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Access speaker bios here:

<https://files.asprtracie.hhs.gov/documents/covid-19-healthcare-system-operations-speaker-bios.pdf>

Access Q and A here: <https://files.asprtracie.hhs.gov/documents/aspr-tracie-ta-covid-19-healthcare-system-operations-qa.pdf>



T R A C I E
HEALTHCARE EMERGENCY PREPAREDNESS
INFORMATION GATEWAY

COVID-19: Healthcare System Operations Strategies and Experiences

May 11, 2020

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- Self-service collection of audience-tailored materials
- Subject-specific, SME-reviewed “Topic Collections”
- Unpublished and SME peer-reviewed materials highlighting real-life tools and experiences



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- Area for password-protected discussion among vetted users in near real-time
- Ability to support chats and the peer-to-peer exchange of user-developed templates, plans, and other materials



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Resources

- [ASPR TRACIE COVID-19 Page](#)
- [ASPR COVID-19 Page](#)
- [CDC COVID-19 Page](#)
- [Coronavirus.gov](#)



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Background/Intro to Health System: Jacobi Medical Center

- NYC Health + Hospitals is the largest public health care system in the United States. We provide essential inpatient, outpatient, and home-based service to more than one Million New Yorkers every year in more than 70 locations across the city's five boroughs.
- Jacobi Medical Center is on of the 11 acute care hospitals within H + H that provide Emergency and Level I Trauma care, Hyperbaric Center, Snakebite Center, Burn Center, Stroke Center, and a Heliport
- COVID-19 response
 - Beds 260 normal bed capacity + 98 additional surge beds = 358 Beds
 - Staffing – H + H / Temps / Agency / Travelers/ Military
 - ED patients specific to COVID-19 from March 2 – April 30: 1326 (361 T&R / 965 Admissions)

Space

Logistics strategies for space

- 5 South
- 2D Same Day
- 6D (ICU)
- 4D Rehab
- 10 East
- GI Suite
- ED Holding AED / Reconfiguration of Asthma Room / Support from PED
- All Isolation rooms doubled
- 3B, PACU, Same Day, GI all became ICU's
- Med / Surg rooms went to double rooms at minimum with the capability in some unit to go to triple rooms

Staff

Logistics strategies for staff: All hands on deck

- Dentists
- Anesthesiologists
- Nurse Travelers
- Agency Staffing
- Surgeons pull to full
- Military Support
- Temps for support positions (Escort / Morgue/Dietary/ Environmental/ Property)
- Command Center coverage

Stuff

Logistics strategies

- PPE vs. Durable PPE (PAPR vs. CAPR)
- Monitors
- Glide scopes
- High Flow Cannulas
- Glucometers
- Ventilators
- Feeding tubes/pumps
- Bipaps
- Portable X-Rays
- IV Pumps
- Ultrasound machines
- CRRT machines
- End tidal CO2 monitoring
- Staff training on equipment

What Would We Do the Same and Differently?

What can the audience learn now and start planning for the next wave?

- Surge response turnkey (Space / Stuff / Staff)
- Patient flow response – Pull to Full
- Daily and centralized communication (Central Office)
- Command Center functions / PPE distribution
- Personal Protective Equipment
- Pharmacy / Medications
- Communications with families
- Engineering and maintenance
- Environmental
- Ambulatory Care – COVID testing
- Morgue capacity / Staffing / Supplies
- Staff support



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Foreword

- Learned – and still learning – from the healthcare, public health, and emergency management components of those jurisdictions that caught the first wave before we did
- Recognize that hospitals come in a variety of sizes / capabilities / organizational structures
- Recognize that some of this may be stating the obvious – preaching to the choir
- Observations are my own

Background/Intro to Health System

NYC Health + Hospitals / Elmhurst

- 545 bed tertiary care hospital
- 140K ED visits, 450K OPD visits
- Level I Trauma Center, Level 3 NICU, stroke center
- Nationally ranked “high performing” in Orthopedics, Heart Failure, and COPD
- 800K resident catchment area
- 4K
- Part of NYC’s public health care system
- Member of two HCC’s

Background/Intro to Health System

“Epicenter within an epicenter.”

