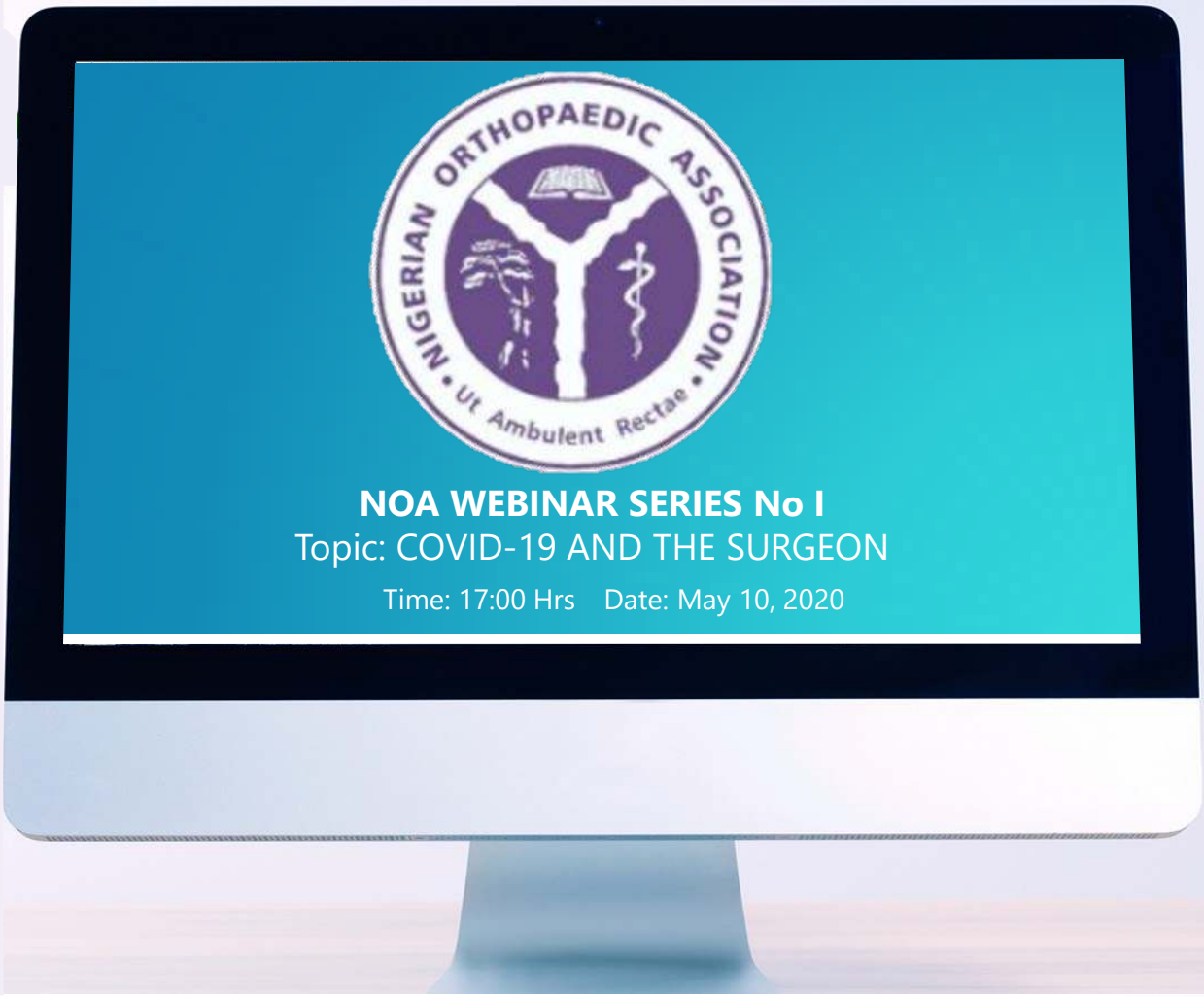
NIGERIAN ORTHOPAEDIC ASSOCIATION
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NOA WEBINAR SERIES No I
Topic: COVID-19 AND THE SURGEON
Time: 17:00 Hrs Date: May 10, 2020

COVID-19 AND THE SURGEON

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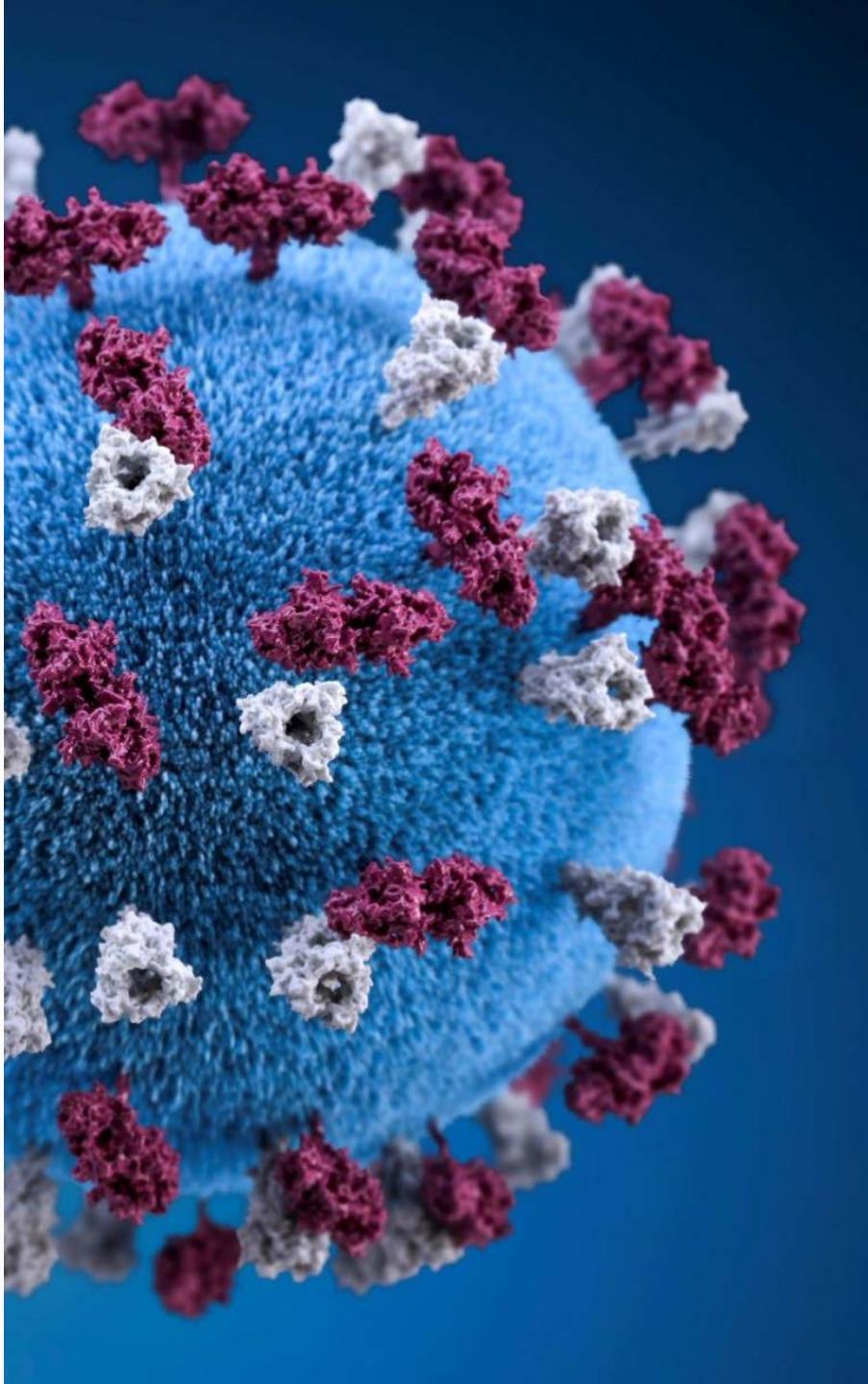
Ado-Ekiti

