



The Never-Ending Stream: Disaster Response in New York City from 9/11 to Covid-19

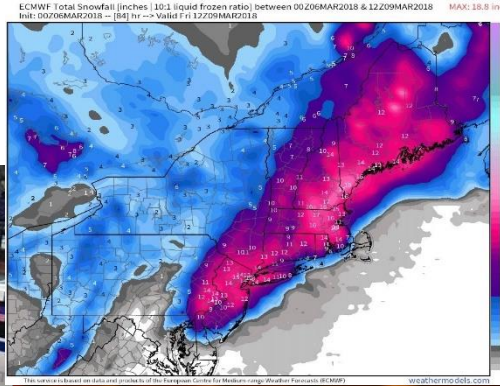
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AVP, Emergency Management + Enterprise Resilience | NYU Langone, New York NY USA



New York City

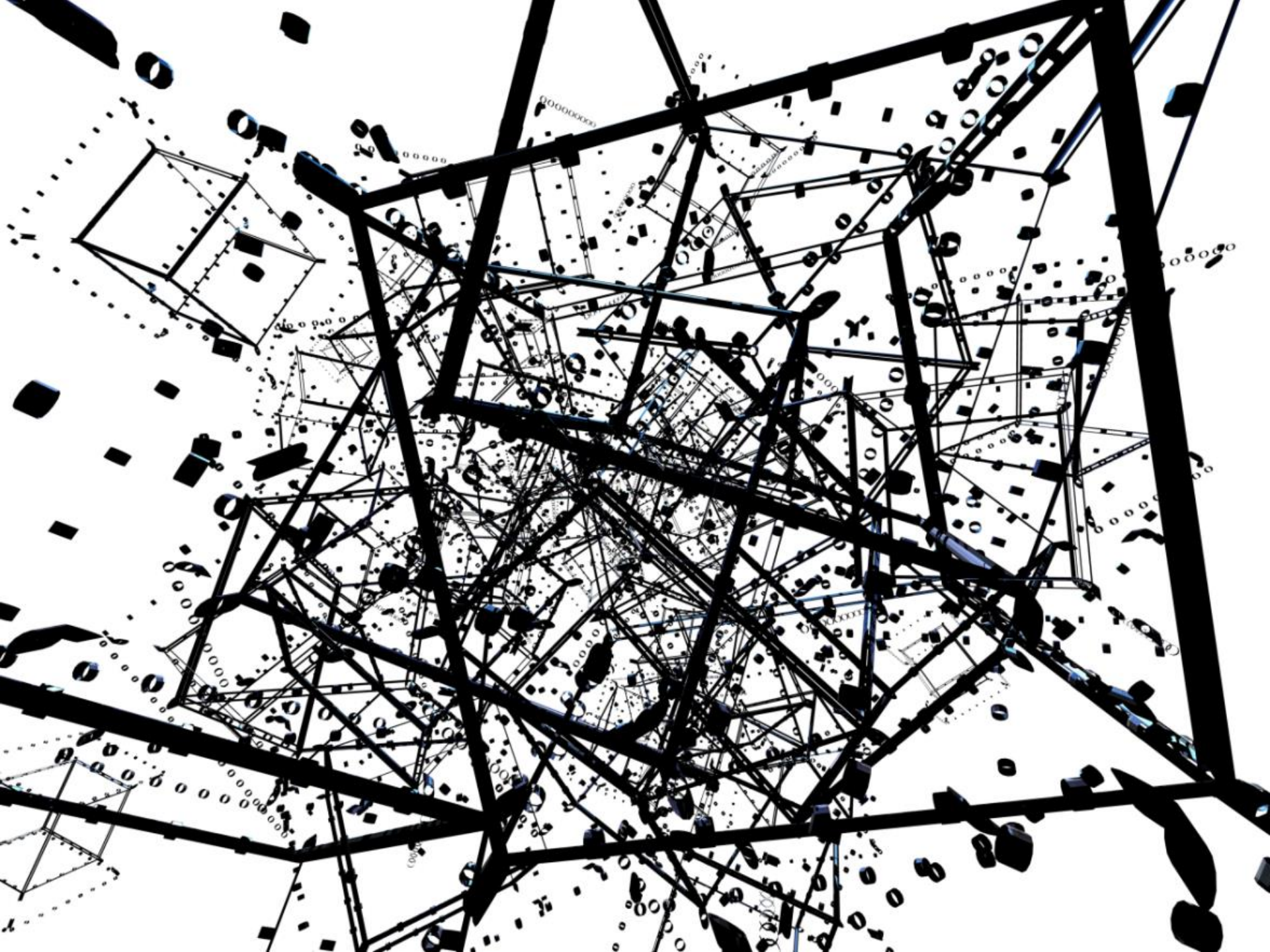
9/11/2001–10/14/2021



New York City

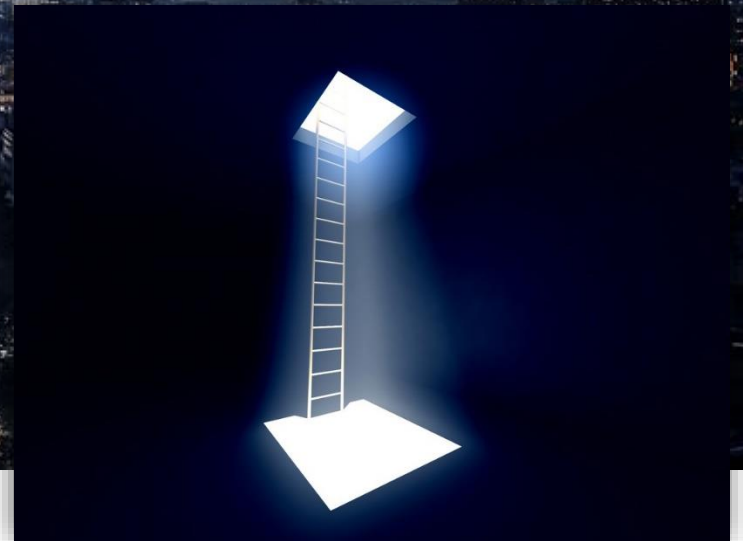
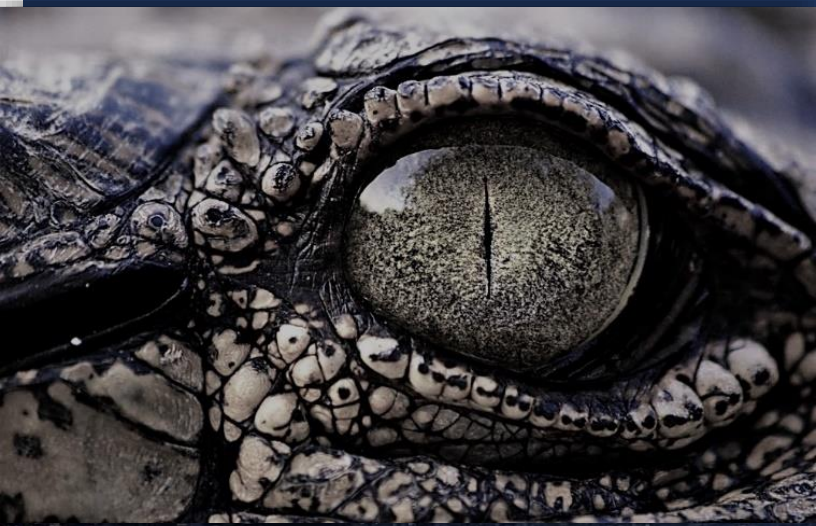
9/11/2001







GenealogyInTime.com






“Everybody's got a plan until
they get punched in the
mouth”

— Mike Tyson, American professional
boxer



THINK





*"If you can keep your head when all about you
Are losing theirs and blaming it on you,
If you can trust yourself when all doubt you,
But make allowance for their doubting too"*

— Rudyard Kipling, If: A Father's Advice to His Son, 1895



“Crisis Mode” Thinking

- ✓ Negative
- ✓ Reactive
- ✓ Looking inward
- ✓ Obsessing about what is happening/ has happened
- ✓ Believing the “inner voice”



Emergency Management Mindset

- ✓ Positive
- ✓ Proactive
- ✓ Expansive situational awareness
- ✓ Ignoring “inner voice”
- ✓ Thinking 3 steps ahead



*“My job is to tell you things
you don’t want to hear,
asking you to spend money
you don’t have for something
you don’t believe will ever
happen”*

— Michael D. Selves
Director of Homeland Security and
Emergency Management, Johnson
County, Kansas





Think different.





what is our value proposition?



Spotlight on Covid-19 first wave...