—Mayor Bill de Blasio, March 26th

Preface – *This is Different*

- Personnel may be treating co-workers – friends
- Personnel may get sick
- Personnel may die
- Personnel may cause their loved ones to become sick or die

Space

- Initially designated certain units (ICU and Med/Surg)
- Planned for surge
 - Performed surge discharge (ALC, etc.)
 - Redesignated in-patient units
 - Repurposed PACU, Amb Surg, etc.
 - Prepared for repurposing of non-patient areas
 - “Ready or not, patients will present.” —COEM
- Eventually, almost every unit was a COVID Unit

Space (cont'd)

- Beds need to be “mapped” in the EMR
- Privacy dividers
- Pressure relationships
- Tents
- “Base”
- Lockers
- Showers

Space (cont'd)

- Storage
 - M/S supplies
 - PPE
 - Biomedical equipment
 - Ventilators
 - Donated goods
 - Food
 - Don't forget *safety*

Staff

- This is big
- Deputize / designate / assign personnel
- Anticipate sick calls, pre-existing health conditions, ill family members
- Ill/symptomatic employees should stay home: ***nobody*** is **THAT** important
- Succession, delegation
- Anticipate that some personnel may die

Staff (cont'd)

- Policy for return to duty
- Augmentation force management
- Volunteer management
- Child / elder care – school closings
- Staff accommodations (hotel, transport, parking)
- Telework
- Psychosocial considerations

Stuff

- Just-in-time inventory
- Bags (plastic, paper, and body)
- Waste
- Ventilators
- Oxygen
- HD machines
- IV pumps
- Beds/stretchers, overbed tables, IV poles, privacy curtains
- New equipment: inspection, tracking, J-I-T-T
- Materiel for stool management, pressure injury prevention
- Components of intubation kits/trays

Stuff (cont'd)

- Hand soap, paper towels
- Hand sanitizer (and batteries) (and deployment)
- Disinfectant wipes and sprays
- Toilet paper?
- Cloth or paper scrubs
- Food
- Linen
- Replacement HEPA filters
- Single-patient thermometers (glass, non-Hg)
- Single-patient stethoscopes
- Commodes

Stuff (cont'd)

- PPE
 - Changes in transmission-based precautions recommendations and PPE guidelines
 - Administrator or manager
 - Security of storage area(s)
 - Satellite distribution areas
 - Selection
 - Ensembles
 - Fit testing
 - PPE doffing and disposal
 - Zones
 - Educate, educate, educate, ...

Systems

- Subscribe to ASPR, CDC, state and local DoH and OEM info sources
- Push info to personnel, and *encourage them to watch / listen to / read it*
- Information collection and reporting
- Mass fatality management
- Undomiciled / under-domiciled persons
- Video phones for patient/family visits
- Long-term psychosocial services for existing patients, new patients, and personnel (we're resilient, but ...)

Systems (cont'd)

- Policies for engaging with the news media and utilizing social media accounts
- Procedure for patients without decisional capacity who attempt to leave AMA

What Would We Do the Same and Differently?

- Surge response lessons learned for the next wave- what would you do the same/keep, what would you do differently and why, etc.
 - Attempt to “tag” (and train) more existing personnel
- What can the audience learn now and start planning for the next wave?
 - Consider concurrent or cascading emergencies
 - Consider supply chain disruption



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Background/Intro to Health System

- 5 Hospital System
- Level 1 Trauma Center | Academic Hospital
- Children's Hospital
- 3 Community Hospitals
- 1300+ beds
- LSU + Tulane SOM