Member, Ekiti State Government COVID-19 Taskforce

OBJECTIVES

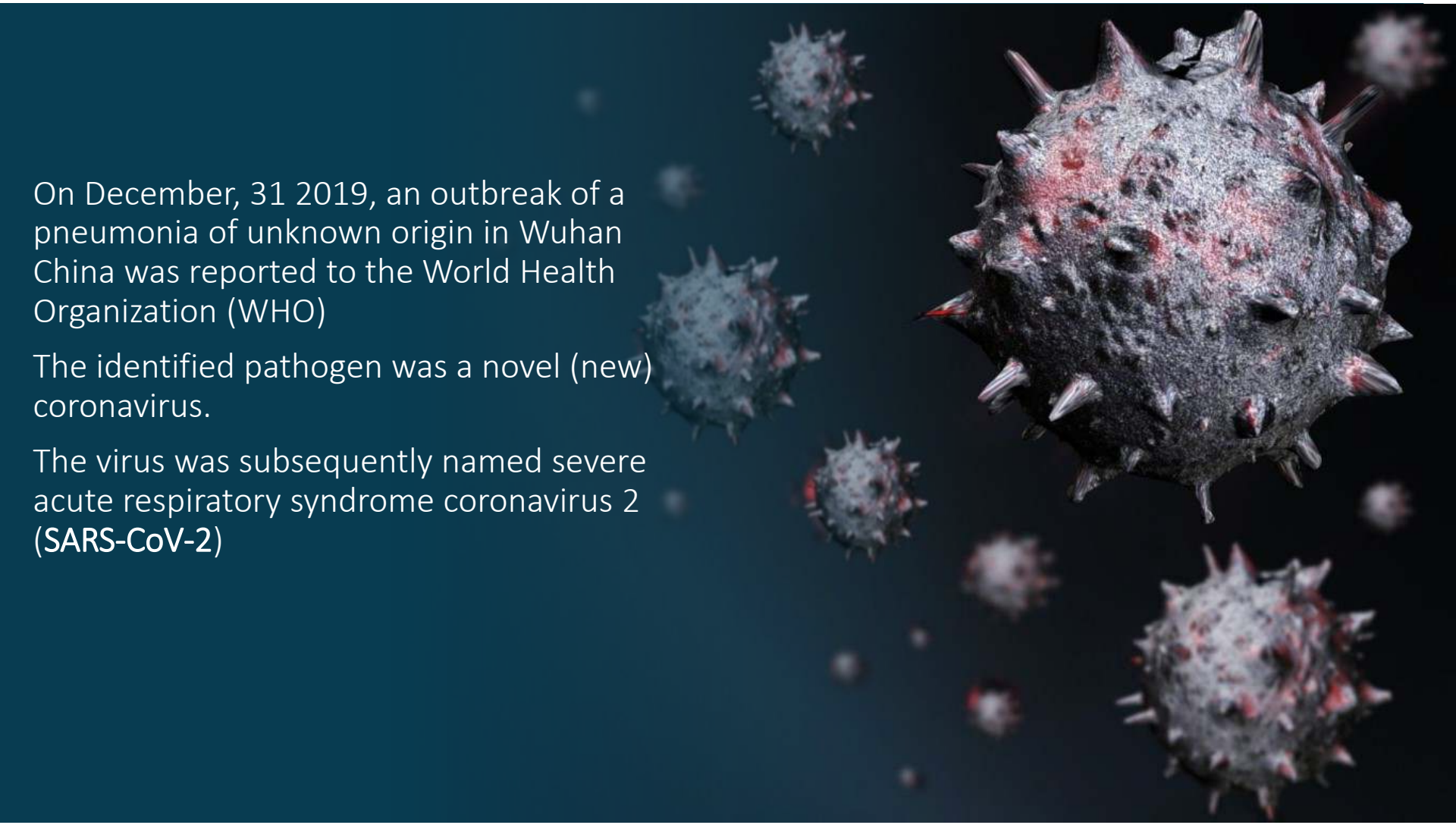
1. Basics of the epidemiology of COVID-19
2. Reliable sources of information on COVID-19
3. Preparing for the pandemic
4. Outpatient Surgical Care in the pandemic
5. Inpatient Surgical care in the pandemic
6. Elective cases: Decision making in the pandemic
7. Surgery for the COVID positive surgical patient
8. Analgesics and Steroids: More than the usual caveats



On December, 31 2019, an outbreak of a pneumonia of unknown origin in Wuhan China was reported to the World Health Organization (WHO)

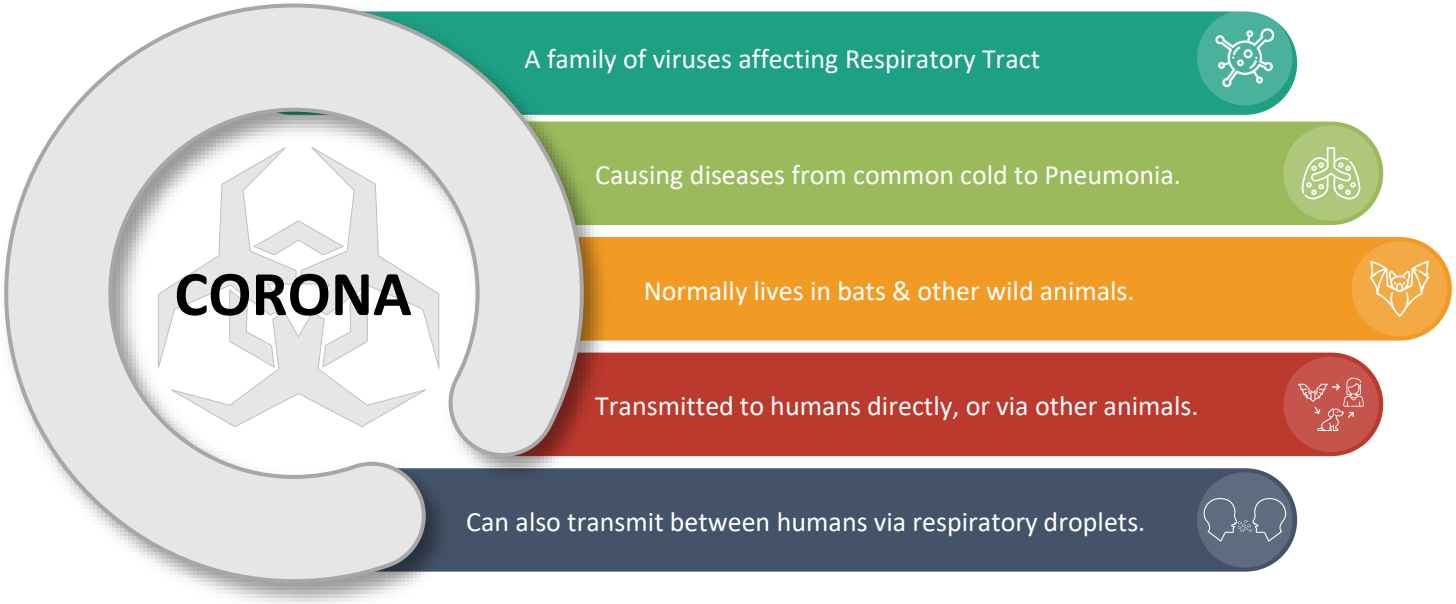
The identified pathogen was a novel (new) coronavirus.