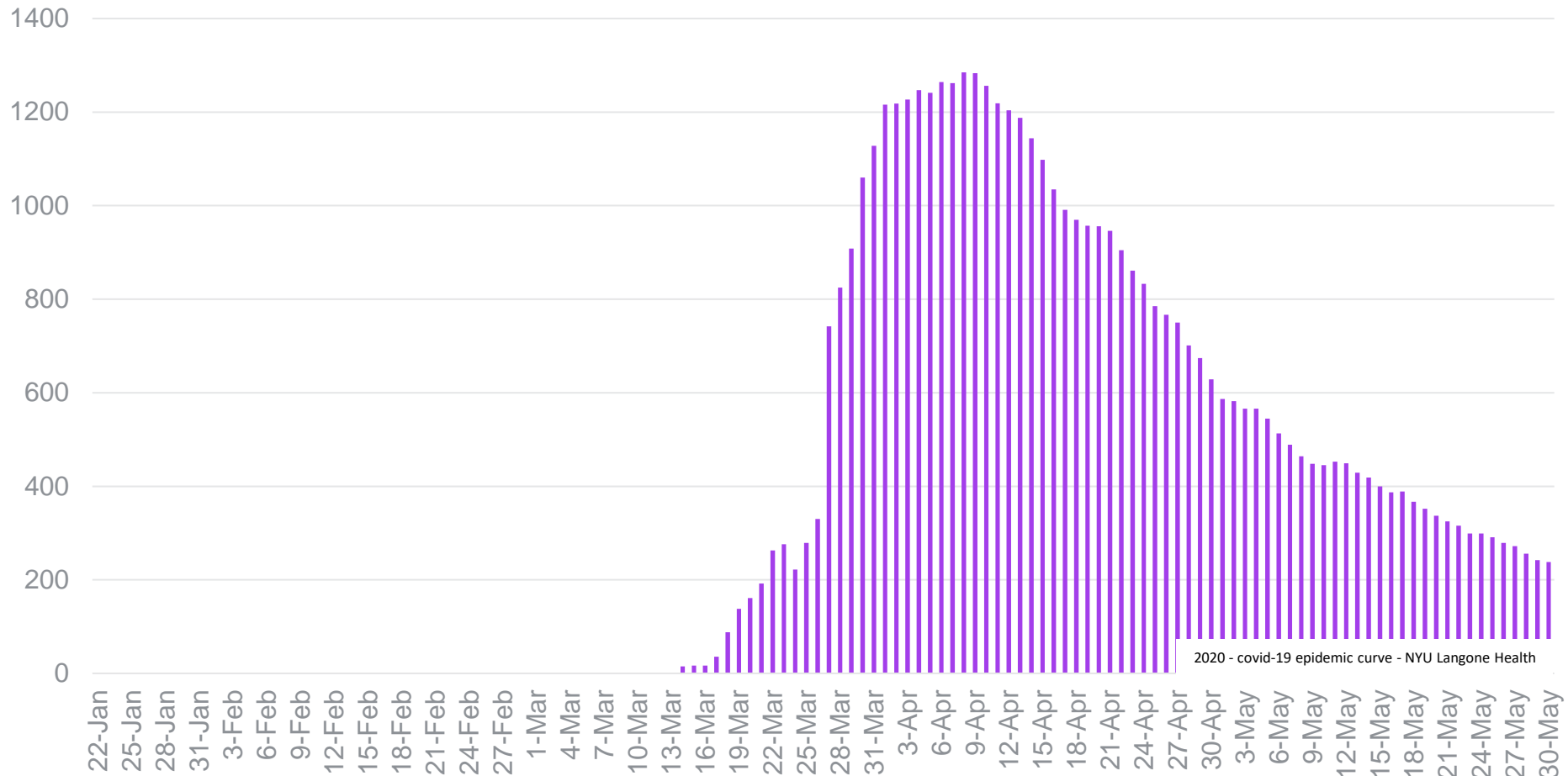


We endured a 42 day climb to the top of the mountain



In this case, the mountain was a surge of infectious patients

Hospitalized Patients System-Wide (COVID+/PUI)



A myriad of factors enabled a successful response

Success Factors in the Enterprise Response to COVID-19

Adaptability and Resiliency

The Institution demonstrated adaptability and resiliency in responding to a rapidly changing environment, including:

- Repurposing Emergency Department space and inpatient beds across the Institution to address a rapid surge in COVID patients
- Redeploying thousands of staff to provide patient care, enable new support teams, and provide support to frontline staff
- Updating policies and processes in response to constantly evolving information and needs related to COVID-19
- Responding to a surge in demand for critical care supplies and Personal Protective Equipment (PPE) coupled with supply shortages in the market
- Moving employees to remote work with little notice or preparation

Collaboration

To solve for critical issues related to the crisis, cross-functional Task Forces, Work Groups and meetings were set up across the Institution, enabling swift and informed decision-making; some examples include:

- Twice daily ELG meetings, with representation from the Hospital, School of Medicine and Corporate areas
- A Surge Space Task Force comprised of EM+ER, IPC, Hospital Operations, RED+F, Nursing, Medicine and P3 to identify inpatient surge space options
- Collaboration between Clinical Engineering, Facilities, Supply Chain, MCIT, and others to enable swift conversion of units to negative pressure
- Collaborations between EH&S, IPC and Supply Chain to evaluate PPE prior to purchase and ensure appropriate and compliant protection

Use of Technology

Technology was utilized to track key metrics related to the pandemic throughout the Institution, allow in-house patients to stay connected, provide access to ambulatory care remotely and educate medical students; examples include:

- Development of a COVID dashboard, allowing the Institution to track key metrics of the crisis in real time and make informed decisions
- Use of MyChart Bedside Mobile, allowing patients to stay connected to their families with timely communication and clinical information updates
- Swift ramp-up of telehealth services, creating availability of Virtual Urgent Care 24/7 and virtual visits with FGP providers
- Shifting of the medical school curriculum to 100% remote delivery

Innovation

The Institution displayed creativity in developing innovative approaches for delivering care, improving patient and family experiences and researching the virus, including:

- Development of a manual four-step technique for proning patients early in the pandemic and establishing an ICU prone team available 24/7
- Development of a novel percutaneous tracheostomy dilational technique (PDT) to mitigate the risk of aerosolization and improve patient outcomes
- Establishment of the Patient and Family Resource Center to communicate with patient families while visitor restrictions were in place
- Launch of 193 clinical studies and 133 translation projects related to COVID-19, including Vaccine Center collaborations with Lilly and Pfizer



Including an ability to remake our hospitals in real time

Overview of Hospital Reconfiguration Timelines

Hospital reconfiguration timelines demonstrated the hospitals' ability to convert units on a daily basis to accommodate COVID patients in ED, acute, and ICU settings.

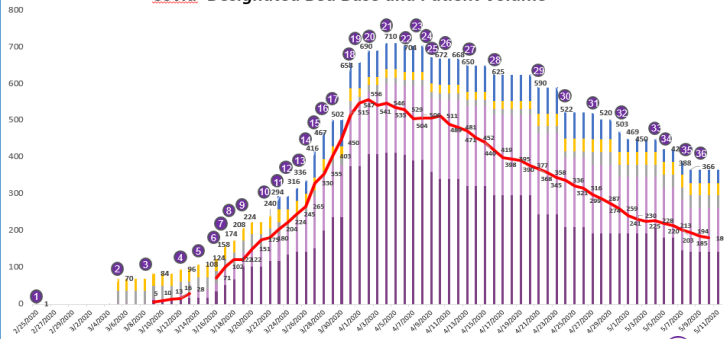
Excerpt from Manhattan's Submission (full timeline in Appendix B)

- 1 2.25.20, Blocked 1 acuity flexible bed on 15W
- 2 3.5.20, Blocked 2nd acuity flexible bed on 15W
- 3 3.9.20, Converted 12 beds to Acute COVID on KP12. 2 beds on 15W became ICU only, in addition to 2 ICU beds on 15E. Converted space in ED to Respiratory Cohort Area.
- 4 3.12.20, Made all of KP12S COVID Acute. Added 6 beds on KP15 for COVID ICU
- 5 3.15.20, Made all of KP15S COVID ICU. Made all of KP12 COVID Acute
- 6 3.17.20, Converted KP 11N to COVID Acute and KP 15N to COVID ICU
- 7 3.18.20, Converted KP 11S to COVID Acute
- 8 3.19.20, Converted KP 10 to COVID Acute
- 9 3.20.20, Converted KP 16N to COVID ICU
- 10 3.22.20, Converted KP 17N to COVID Acute

Excerpt from Brooklyn's Submission (full timeline in Appendix B)

Go Live Date	Identified Space	New Use	Staffing	End/ Return Date
3/27/20	PACU 2	Convert 10 bed PACU unit into ICU level isolation unit for COVID patients (6 beds) • RED+F: convert space into negative pressure, establish PPE donning and doffing area • Pharmacy: provide additional medications to omnicells • Supply Chain: add additional ICU supplies to par	Providers: 1 Attending and 4 APPs • Covered PACU 2, PACU 3, and 4300 Nursing: 2 RNs per shift SNA/RN Extenders: 1 SNA/RN Extenders per shift	4/27/20
3/30/20	LB 3667	Convert outpatient neurology testing suite into an Employee Screening Center (2 testing rooms) Note: Used for patient testing starting 4/20 • RED+F: convert space into negative pressure area • MCIT: map 2 zebra label printers for lab labels	Nursing (staffed by FHC): • 2 RNs per Shift • 2 PSAs per shift Hours: • 3/30 – 4/17: 9am – 5pm, M-F • 4/17 – present: 7am – 6pm, M-F	ongoing
3/27/20	LB 5700	Convert observation beds to medicine in-patient beds (12 beds) • Merged staffing with 5600 medical/telemetry unit for a total of 30 beds	Providers: 2 Attendings and 3 APPs Nursing: 2-3 RNs per shift SNA: 1 SNA per shift	ongoing

Covid-Designated Bed Base and Patient Volume



Excerpt from NYU Winthrop's Submission (full timeline in Appendix B)

Conversion Start Date*	Identified Space	New Use	End/ Return Date
3/7/20	GP2 (2115)	Used one isolation room for ED triage overflow for PUIs	3/10/20
3/10/20	GP2	Converted to negative pressure and utilized as COVID Acute Unit (28 Beds)	5/4/20
3/11/20	MB4A	Converted to negative pressure and utilized as a triage area for PUIs (7 beds)	3/21/20
3/12/20	MICU	Converted to negative pressure and utilized as COVID ICU Unit (20 Beds)	Ongoing
3/12/20	GP4	Converted to negative pressure and utilized as COVID Acute Unit (32 Beds)	Ongoing



And the ability to get right person in right place at right time

Staffing Levels and Redeployments

At their peaks, each campus had the following staffing levels for Physicians and Allied Health Professionals:

Tisch/ Kimmel

- 120 ICU Attendings, APPs, Residents and Supplemental
- 727 ICU RNs
- 151 Acute Attendings, Acute APPs, Acute Residents, and Acute Supplemental
- 644 Acute RNs
- 154 Respiratory Therapists

