

Case Presentation

Fairfax County Fire & Rescue Department



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No conflicts of interest



Fairfax County, Virginia

1.2 million residents ~ 395 square miles



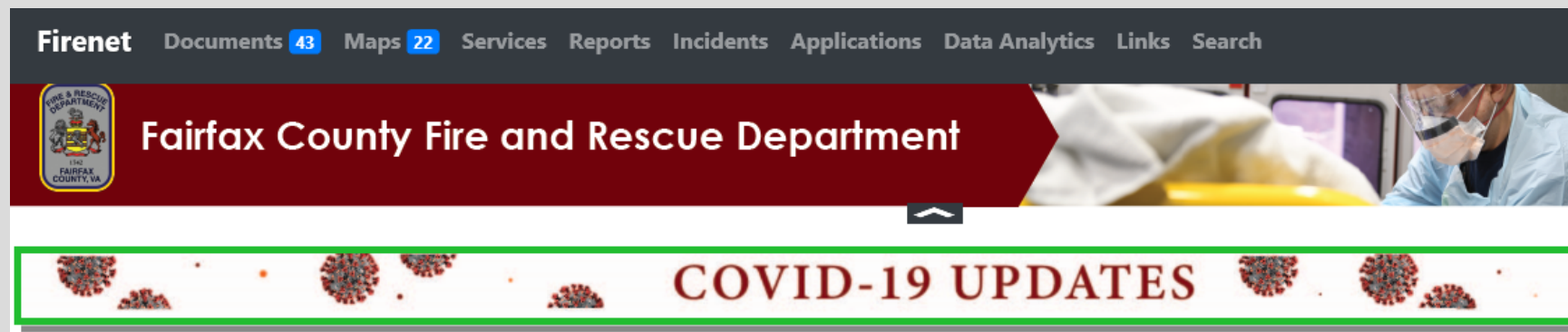
Fairfax County Fire & Rescue

- combined career/volunteer department
- 38 stations / 7 battalions: 1 ALS provider as minimum staff/frontline units
 - 42 ALS transport units + 38 ALS engines + 14 trucks, 8 rescues, 3 tankers, 4 boats
 - 460 authorized ALS providers
- 2 full time Operational Medical Directors (both board certified EM/EMS)
- CY2019 stats: 106,546 calls ~ 77,822 for EMS



The early days

- January 24 – Safety Bulletin: Coronavirus Awareness
- February 19 – Safety Bulletin: Covid-19 Update
- March 10 – 1st confirmed case in Fairfax / Contingency Team activated
- March 12 – Governor declares State of Emergency
- March 16 – 1st Contingency Action Plan posted / telework begins



+ response guidance, PPE, HR/Wellness, hospital & congregate living info, etc.

Dispatched Information

- 6/3/2020 at 20:00
- 47-Year-Old Hispanic Male
- No past medical history
- No medications/allergies
- Spanish speaking only

“UNITS: T411, M411B
LL SPANISH// POSITIVE INFECTIOUS DISEASE TEST//
47 YOM// SOB//NOT RESPONDING NORMALLY// CPPE
RECOMMENDED”



Arrived on scene to find

- Adult male moderately dyspneic (2-3 word sentences)
- Standing, ambulatory for short distances
- + COVID-19 PCR testing at Virginia Hospital Center 2 days prior
- Progressive worsening of symptoms over the past 6 hours
- Initial patient contact made with “COVID Kit”
 - Profound hypoxemia (<50% at room air)



| | 8:11 PM | 8:16 PM | 8:21 PM | 8:26 PM | 8:31 PM | 8:36 PM |
|----------------------|---------|---------|---------|---------|---------|---------|
| SpO2 (%) | -- | 62 | 64^ | 67^ | 72^ | -- |
| Pulse (bpm) | -- | 141 | 139^ | 137^ | 137^ | -- |
| AwRR (rpm) | -- | 50 | 51^ | 53^ | 50^ | -- |
| EtCO2 (mmHg) | -- | 15 | 15^ | 15^ | 15^ | -- |
| HR (bpm) | -- | -- | 139^ | 137^ | 137 | -- |
| NBP systolic (mmHg) | -- | -- | 145 | 142 | 138 | -- |
| NBP diastolic (mmHg) | -- | -- | 88 | 86 | 88 | -- |
| NBP mean (mmHg) | -- | -- | 107 | 105 | 105 | -- |

Prehospital Care Plan

- High-Flow NRB mask applied under surgical mask
 - Current FRD NPPV/CPAP unable to be filtered
- Removed from residence via stair chair
- Assessment to include ETCO₂, 12-Lead ECG
- Transport initiated to local community hospital, INOVA Mt. Vernon
 - (6 minutes by ground)
 - Early notification of Patient Under Investigation (PUI) from scene
- During transport SPO₂ remains poor despite increased flow rate 15 → 25LPM
- PIV established



Photo: Medtronic CapnoAcademy
<https://www.capnoacademy.com/2020/03/21/airway-management-adjustments-in-the-era-of-covid-19/>