The virus was subsequently named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)



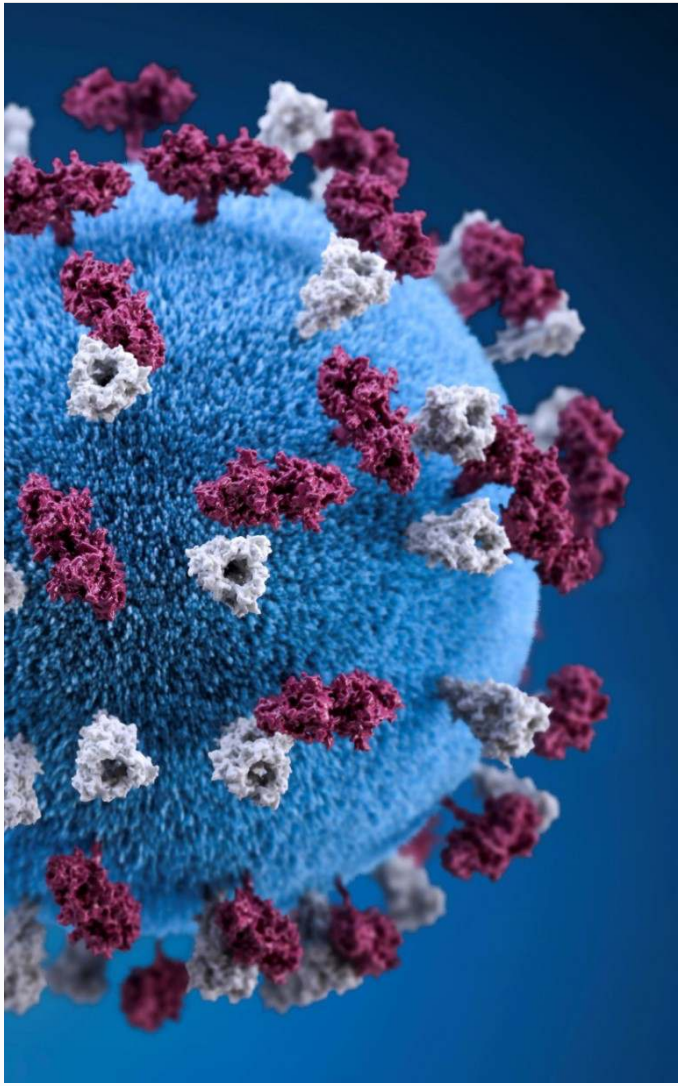
CORONA VIRUS (COVID-19)

What's a Coronavirus?



World Health Organization Nomenclature

- The WHO on 10th February 2020 proposed an official name for the illness caused by COR-SARS-2 as **COVID-19**
- The goal was to avoid the stigma to any of the places, people or animals associated with the virus.
- **'CO'** stands for **CORONA**
- **'VI'** stands for **VIRUS**
- **'D'** stands for **DISEASE**



How n-CoV spreads

- **Air Droplets** (Coughing, Sneezing)
- **Touching** an object with the virus on it , then touching mouth, eyes or nose before washing hands
- **Close personal contacts** (Touching, shaking hands)
- Rarely **faecal** contamination