LOH

- 14 Attendings and APPs

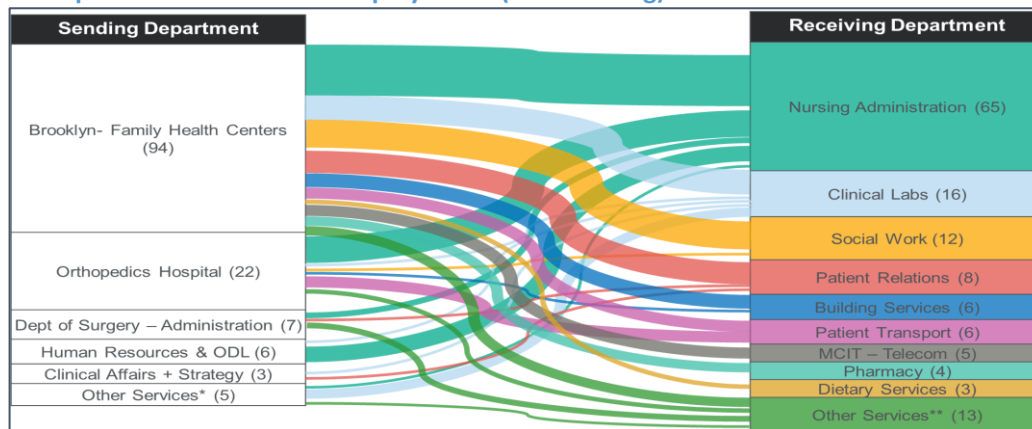
NYU Langone Brooklyn

- 51 ICU Attendings, ICU Fellows, and Residents
- 154 ICU RNs
- 77 Acute Attendings, APPs, Residents and Supplemental
- 214 Acute RNs
- 59 Respiratory Therapists

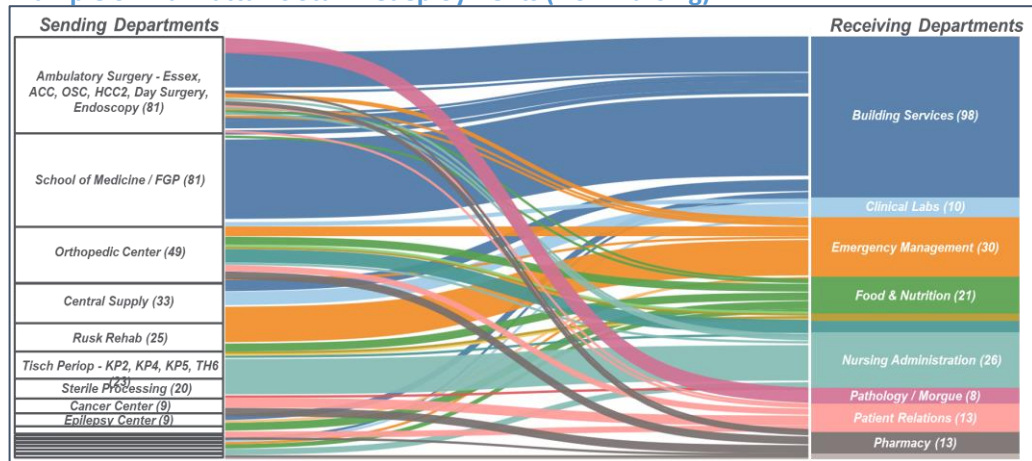
Winthrop

- 55 Hospitalists and Nocturnalists
- 22 Intensivists
- 35 Physician Assistants (Acute and ICU)
- 100 Respiratory Therapists

Example of NYULB's Staff Redeployments (Non-Nursing)



Example of Manhattan's Staff Redeployments (Non-Nursing)



Our success meant the execution of our core process

5-Step Incident Management Process

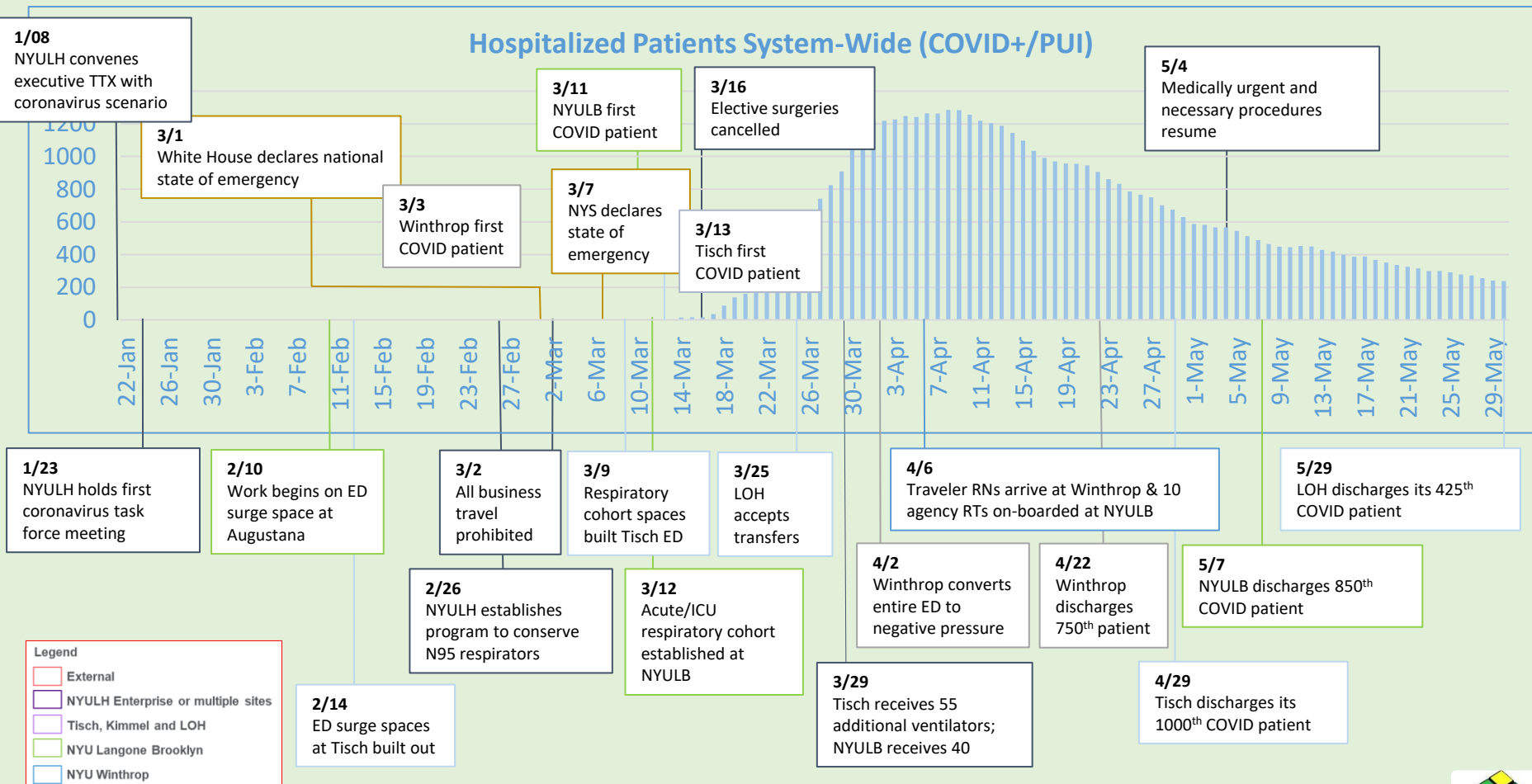
① Watch	<i>Monitor emergency radios, alert systems and breaking news 24/7</i>
② Size-Up	<i>Investigate threat to understand potential impacts and timing¹</i>
③ Notify	<i>Transmit initial Incident Notification to First Call Roster or All Staff²</i>
④ Activate	<i>Convene remote or in-person Ops Brief</i>
⑤ Operate	<i>Commence emergency operations</i>



And our Emergency Management mindset

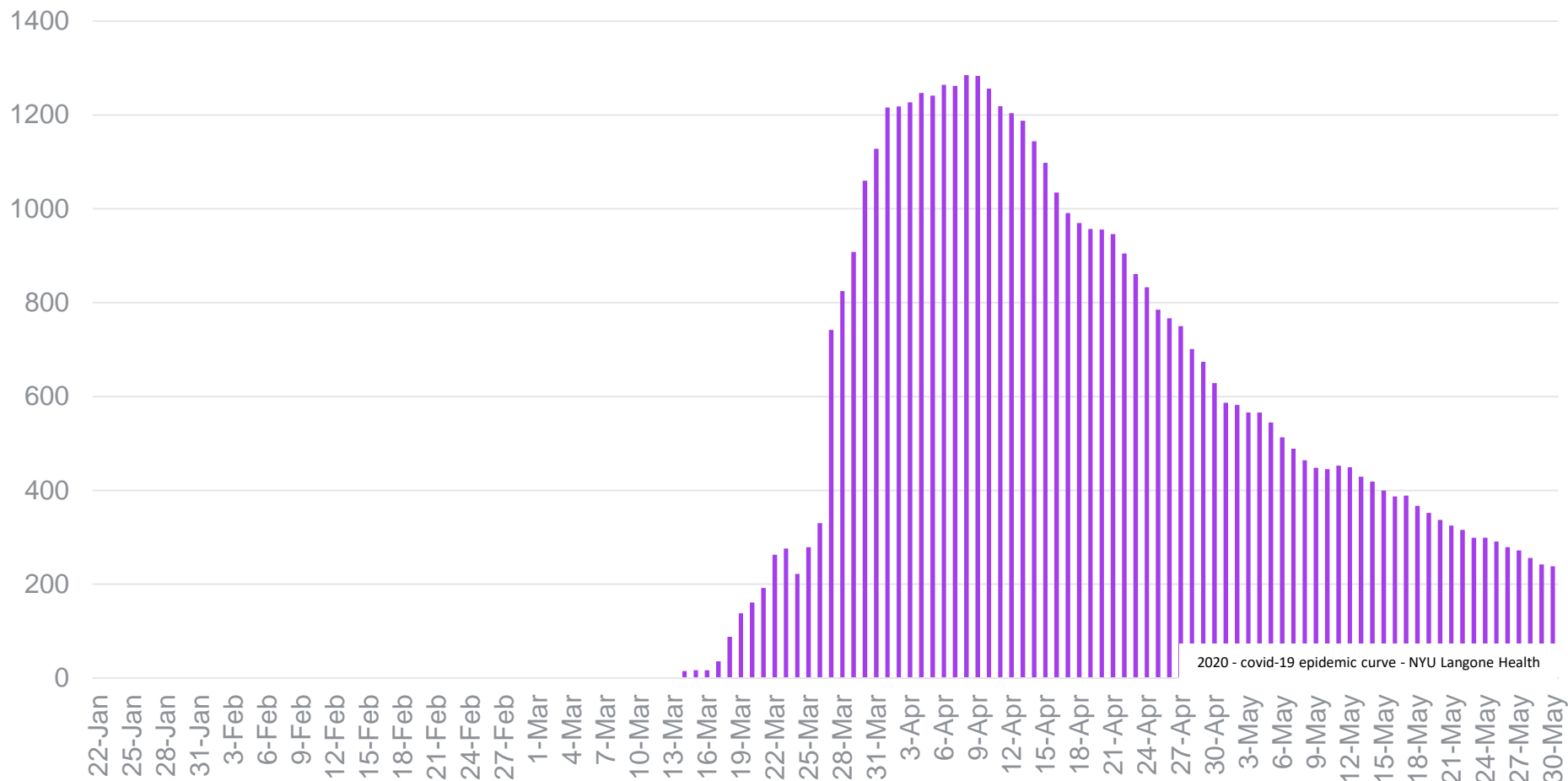
Incident Timeline

All three campuses began preparing for COVID-19 in January 2020, starting with planning meetings and development of protocols and action plans, and moving quickly to implementation of policies, reassignment of staff, expansion of testing services, and conversion of spaces.