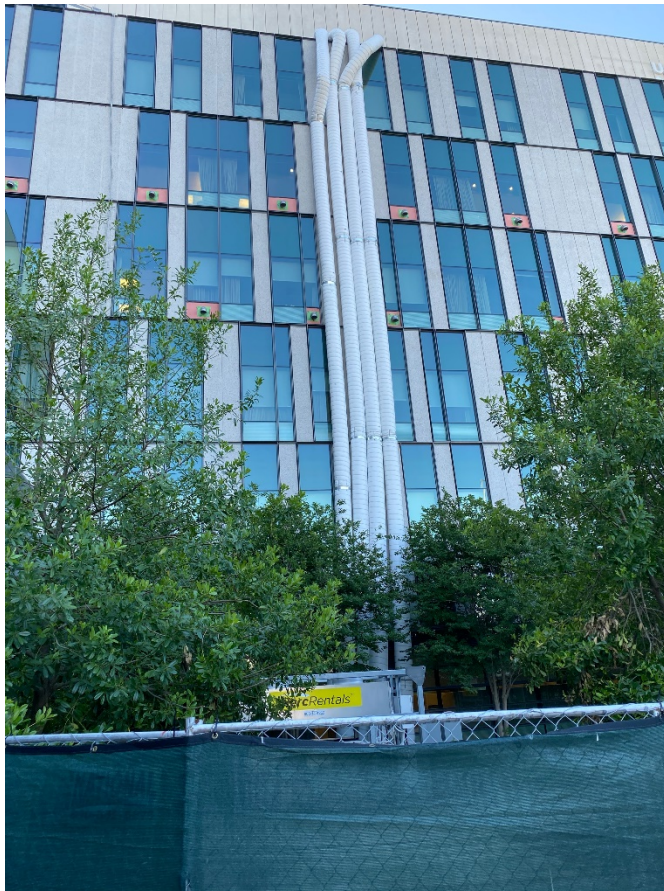
Logistics, Communications, and Tents

Space

- ED Expansion
- ICU
- Med | Surg
- Negative Pressure



Negative Pressure



Staff

- Nursing
- Physicians
- EVS
- System Employee Pool



Stuff

- Supply Chain
- PPE
- Lab
- Meals



What Would We Do the Same and Differently?

- Community response
- Supply chain
- Utilize key leaders
- Communications
- AAR





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Background/Intro to Health System

- Tribal Hospital on Western Navajo Reservation in Northern Arizona (638 site, not Indian Health Service)
 - 60 beds: ICU 6, RCU 24, MedSurg 15, OB 6
 - 44,000 ER visits annually
 - Level 3 Trauma Center
- Population:
 - 30,000 patients for primary care; 50,000 patients for specialty care
 - 30% without running water
 - 10% without electricity
 - H1N1 mortality 4 times higher here
- Navajo Nation spans 4 corners area. Nation is sovereign.



How Tuba Incidence Rates Compare

If the Navajo Nation were considered a state, it would have the 3rd highest incidence rate in the U.S behind New York and New Jersey