Spread by aerosol is very important to us as surgeons

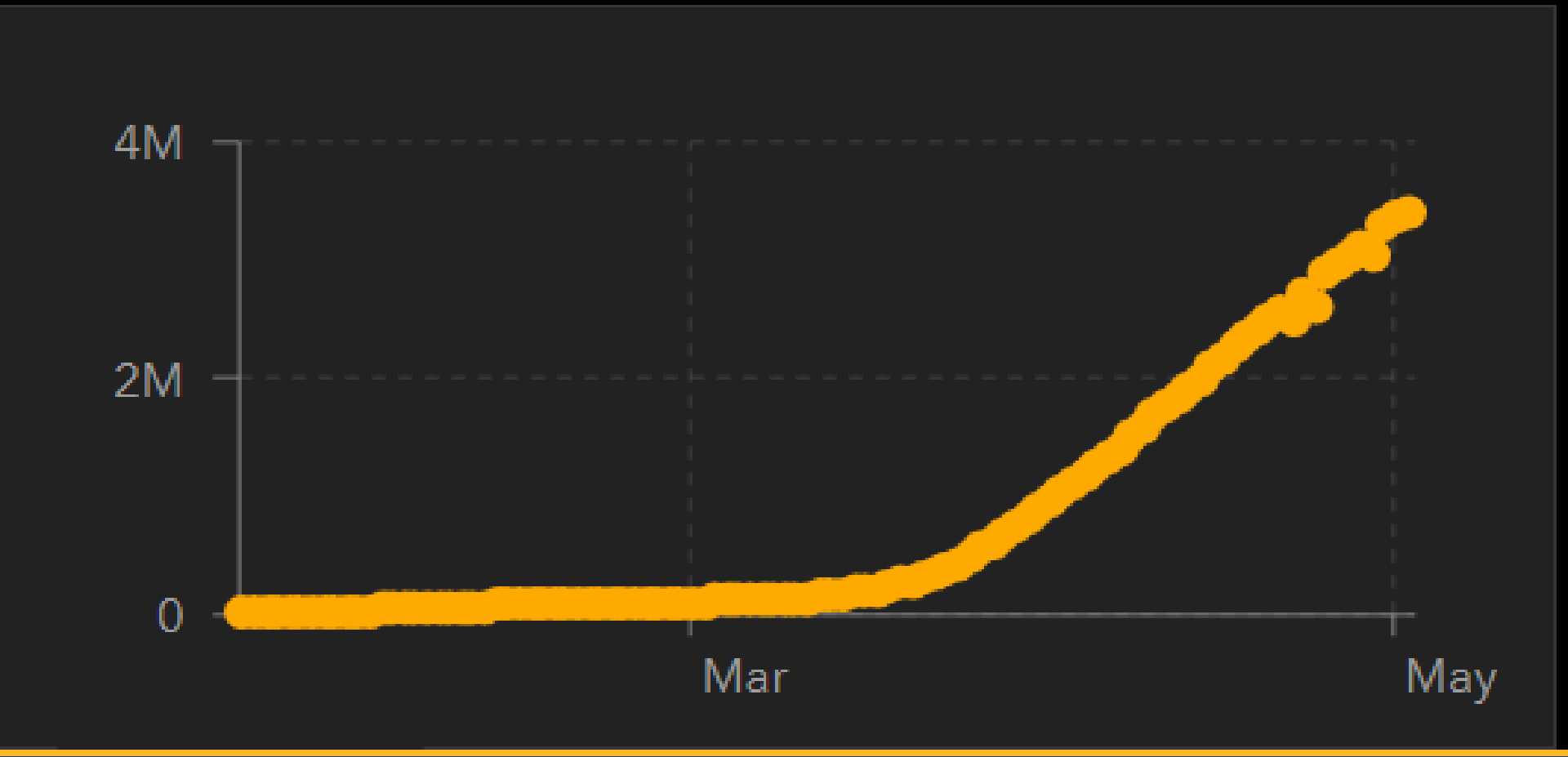
INCUBATION PERIOD

WHO: 2-14 Days

May take as long as 21 Days

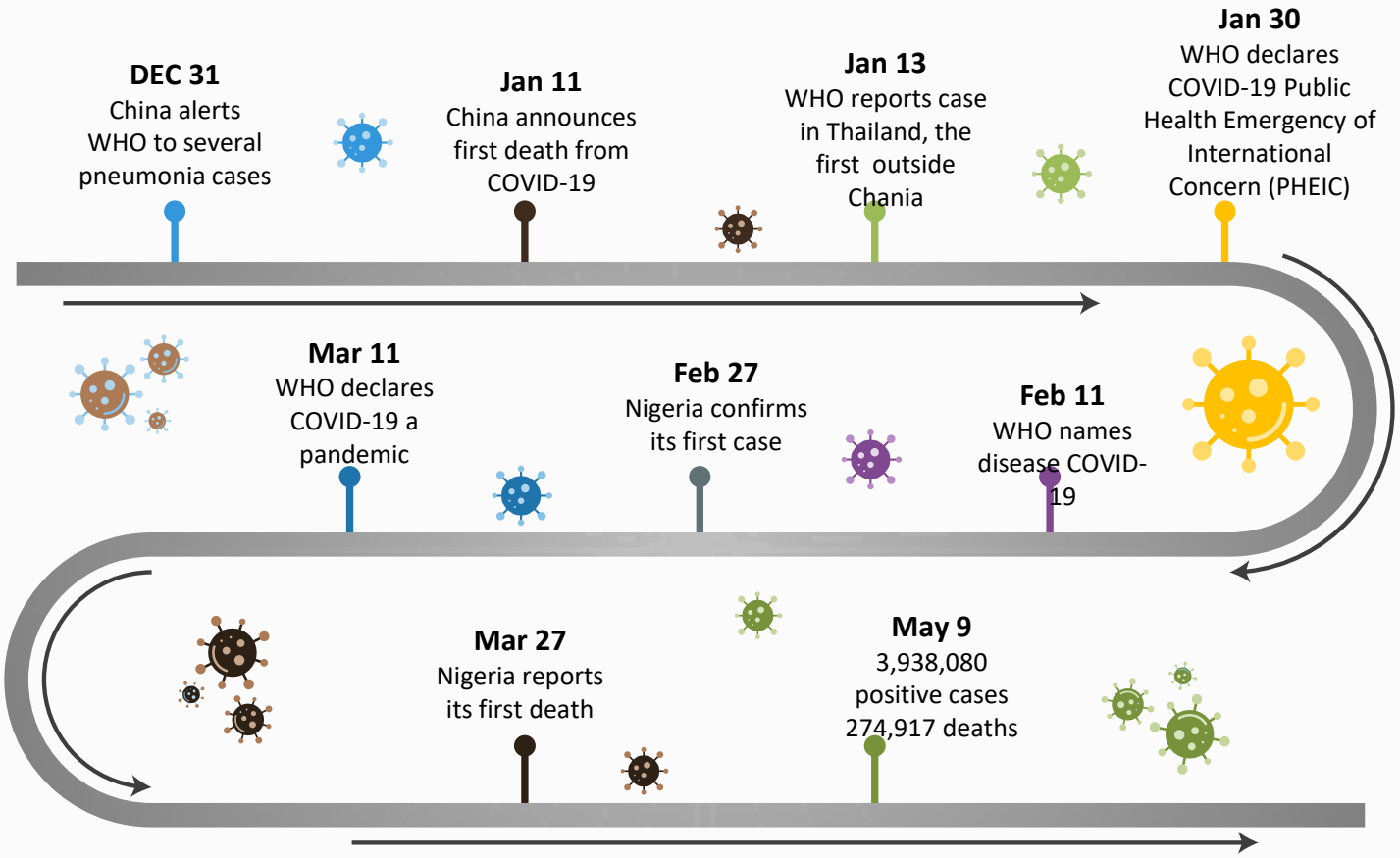
It spreads exponentially…

Exponential growth: something always grows in relation to its current value, e.g. always doubling in a particular time



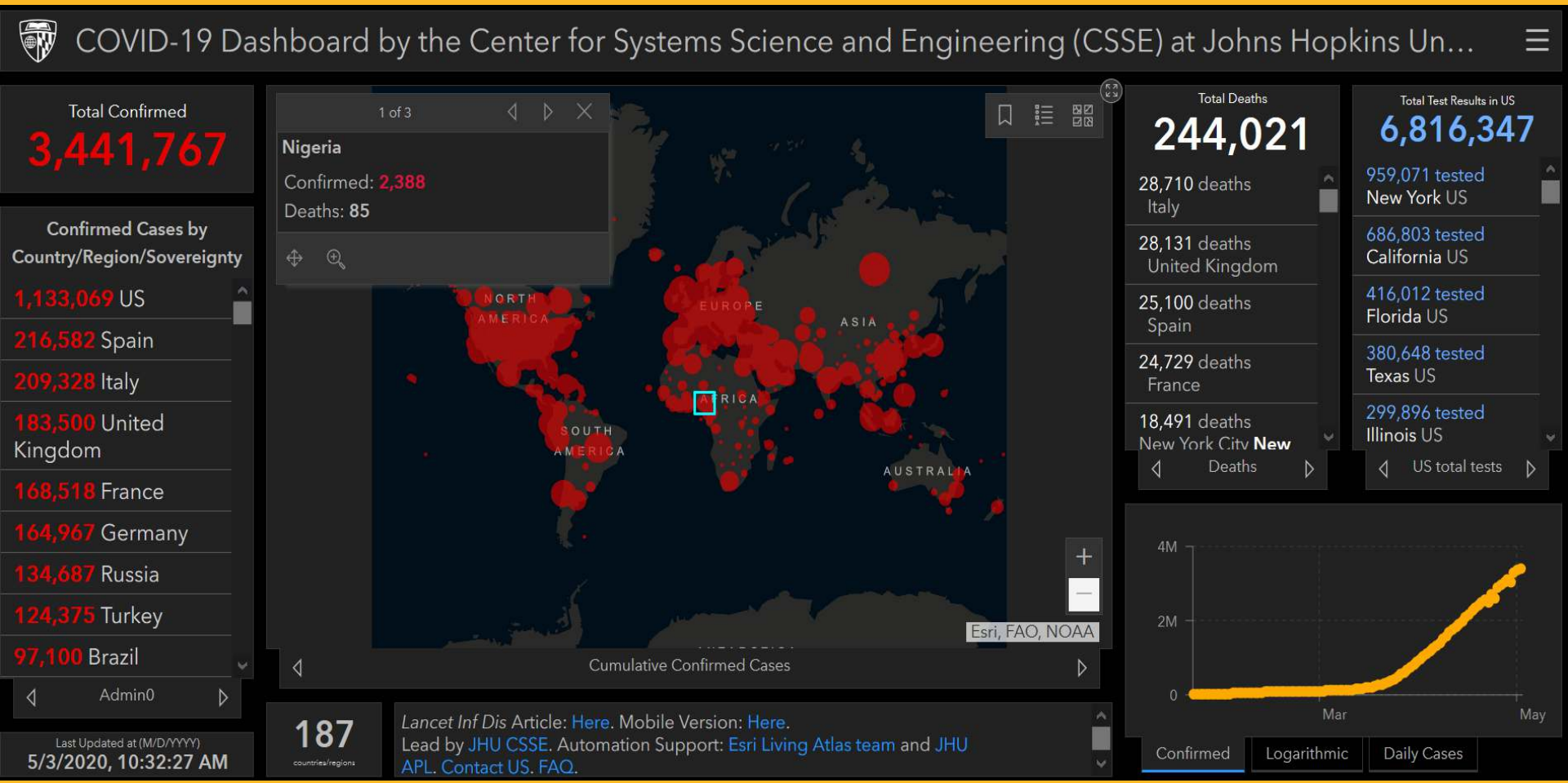
Want to know more about exponential growth and how it applies to COVID-19, visit: https://www.wired.com/story/how-fast-does-a-virus-spread/