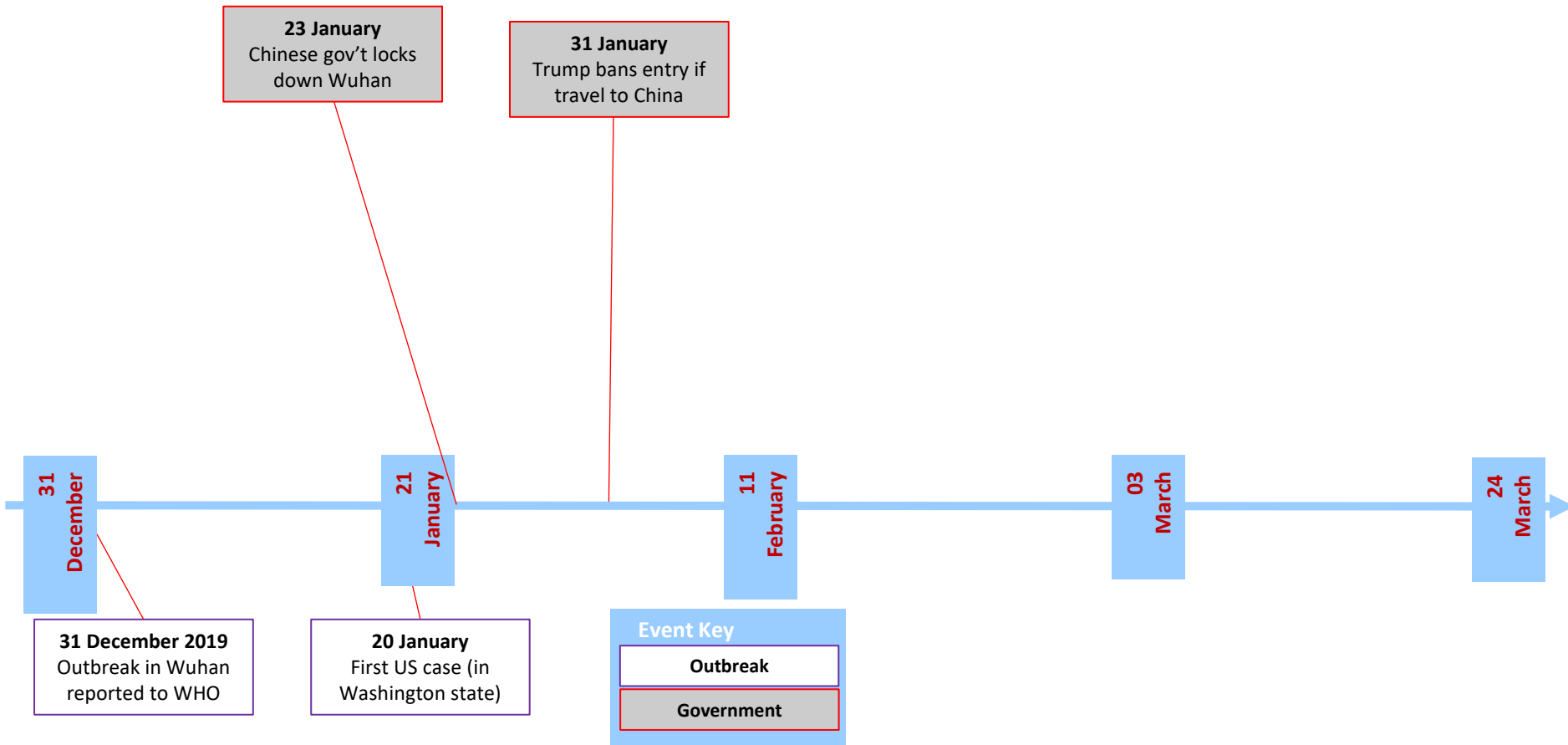
That applied a reasonable worst-case expectation

Hospitalized Patients System-Wide (COVID+/PUI)