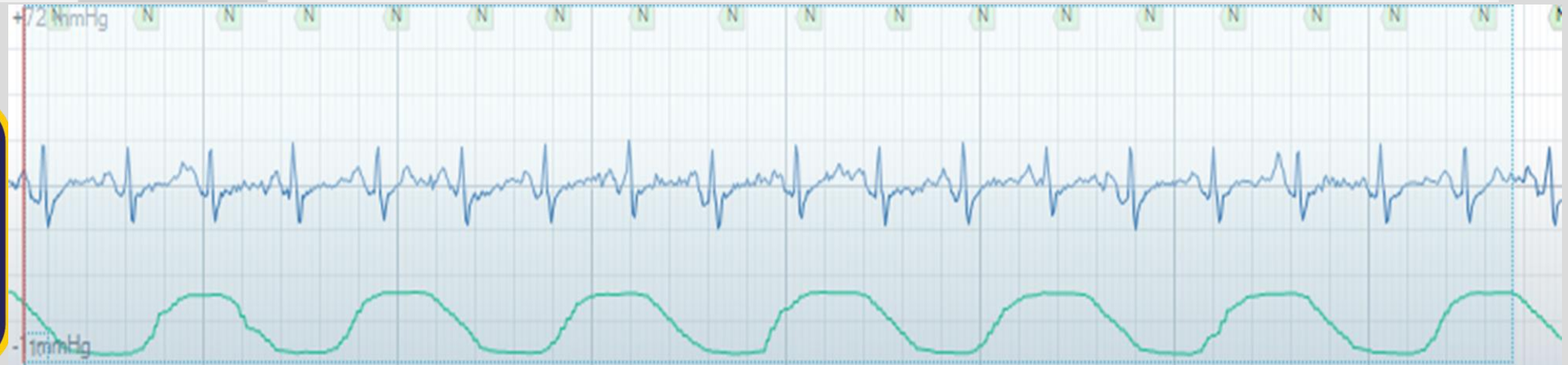
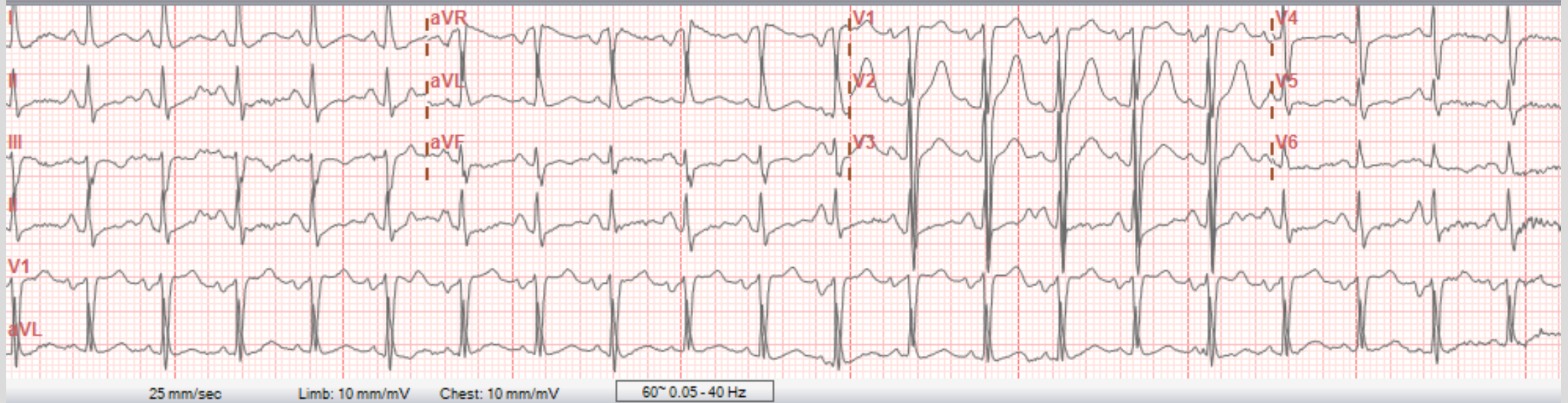


| | |
|------|-----|
| Rate | 135 |
| PR | 119 |
| QRSd | 78 |
| QT | 317 |
| QTc | 476 |
| Axes | |
| P | 41 |
| QRS | -12 |
| T | -20 |

- Sinus tachycardia rate > 99
- Probable left atrial enlargement P > 50mS, < -0.10mV V1
- Borderline T abnormalities, diffuse leads T flat/neg
- Borderline ST elevation, anterior leads ST > 0.15mV in V1-V4

- ABNORMAL ECG -

Unconfirmed diagnosis

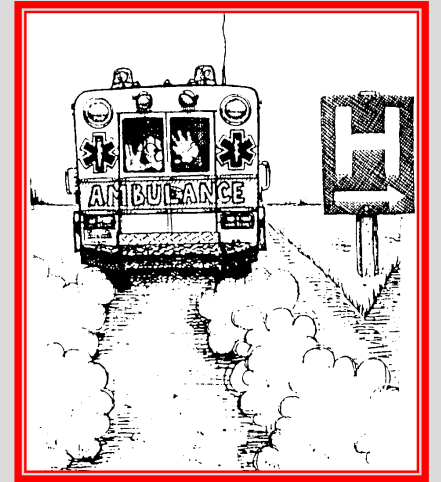


Hospital Course

- 24-day admission,
 - Dx: COVID-19 virus infection, DKA, acute Resp Failure, viral sepsis
- Day 1- Insulin drip, Remdesivir, BiPAP → HFNC with self proning.
- Day 5- stepdown from ICU, transition to oxymiser
- Day 13- rapid response activation, reescalation of NPPV, rule-out PE
- Continued improvement to NC



Thank you!



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<https://www.fairfaxcounty.gov/fire-ems/>



@ffxfirerescue

