCURATE AND COMPLETE DOCUMENTATION
STILL EVALUATING CARDIAC ARREST SURVIVAL RATES DURING PEAKS

• COMPARING ROSC RATES 2019 TO COVID 2020 (34.7% VS 18.2%)

• COMPARING SUSTAINED ROSC RATES 2019 TO COVID 2020 (25.2% VS 10.6%)
GENERAL COVID ISSUES

• WHAT PPE (PERSONAL PROTECTIVE EQUIPMENT) LEVEL
• HOW TO IDENTIFY A POTENTIAL CALL PRE-ARRIVAL – FC (FEVER COUGH) IMPLEMENTATION
• MINIMIZING AEROSOLIZING PROCEDURES (DEPLOYMENT OF BAN NEBULIZERS)
• LIMIT CONTACT WITH ELECTRONIC PATIENT CARE RECORD DEVICES PATIENT AND HOSPITAL
• ENHANCED DECONTAMINATION PROCEDURES
• INCREASED AVAILABILITY OF CRISIS INTERVENTION SERVICES FOR ALL MEMBERS
PREPARING FOR A POTENTIAL SECOND WAVE

• Monitoring NYC and NY State COVID cases – new cases and deaths

• Monitoring the rest of the United States (particularly the South and West)

• Will antibodies offer some immunity – may decrease cases in previously high areas

• Monitoring influenza

• Monitoring swine flu in China

• Monitoring plague in Mongolia

• Communicable diseases are only an airplane ride away

• Reviewing what worked and what may need to be tweaked from our first wave
QUESTIONS?

THANK YOU

PLEASE STAY SAFE!