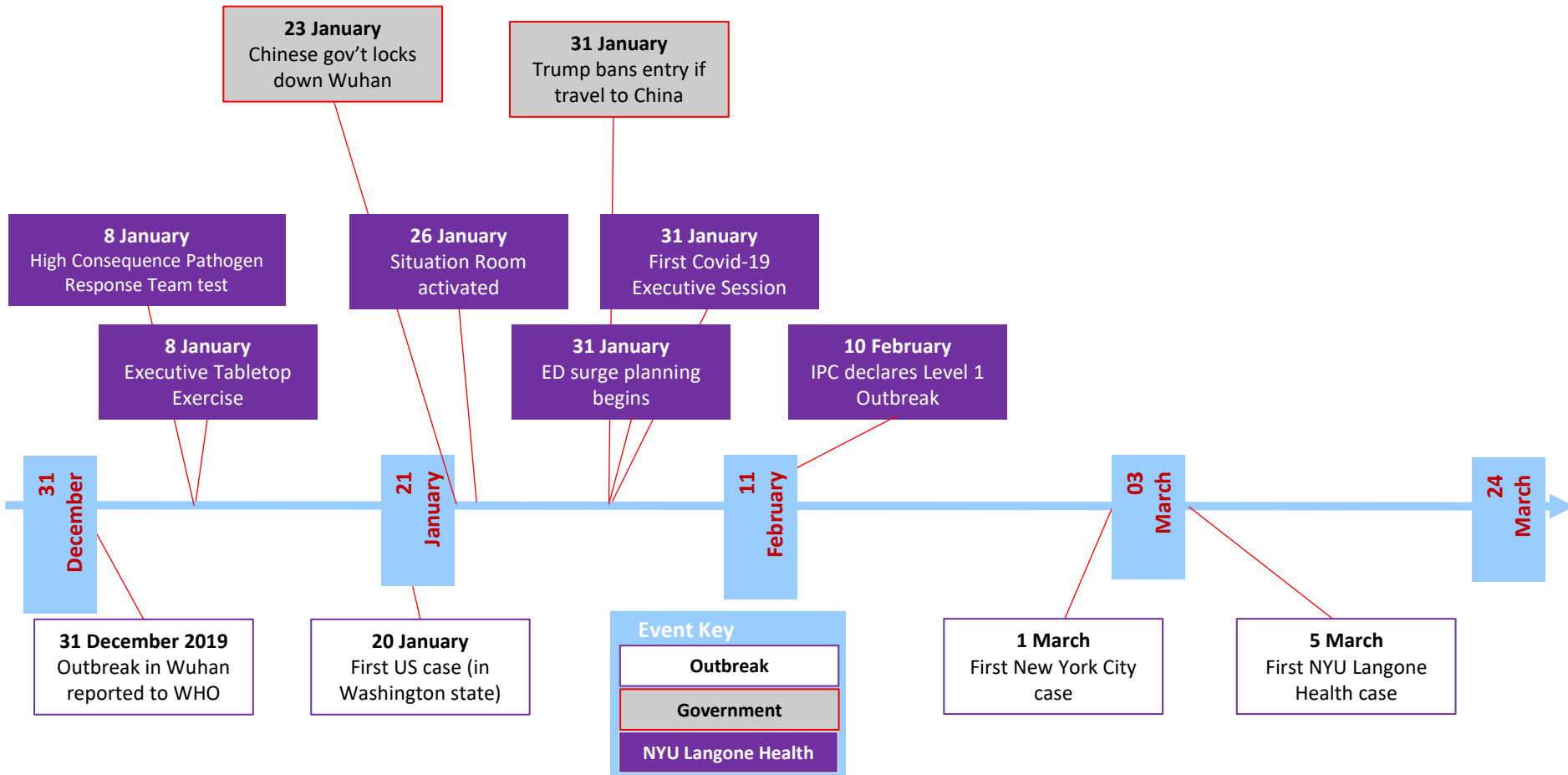
We properly assessed the risk

Key Events Timeline



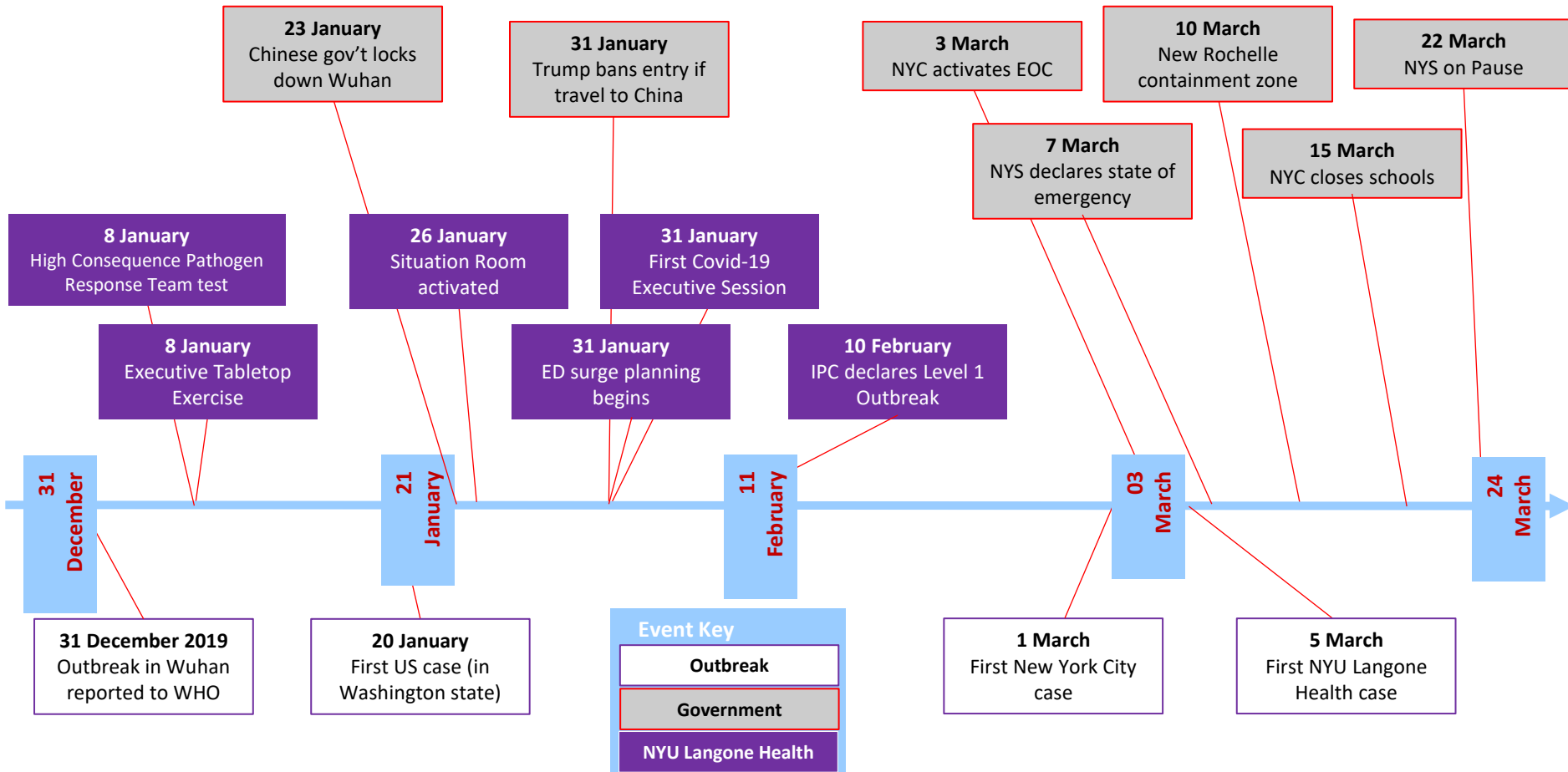
And used the time we were given

Key Events Timeline



To prepare for it

Key Events Timeline



We put ourselves in the job

Executive Tabletop

January 8, 2020



To activate an enterprise response

Executive Tabletop

January 8, 2020

“First and foremost, we have to halt the spread of this disease inside our hospitals

Second, and no less important, we have to protect our staff, faculty, students, patients, families and visitors

Third, we have to tell everybody inside the organization what is going on, what it means to them, what they should be doing right now

Fourth, we have to have a clear story that we are telling externally about why it is safe to come here and to be here

Fifth, we have to make adjustments to our hospital operations to account for this new normal

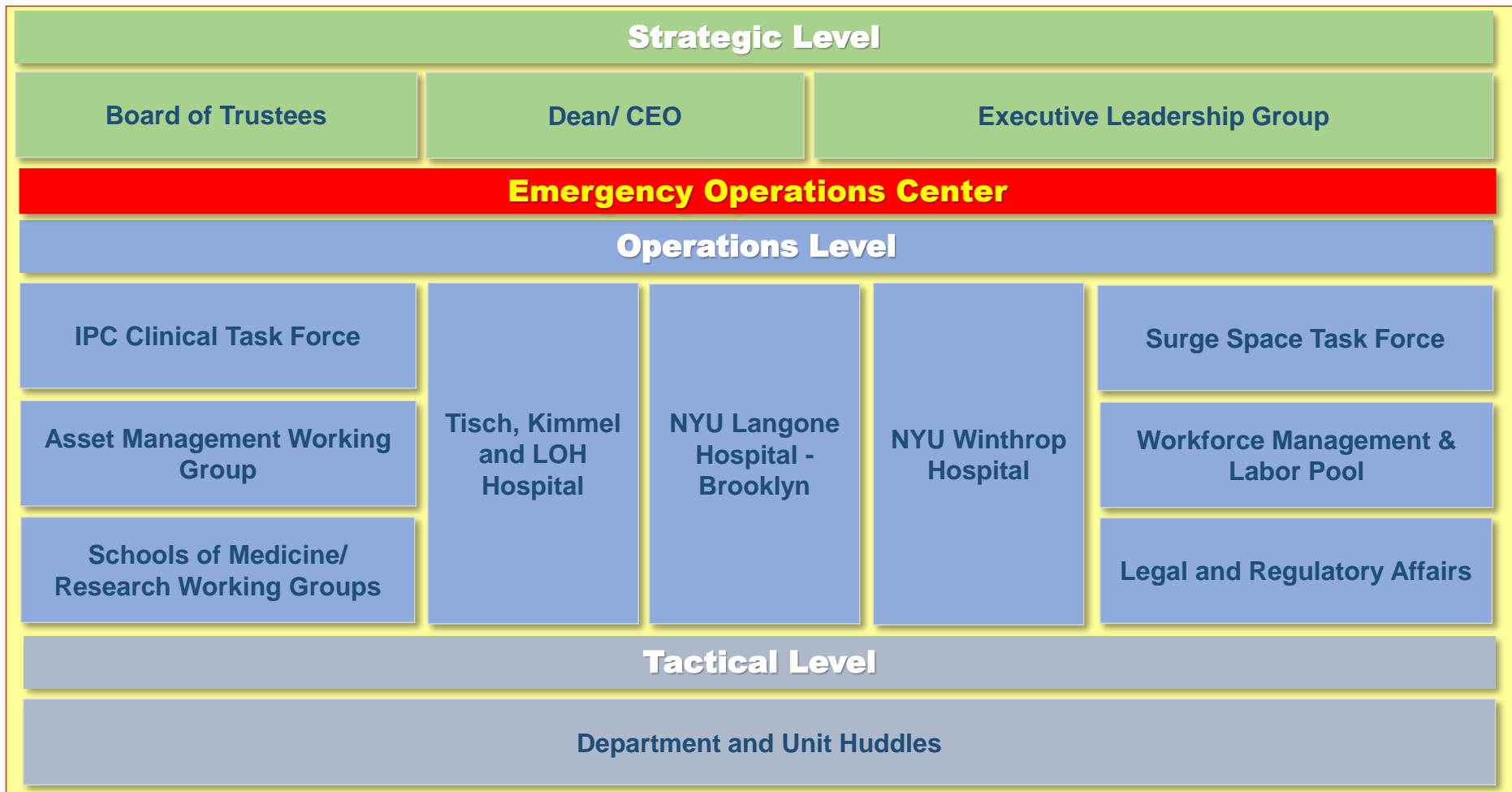
Sixth, we need to prepare all of our hospitals, Article 28s and doctors offices for a surge in patients from the wider outbreak



Coordination enabled nimbleness as the threat evolved

Enterprise Coordination

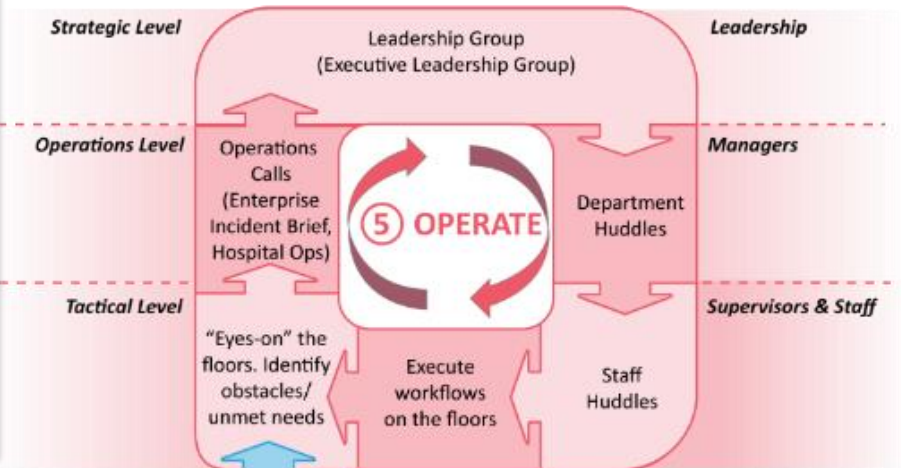
Agile, data-informed, decision-making and response across the enterprise were enabled by integrated leadership communication and planning



With an expedited tempo to surface challenges for resolution

Enterprise Coordination

Agile, data-informed, decision-making and response across the enterprise were enabled by integrated leadership communication and planning

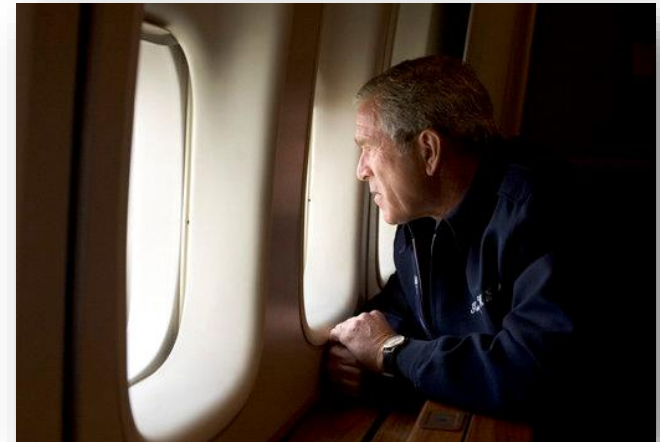


katrina story



Who owned the job?