COVID-19: Timeline

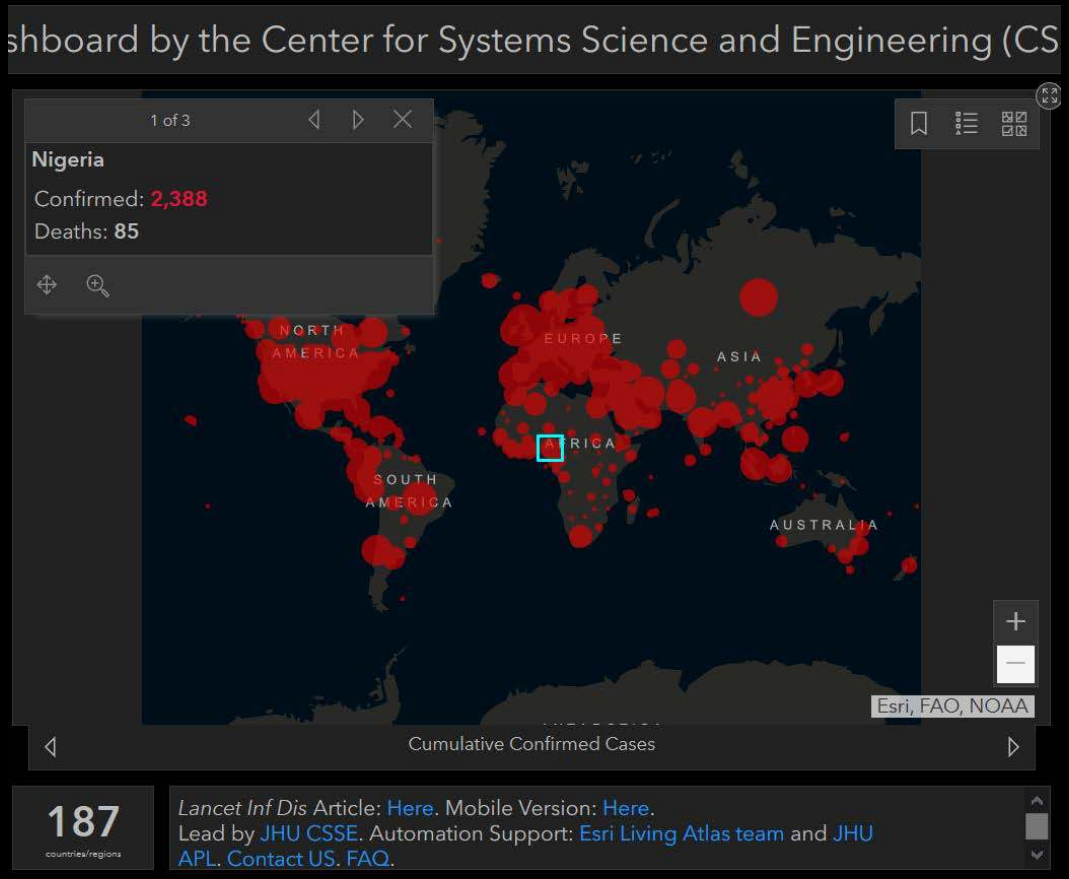


Useful Websites to monitor the pandemic

https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6



Click on a country for the country data……



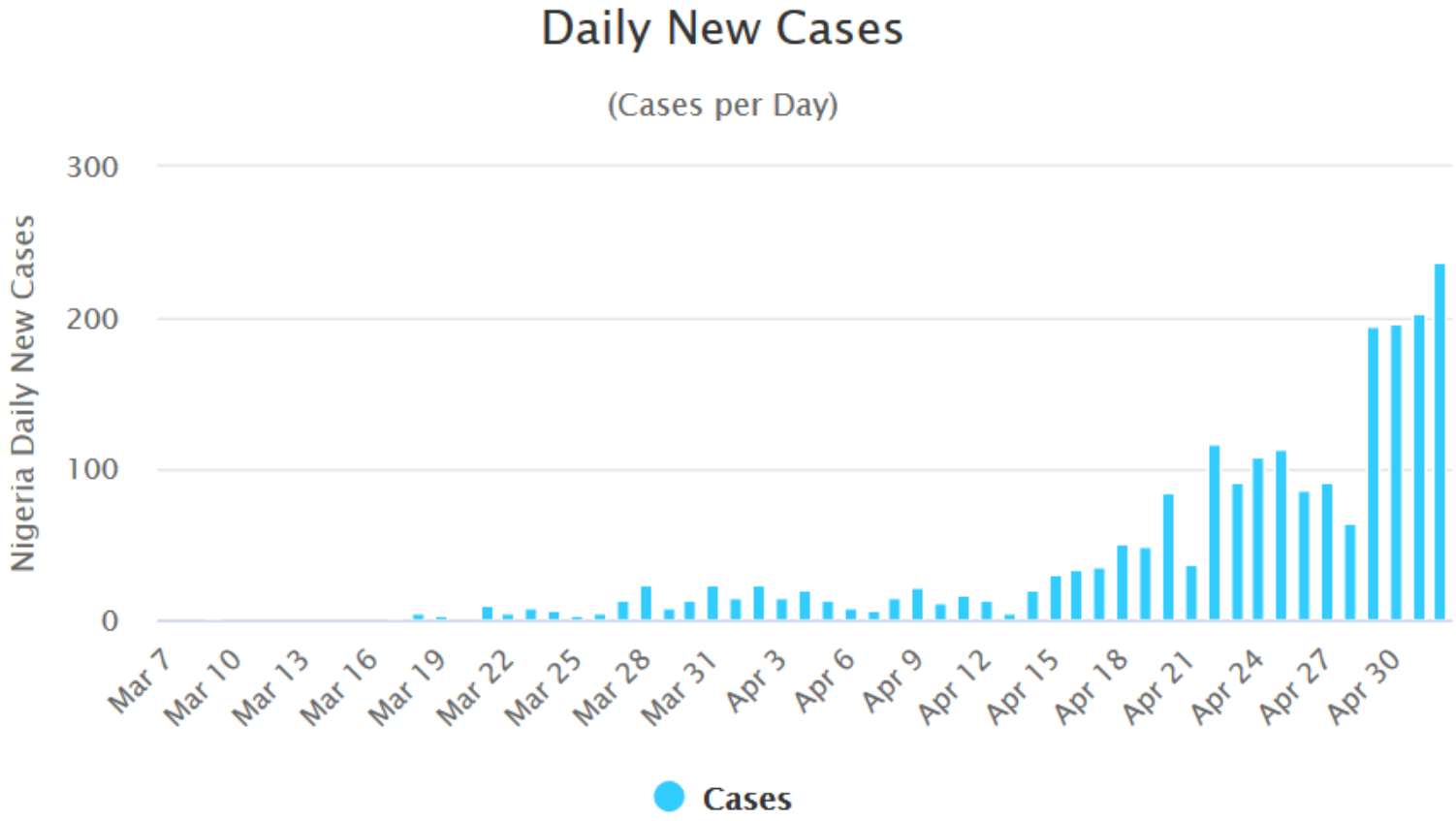
Here, we have clicked on Nigeria to show Nigerian COVID data

