Report from Northwell-Long Island Jewish Medical Center, Update of April 3, 2020

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We are wrapping up week 4 since we encountered our first case. It has been an unnerving experience and it is going to get much more challenging going forward. North Shore and our sister hospital, Long Island Jewish (LIJ), are the flagships of Northwell Health, Inc., a healthcare behemoth consisting of 23 hospitals in Metro New York. We are in Nassau County, just outside Queens (LIJ is just inside Queens), a borough that has been and continues to be the global hot spot at this moment.

Two weeks ago, we had nearly 300 empty beds (out of 800+) preparing for the surge. All patients that could have possibly been discharged were discharged, all elective procedures canceled. We are now at capacity and filling into our back-up areas. We have around 600 COVID-19 cases, about 1 in 5 of them are in ICUs, and we are admitting at full force. Our non-COVID areas have dwindled down to four and a half units and we have now started expanding into auxiliary space - our auditorium, our library, our conference rooms... We are not without resources, so we deployed a mobile hospital we acquired a while ago and may be looking to expand it. We started sending patients to our on-campus Rehab/Nursing home building and, if the need be, will use our Research Institute next. Engineering teams are doing a marvelous job of re-purposing non-medical areas and fitting them for patient care. We are running low on ventilators. Our Director of Critical Care hacked BiPAP machines to work as ventilators, our Research Institute is 3D printing the parts for the hack. System-wide, the number of COVID patients Northwell hospitals care for is about 3000. The peak demand is expected in about a week, perhaps sooner, the crest will likely last for two weeks or thereabouts.

Men tend to be admitted more than women (about 57 to 43 percent ratio); M to F ratio in the ICUs is about 2:1, so male gender appears to be a risk factor for complicated course. Our mortality rate is comparable to similar centers in similar situations. We are developing guidelines and algorithms for better care which include earlier, more aggressive ventilation (patients tend to crash suddenly, with little warning signs). Renal failure appears to be a bad prognostic sign. We are developing a stochastic AI model for outcome prediction at the time of admission, which will play into the life-saving treatment guidelines used by our system, which are drafted to comply with NYS DOH directives. I started seeing a lot of patients on hydroxychloroquine, but do not know if that is the standard treatment for every patient.

Consults have gone down and are still down, for now. Use the time at the very outset to prepare. We have been fortunate to maintain our 'regular coverage' schedule (ours a weird one, to begin with), but have several back-up plans on how to reorganize if we have to. Our sister-team at LIJ has been hit hard, with two members out with COVID (thankfully, mild symptoms), but they manage somehow. I will leave it to indomitable Sam Greenstein to provide an update on their end, once he surfaces for some air. Our residents are being redeployed to join Medicine team, now they are asking for volunteers among Psychiatry attendings. Students (from Hofstra Medical School) have been sent homes weeks ago, with all educational activities shelved. They are petitioning to come back, though, as volunteers; not sure if that will be allowed. We are getting our first COVID-recovered team member in the coming days. Try to make plans for such situations as well.

Consults are mostly for managing agitation in delirium, very few consults for delirium itself. I would suspect a significant number of delirium cases based on the sheer volume seen on regular hospital and

IC units and then some, based on the implicated IL-6 involvement in the distress response in critical patients (which, we know, is also involved in the delirium cascade). I ascribe this to the use of Precedex and overall isolation of the patients. Isolation will be an overarching theme. Breaking the isolation will be your mission impossible, should you choose to accept it. The next considerable group of consults we see are otherwise relatively stable COVID patients who are frantic about the possibility of an imminent demise. Haldol works fairly well for delirium and agitation; we are still in search of a go-to agent for anxiety and apprehension, we are looking at several 5-HT2 antagonists, rather than the benzo route. All suggestions in this regard are welcome.

We see and hear everything in between, just with the COVID twist - an autistic patient, a patient in alcohol withdrawal, a suicidal patient, a couple of heart transplant cases. We see COVID+ patients remotely, also extended the same caution to our immunocompromised patients; no need to risk exposing them. I can see by your questions and concerns approximately where you may be on the curve of this tsunami. Go ahead, draft your protocols. Finalize them. Print them. Shred them. Everything you know about your work goes out the window and you have to get creative with every new case. Use whatever you can - videolinks, tablets, smartphones, built-in AV equipment, patients' hospital room phones, faxes, Morse code... whatever works for a particular case at that time is the best modality. We have collected money amongst ourselves a bought a tablet to hand out to patients when there is nothing else. It was the last one in the store. We have a proprietary system in the ED with telecarts. It works well there, because the ED has been using it for years for the overnight coverage. It does not work on the floors. So, we use doxy.me, FaceTime (and I don't even have an iPhone), and whatever else will work in that moment. Still, no matter how sophisticated system you may have (or lack), you will always be limited by two variables:

1. Patients attitude and aptitude - patients have to be willing and able to use any technology to engage with you.
2. Last yard carrier - who gets the piece of equipment into the patient's room (or who activates it, or who notifies the patient you are about to engage with them) and then retrieves it back or turns it off.

Different units develop different attitudes among staff within hours of being designated as COVID unit. Some are friendly and cooperative, some… whatever is at the other end. I dread the dejection on the faces of my colleagues and in the tone of their voices when I tell them I am not entering the patient's room. We are colleagues. We are equal. We get to stay behind, they get to enter that room. Great setup for liaison work. Our hospital limited clinician encounter with COVID patients to one per day. No more resident rounding, then the attending rounding with the team, then the consultants... One. That's it. The best approach is therefore to ask when will someone from the team be entering patient's room and then ask them to help establish that link. Some will help with patients' phones, some will volunteer their own phone, some will accept to hand over your piece of equipment to the patient. Use whatever they feel comfortable with; be appreciative of their favors and grateful for their work. Be prepared to wait. The clock ticks. Frustration abounds. Try to work with other consultants and hospital leadership to see how communication issue can be addressed. Administration may develop different solutions for different units. All rooms in one of our units were outfitted with Amazon Echos. Go figure. "Alexa, tell the patient to stay positive... Just kidding, Alexa, just kidding."

We started doing Balint groups for our colleagues. They are just called Balint groups. Whatever. In an ordinary Balint group, when a clinician presents a case, it is to understand and enhance their relationship with that patient for the future benefit. In our 'Balint group', the patient invariably dies. It is very awkward to do such groups with your colleagues through a screen. It is uncomfortable. Surreal.

Virtual silence is not a therapeutic tool. But we grind through it somehow. We did some work with the ED (preoccupied with their workflow), social workers (preoccupied with how to cheer up teams on their units), hospitalists (preoccupied with patients suddenly dying). They say it helps. I am not so sure. But it sure does help me. It's a new routine, but a routine that keeps me sane.

I cringe when I hear an overhead pager: "Anesthesia, stat..." Ten, dozen times a day. It will likely remain a trigger for the rest of my life. We all cringe. To do something about it, we are going to ring a chime every time a recovered COVID patient is being discharged from the hospital.

I can't wait to start getting annoyed by that ring in the coming days. We discharge a lot, you know.

If there is an opportunity, will try to give an update in a few weeks.

Stay positive, y'all! :)

Seriously, try to take care of yourselves, your families, your teams, your colleagues. Let them take care of you.

Have confidence in your skills, instincts, knowledge. You've got this.

Best,

Damir