- a) The local government, led by Ray Nagin Jr., Mayor of New Orleans, Louisiana
- b) The state government, led by Kathleen Blanco, Governor of Louisiana
- c) The federal government, led by George W Bush, President of the United States
- d) None of the above
- e) All of the above





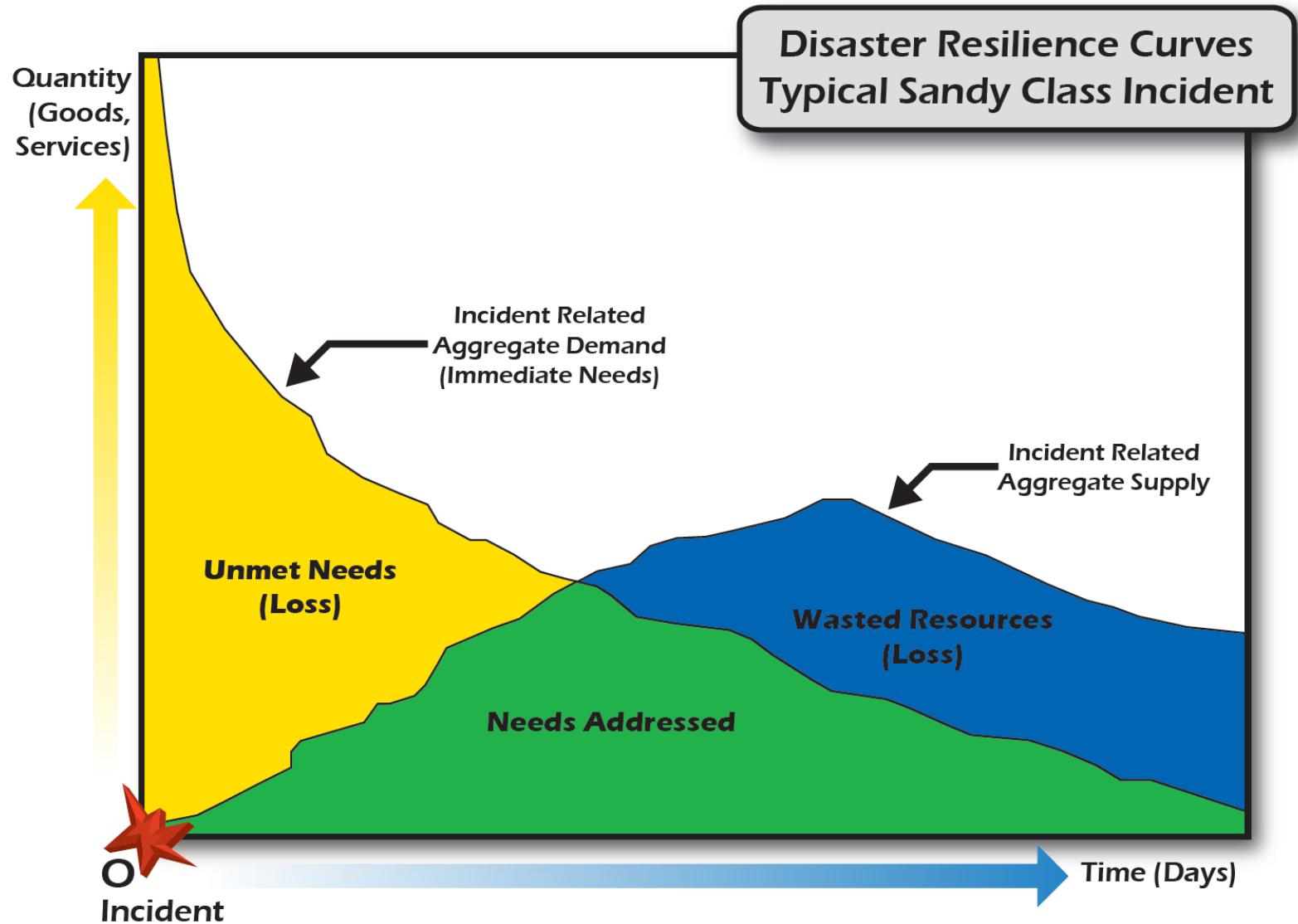
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- d) None of the above
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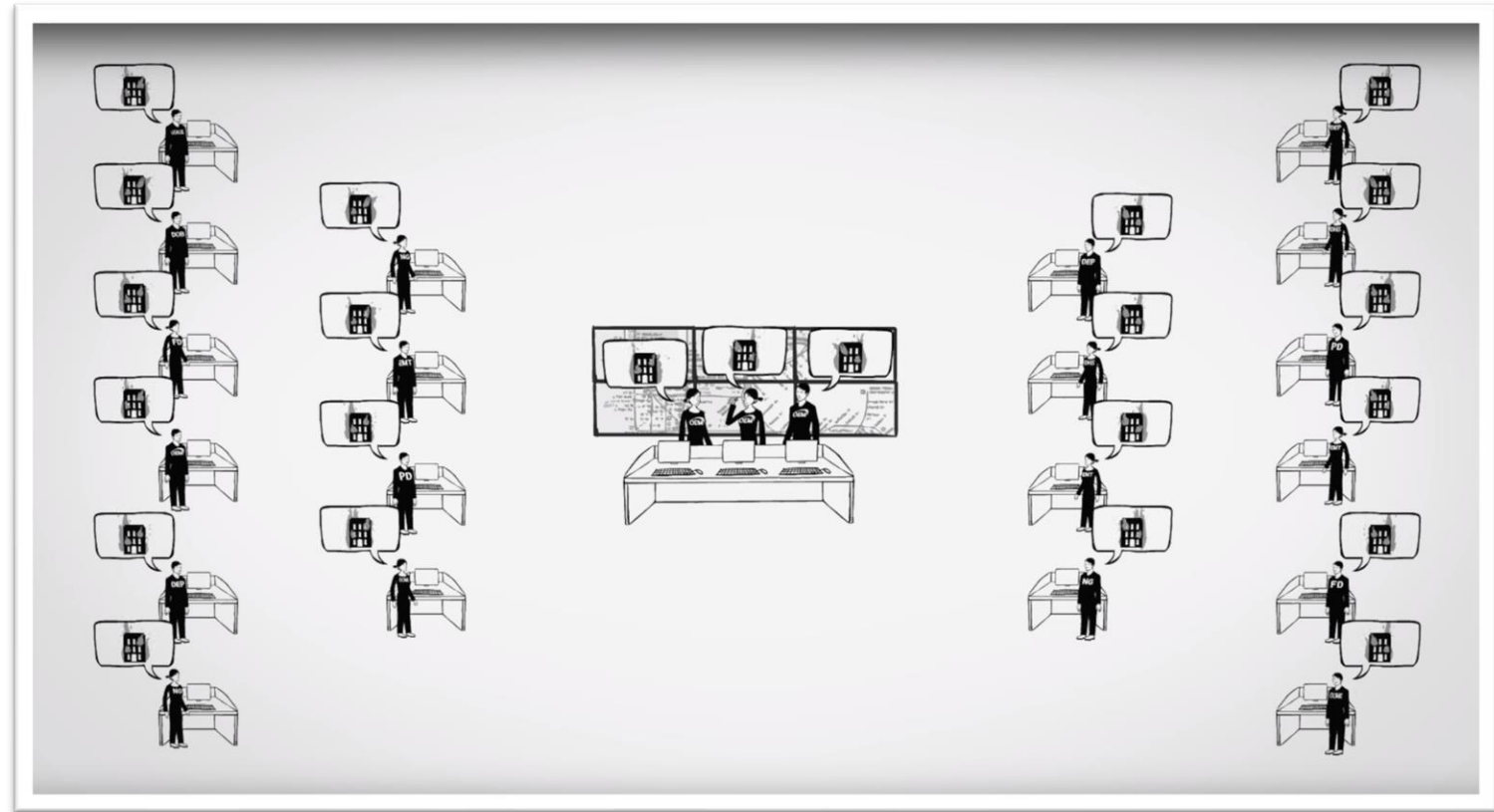
we can't get big enough fast enough



HOW?