WHO COVID Pandemic Page

https://www.who.int/emergencies/diseases/novel-coronavirus-2019

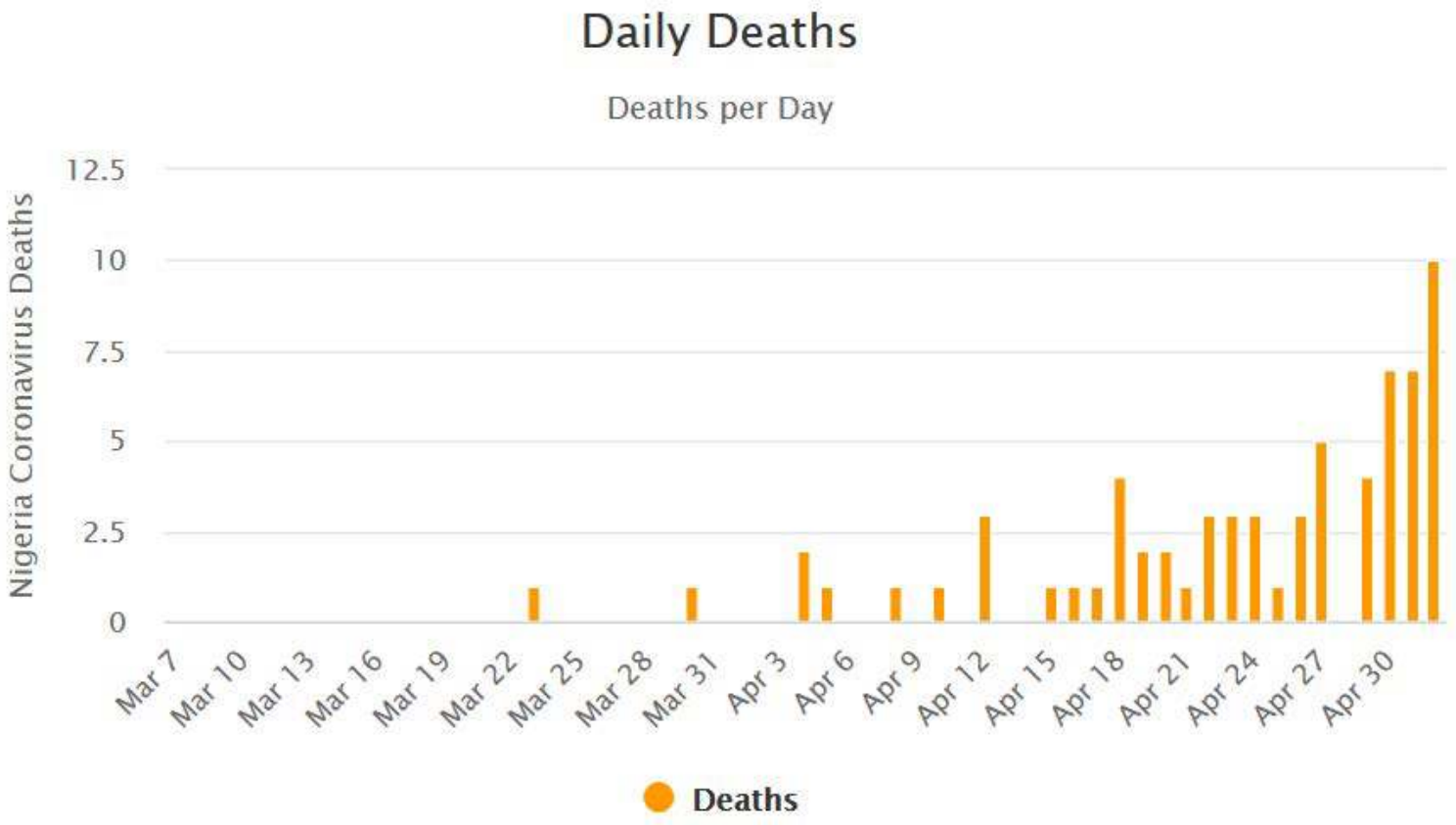
The Nigerian Situation: Daily Cases

https://virusncov.com/covid-statistics/nigeria



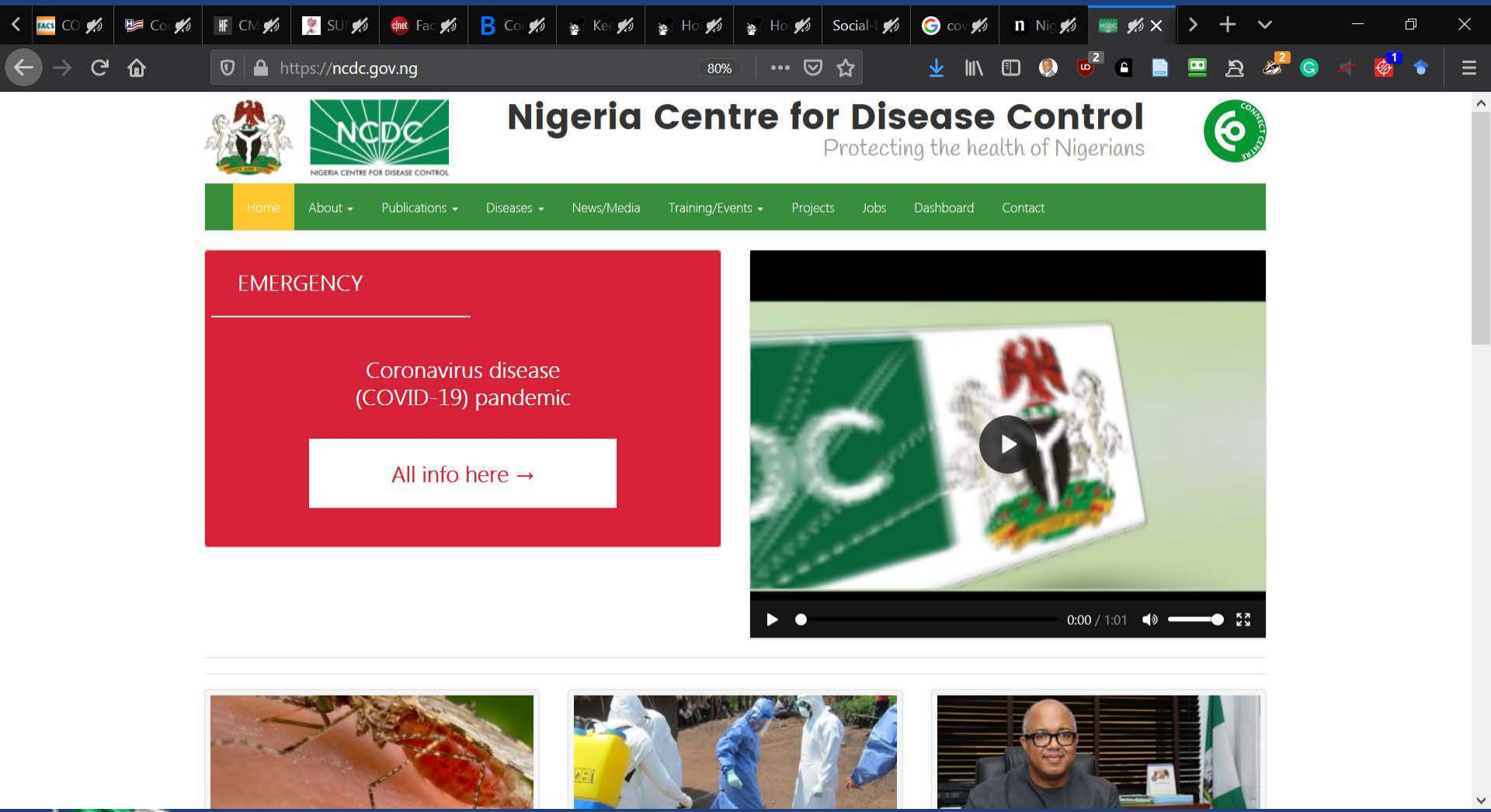
Observe the Exponential Growth!

COVID-19 in Nigeria: Daily Deaths



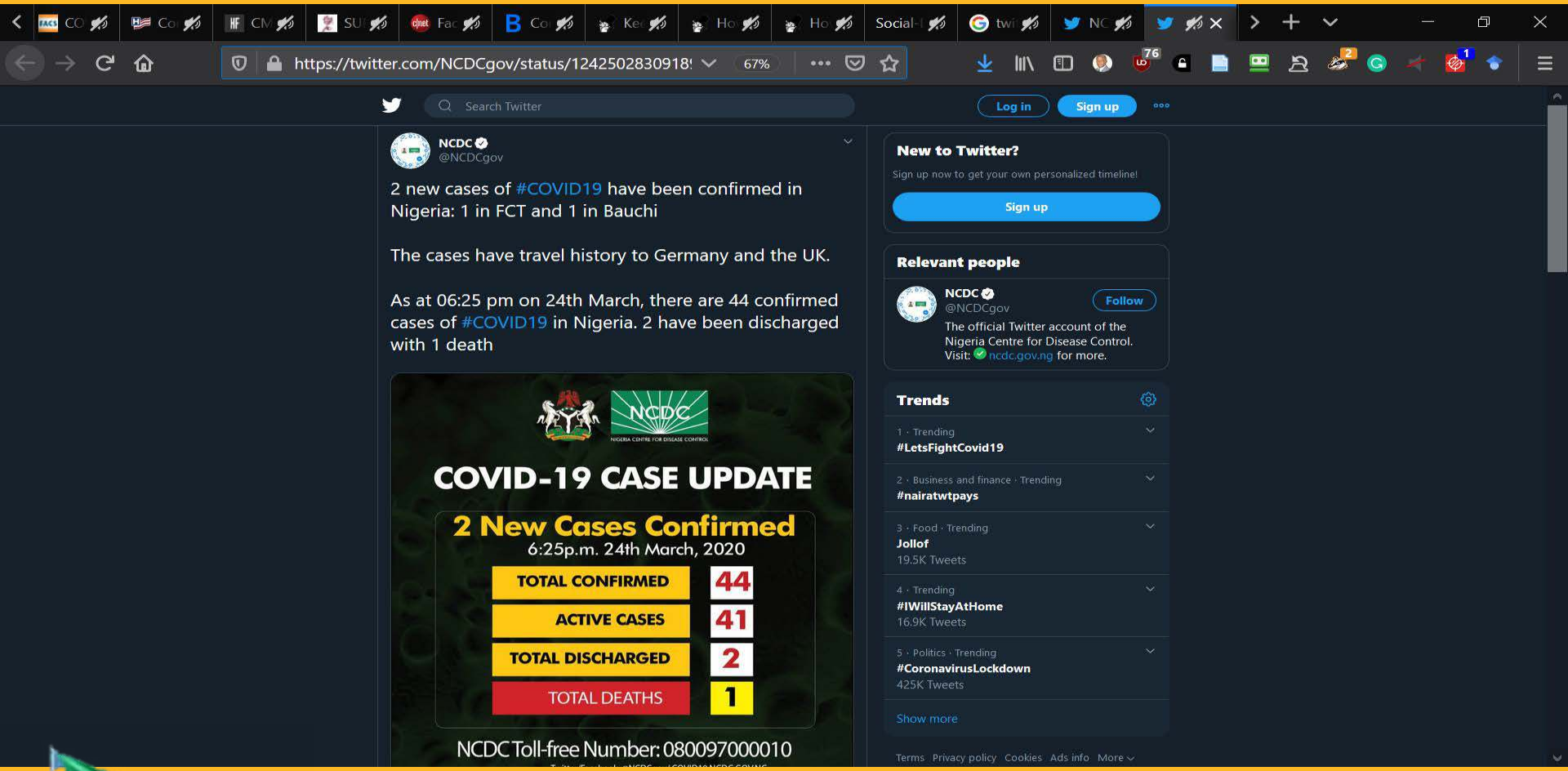
Observe the Exponential Growth!