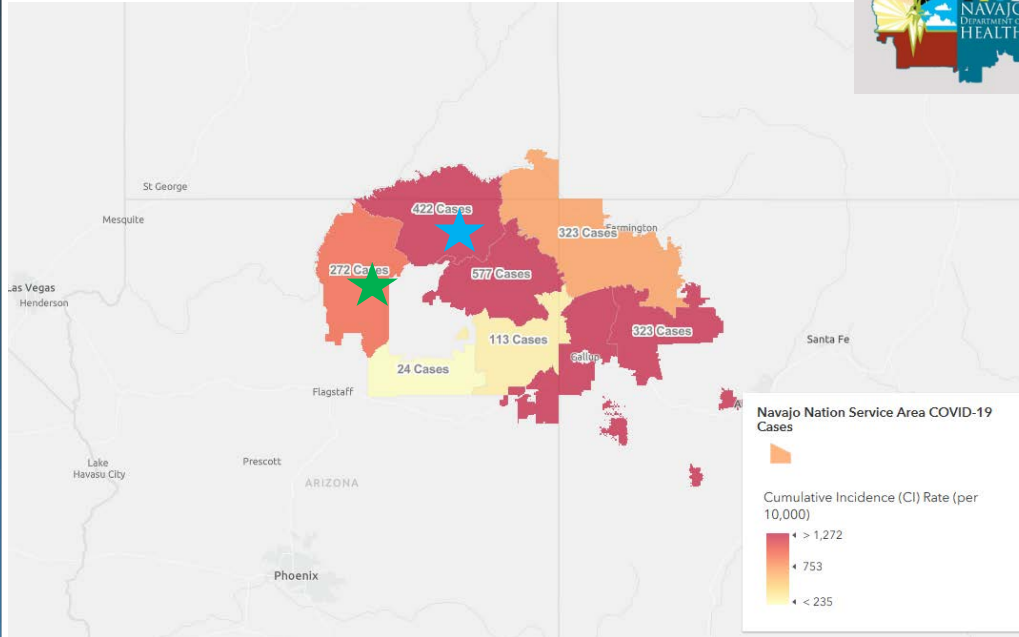


Geographic region	Unadjusted incidence rate per 100,000 persons
New York State	1,632
<i>New York City</i>	11,283
New Jersey	1,464
Navajo Nation	1,133
<i>Western Agency</i>	1,233
Massachusetts	1,049
Rhode Island	963
Louisiana	648
<i>New Orleans</i>	~1,600

Navajo Nation Burden of Disease



Super-spreader Event: March 6 in
Chilchinbito, AZ ★
Church of the Nazarene



As of May 7

- Arizona Cases 9305
- Navajo Area Cases 2559
- Tuba City ★
 - 1125 tested
 - 357 POSITIVE

Space

- Get your respiratory care unit (RCU) ready before you have patients
- We converted our pediatric ward to the RCU
- Entire ICU is COVID positive, where does everyone else go?
- Negative pressure rooms for OB, ICU and RCU – takes time and costs money. Old buildings may require an engineer team.
- Triage tent outside for most of the testing



Staff

- “Help isn’t coming” –CRNAs as ICU RNs, NP working as floor nurses in RCU
- NURSES NURSES NURSES and more NURSES
- Beautiful facilities unused due to lack of nurses
- Bring the outpatient CMAs to help in RCU for lab draws and ADLs
- Dentists, optometrists, physical therapists, and orthopedic surgeons will be repurposed (contact tracing team and case management, doffing monitors, triage tent, gown sewing)
- Explore Tele-ICU opportunities



Stuff



- Get a full counting of what you do have early and assign a PPE Czar to this task ALL the time
- Insecure supply chains cause a revolving door of PPE recommendations
- Use PPE correctly. Train and then retrain. Use a doffing monitor.
- We bought ventilators but haven't used them. We transfer intubated patients to Phoenix...so far. Statewide transfer center has been invaluable.
- Vapotherms (HFNC increased supply by 150%)
- HEPA filters for ambu bags
- Signs to mark your different areas
- Tents for triage and outdoor treatment areas

What Would We Do the Same and Differently?

- Don't deny this; COVID can come to you. Spend the time and the money NOW.
- Rural areas are chronically understaffed. Have a surge staffing plan.
 - NURSES NURSES NURSES NURSES NURSES NURSES
- No hospital is an island! Identify and develop community partnerships.
 - Create a public relations plan and identify community contributors
- EMS – get them trained on PPE, MDI and spacer; decon the ambulance
- Pandemic Flu policy: find it and fix it now
- Ethics – publish your COVID recommendations for pre-hospital CPR, Ventilated codes, Duty to Care for employees, etc.
- How and who will do the contact tracing? We are implementing CommCare at week 9 of this pandemic.
- Employee salaries and benefits cut; operating costs are up and revenue is WAY WAY down. Get your tele-med process and billing ready before you need to use it.
- “Help Isn't Coming”





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Moderator Roundtable

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Question & Answer



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