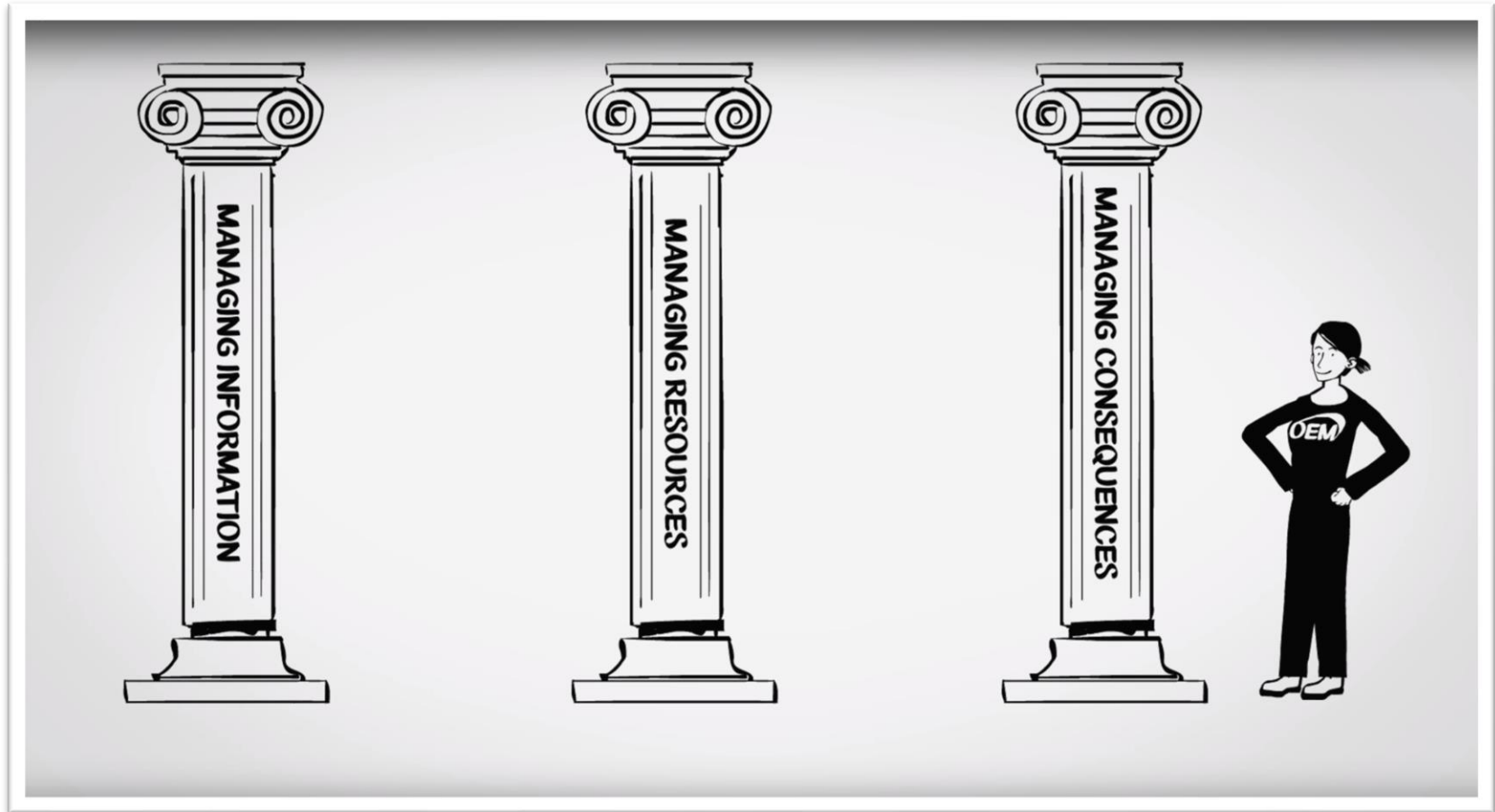
co·or·di·na·tion

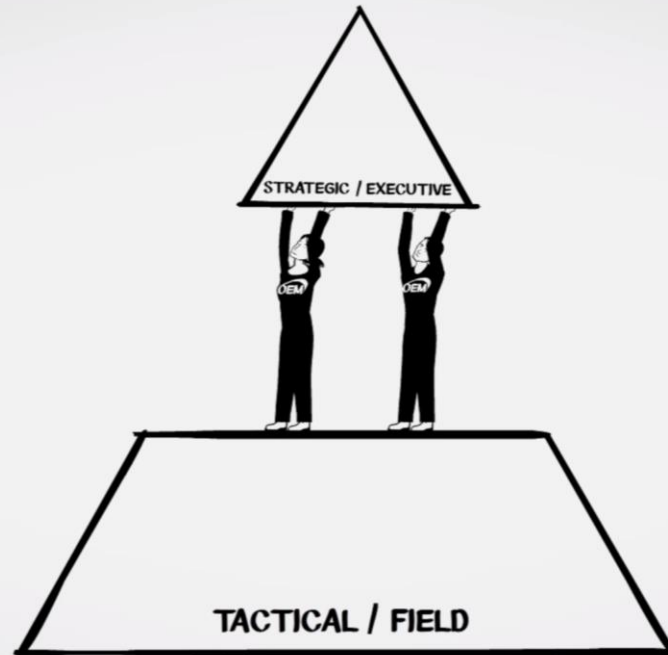
/kō,ôrdn'āSH(ə)n/

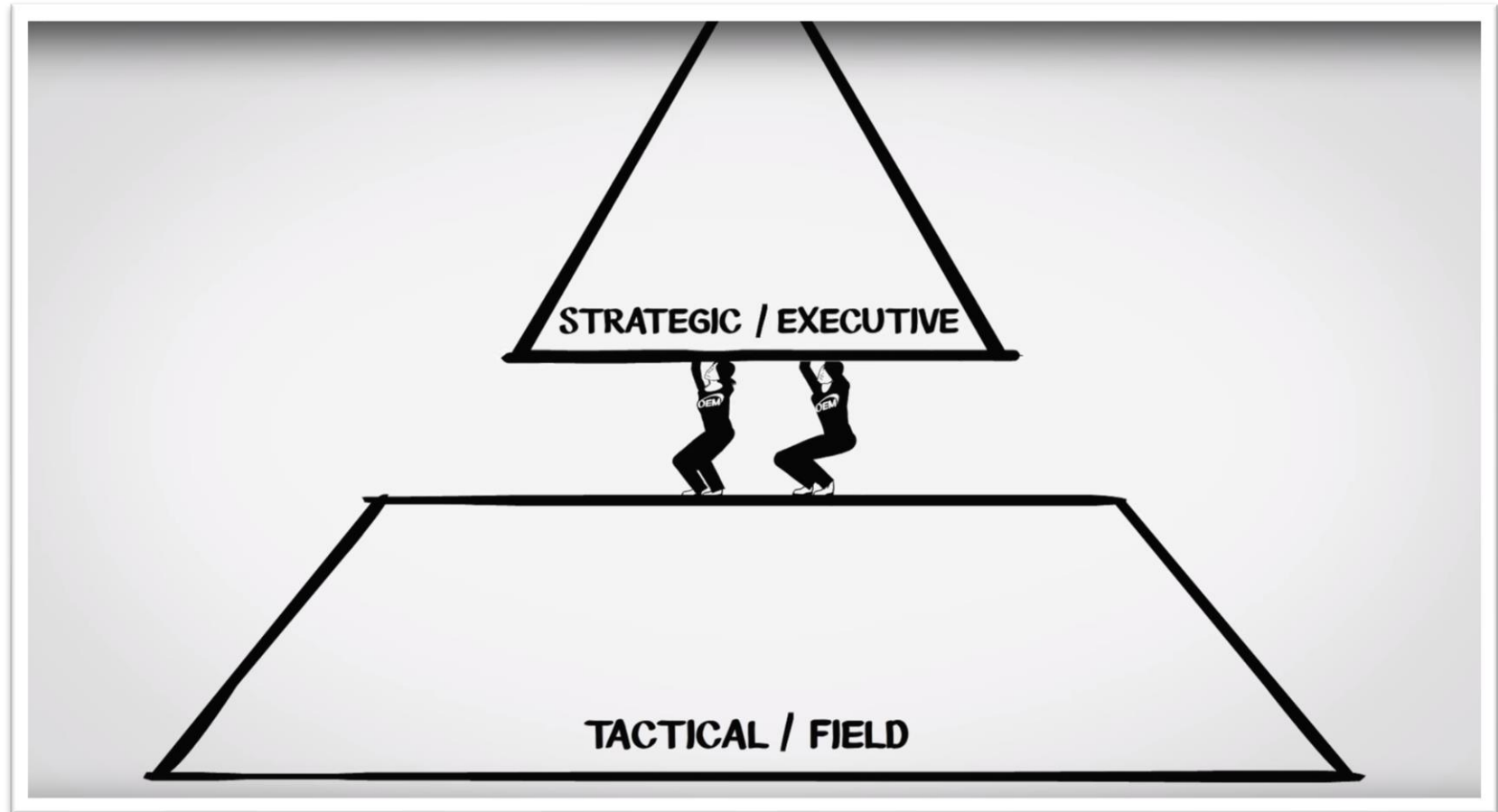
noun

1. the organization of the different elements of a complex body or activity so as to enable them to work together effectively.

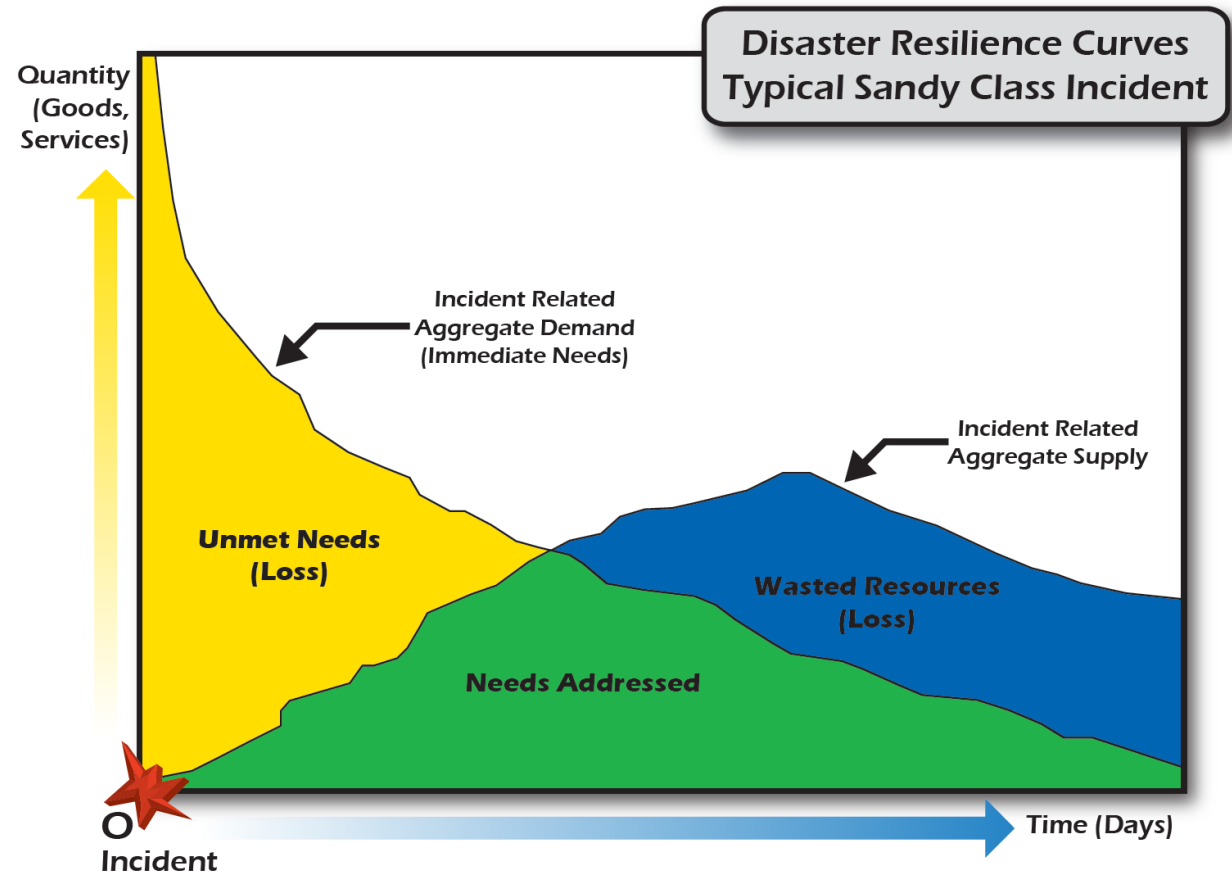








what surging is not





LIVE BREAKING NEWS

“The old emergency management tends to be disaster driven...”