NCDC Website: Info hub for Nigeria



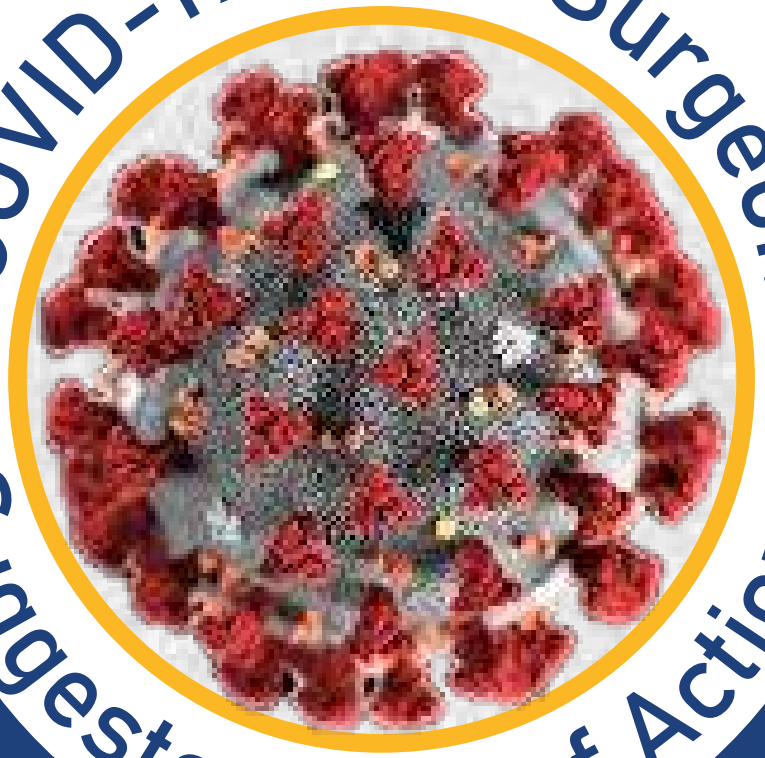
NCDC Twitter Account

Where you get the Nigeria's latest Covid-19 news



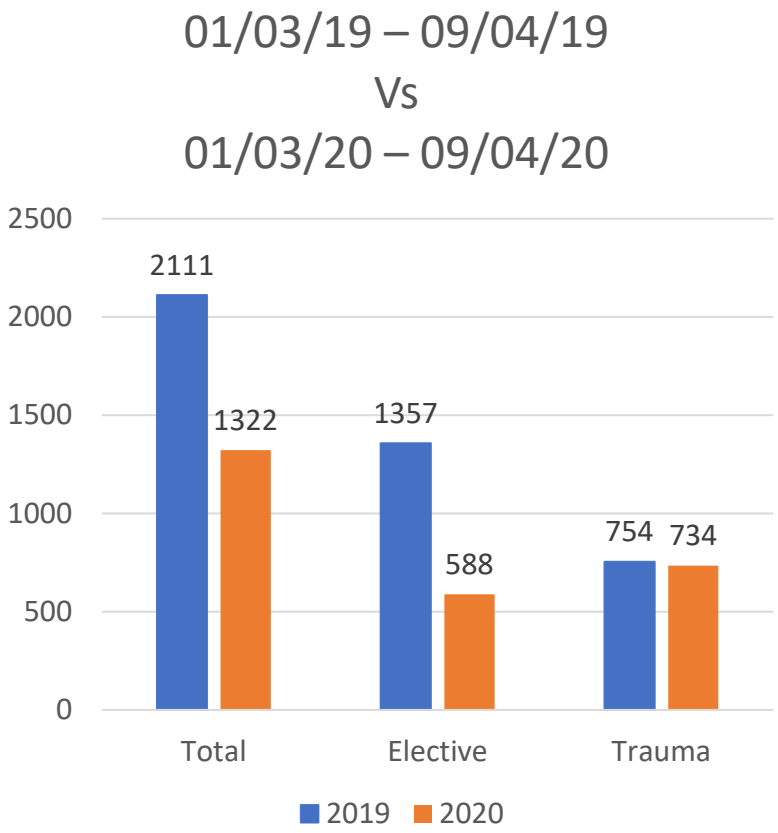
https://twitter.com/ncdcgov?lang=en

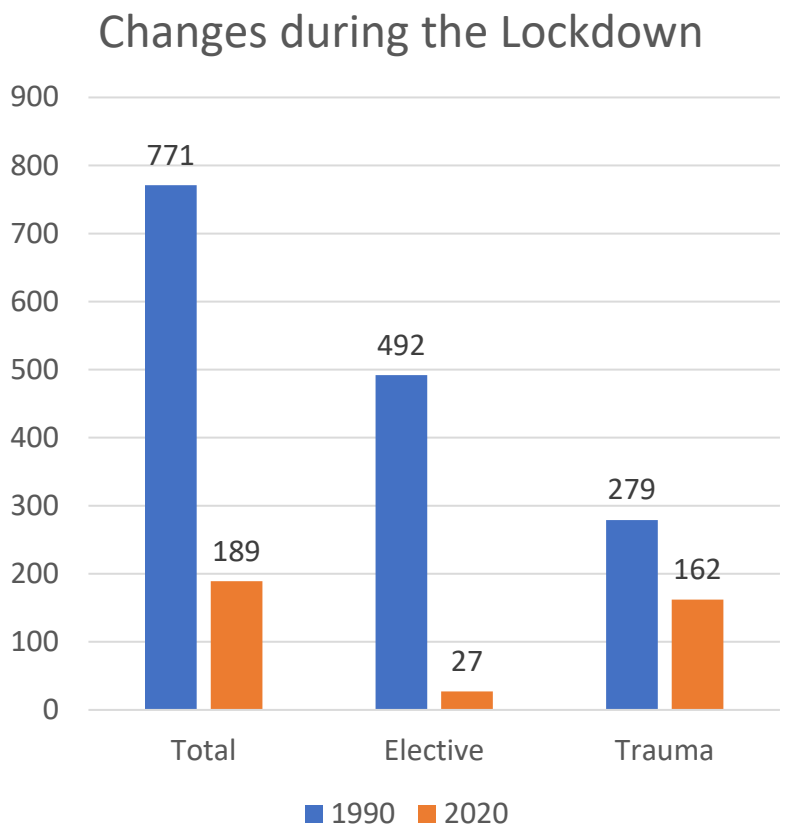
COVID-19 & the Surgeon



Suggested Plan of Action

Effect of COVID-19 on Trauma and Elective Orthopaedic Surgery – Experience of a hospital in Scotland





1. BOA. The Early Effect of COVID-19 on Trauma and Elective Orthopaedic Surgery [Internet]. [cited 2020 May 4]. Available from: https://www.boa.ac.uk/policy-engagement/journal-of-trauma-orthopaedics/journal-of-trauma-orthopaedics-and-coronavirus/the-early-effect-of-covid-19-on-trauma-and-elect.html

Why Surgeons must modify their practice in a pandemic

- To reduce morbidity and mortality
- To minimize disease transmission
- To protect healthcare personnel
- To preserve healthcare system functioning

PREPARATION: What to do before the pandemic reaches your community

- **Improve the knowledge of your staff:**
  - How does COVID-19 spread?
  - What are the recommended protocols for containing the spread of the disease
  - In what ways will COVID-19 affect surgical practice?
    i. Surgical Outpatient Department
    ii. Emergency Surgery
    iii. In-Patient Surgical Care
    iv. The Surgical List
    v. Performing Surgery on COVID-19 patients
  - Clinical management of Covid-19

AIM is Allay fear through open, honest, and transparent planning and careful training