...its focus is response and recovery, with a narrow focus on technical capabilities”



Source: GAR 2019

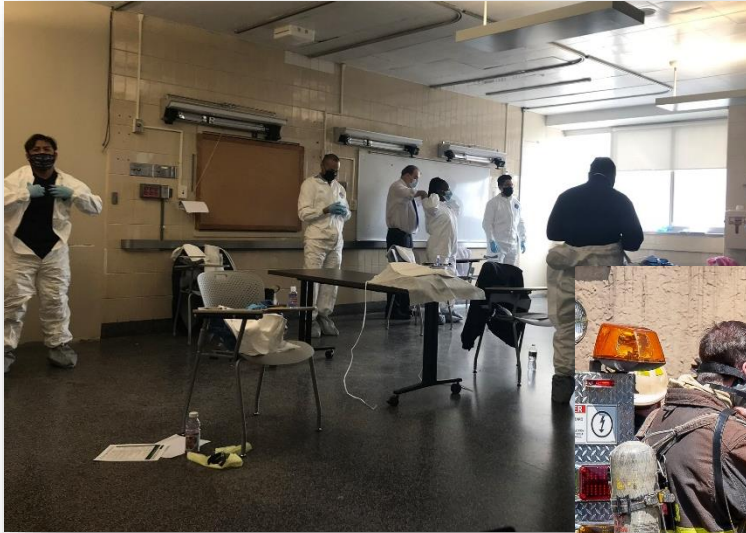


“There's no such thing as a
'natural' disaster...”

*...the new emergency
management is driven by hazard
mitigation*

*And is part of a holistic system
connected to the broader
concerns of community
planning”*





The Dark Shadow of COVID: Mental Health Impact Persists





EMPLOYEE EXPERIENCE

The other COVID-19 crisis: Mental health



Qualtrics // April 14, 2020 // 20min read

42% of people have experienced a decline in mental health. Specifically, 67% of people are experiencing increases in stress while 57% have increased anxiety, and 54% are emotionally exhausted. 53% of people are sad, 50% are irritable, 28% are having trouble concentrating...

Level of stress since the coronavirus outbreak

66.9%



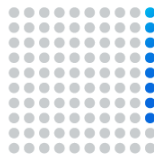
report **higher** stress levels since the outbreak

24.8%



report **somewhat equal** stress levels

8.2%



report **lower** stress levels since the outbreak

Source: Qualtrics, SAP, and Mind Share Partners, 14 April 2020, accessed at <https://www.qualtrics.com/blog/confronting-mental-health/>

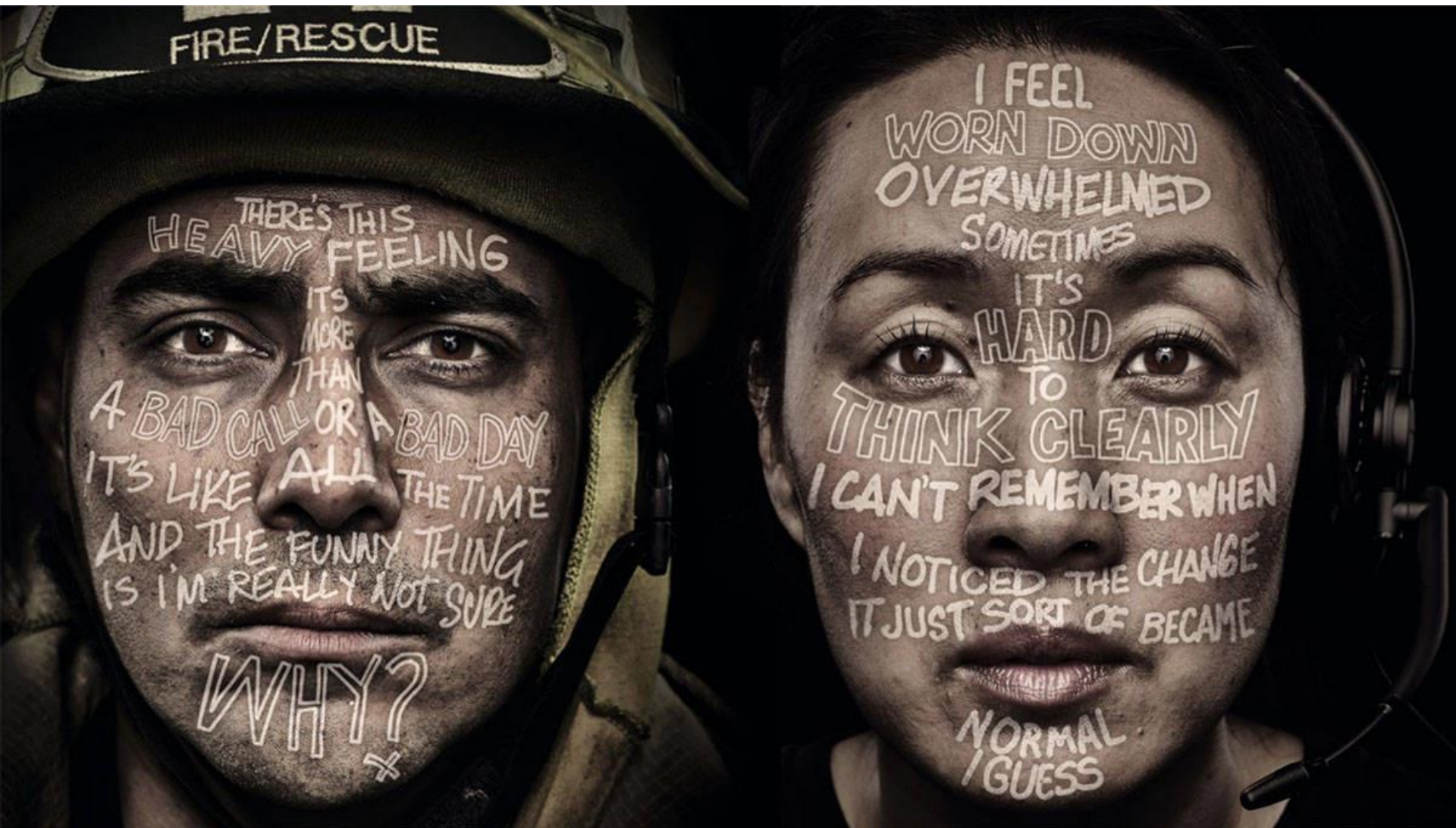
As the Covid-19 crisis ebbs in the U.S., experts brace for some to experience psychological fallout



By Andrew Joseph May 7, 2021

Reprints





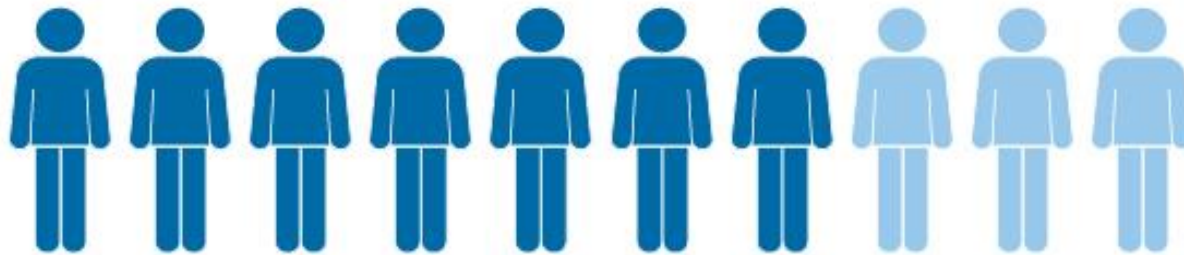
First responders are at higher risk for mental health conditions

First responders are
5x more likely
to experience depression and PTSD

Source: The Ruderman White Paper on Mental Health and Suicide of First Responders, April 2018.



First responders can be reluctant to seek help



7 in 10 say mental health services are seldom or never utilized.

Source: "University of Phoenix Survey Finds Majority of First Responders Have Experienced Symptoms Related to Mental Health Issues," University of Phoenix press release, April 20, 2017.



Nurses

27%

have been diagnosed
with depression

47%

cited incidents at
work that caused their
depression

10%

have been diagnosed
with PTSD



75%

of those diagnosed
with PTSD have received
treatment





Our Purpose

Protecting those who protect us

ESF is a not for profit organisation which brings together Victoria's emergency management agencies to protect the mental health and wellbeing of those who protect us.

[ABOUT ESF >](#)





Police Treatment Centres

- Drip...drip effect
- Catastrophic “one-offs”
- “Curse of the strong”
- Blurring of family, personal and work stress
- Cannot empty the “stress bucket”





Psychological Wellbeing Programme

Example Programme [Week 1]



		Wednesday	Thursday	Friday
Meeting	Workshop	Sleep Workshop	Mindfulness	Aromatherapy Class
Gym Induction	Pilates	Walk/Run		Swim
Comp Therapy	Acupuncture	Comp Therapy	Acupuncture	Comp Therapy
Relaxation	Relaxation	Relaxation	Relaxation	
Tai Chi	Yoga	Tai Chi	Yoga	





conclusion





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