PREPARATION: What to do before the pandemic reaches your community

- **Practice to improve the skill of your staff:**
  - Donning and doffing of personal protective equipment (PPE)
  - Practicing specific techniques that need to be modified e.g. safely transporting and receiving COVID-19 patients, or that are newly introduced e.g. buffer zones for COVID-19 areas.
  - Simulate the run of suspected surgical cases through:
    - The A&E
    - The Ward
    - The Theater

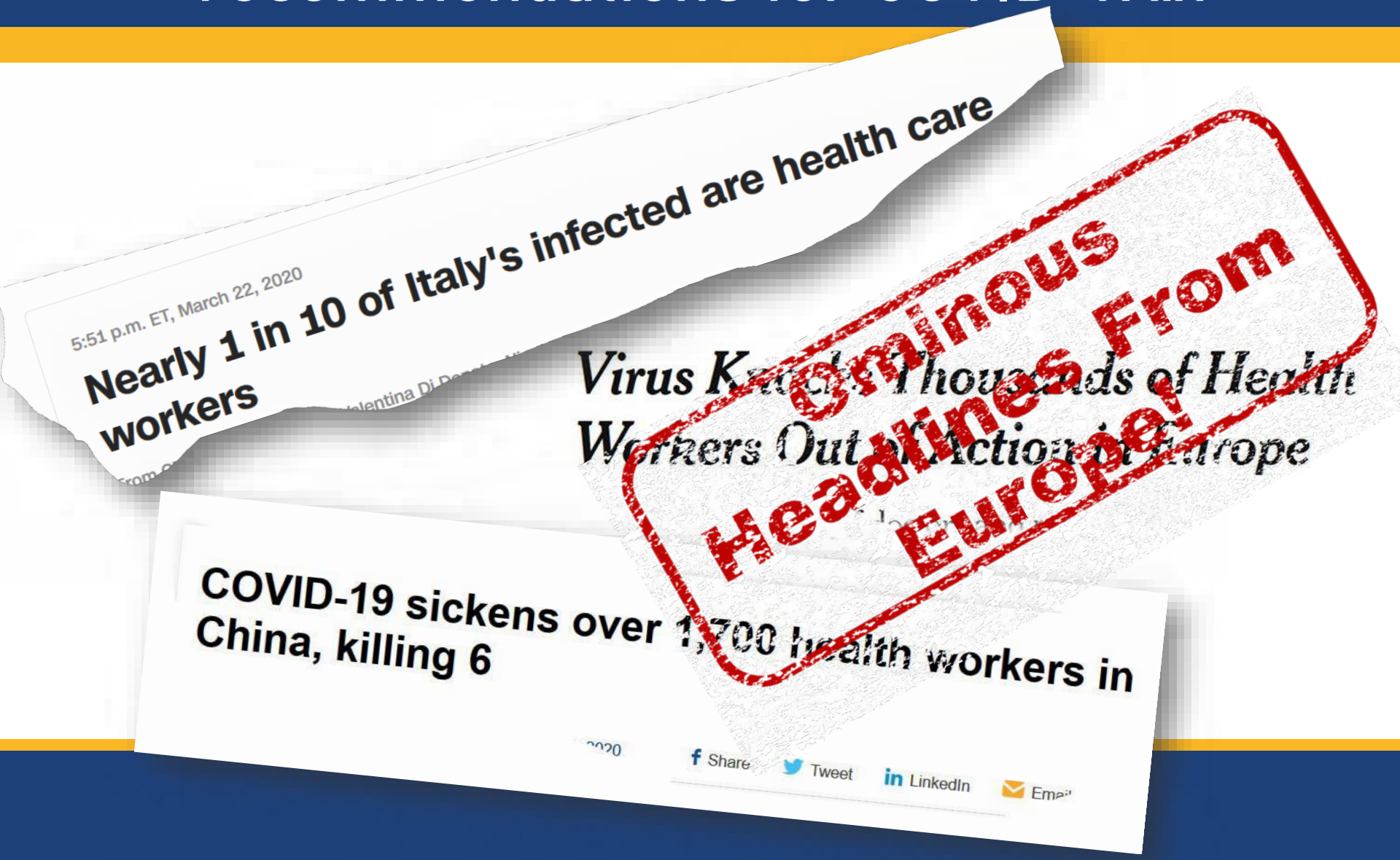
You may need to do dry runs

PREPARATION: What to do before the pandemic reaches your community

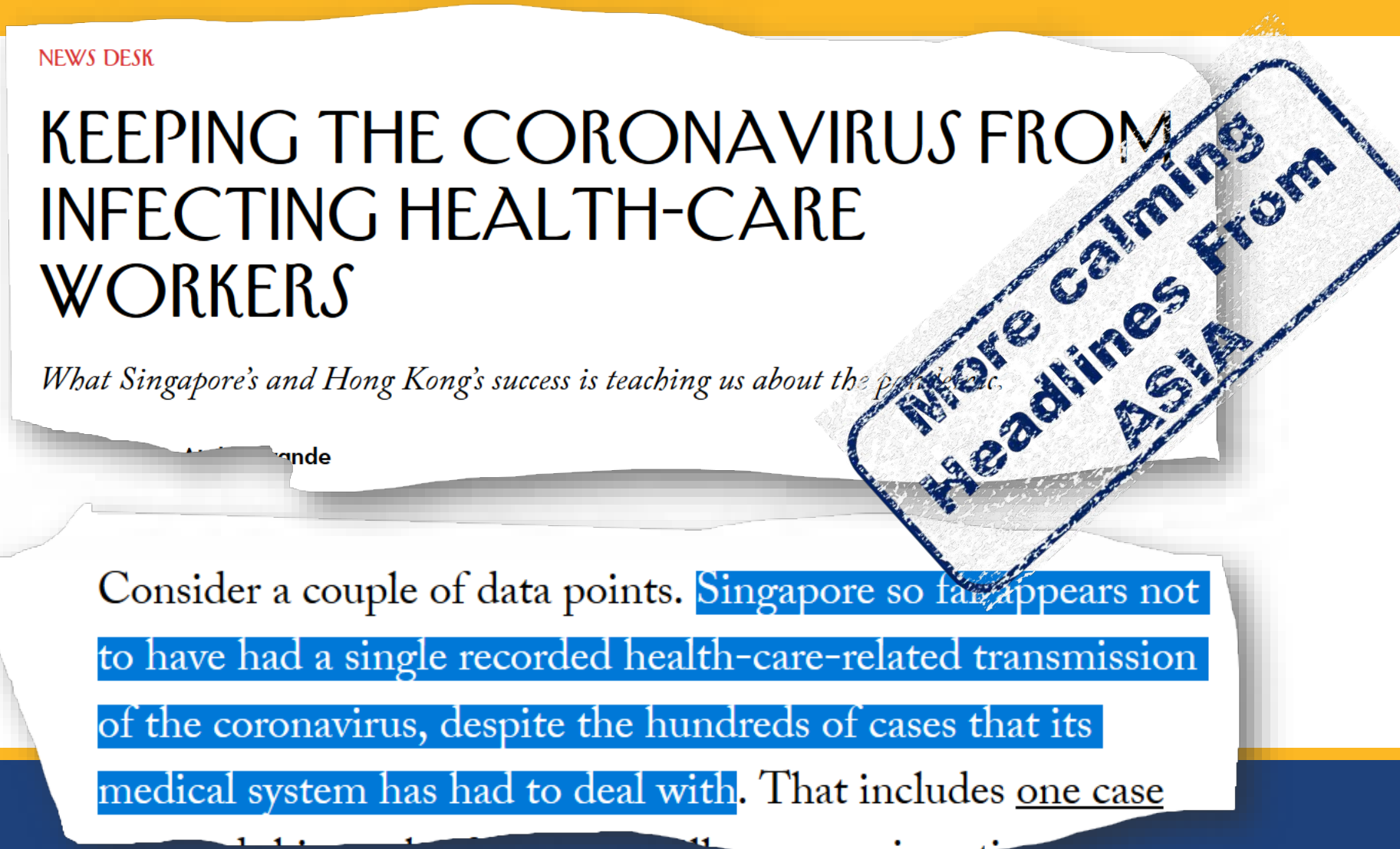
- **Make necessary changes to processes and the work space:**
  - Spaces will have to be remapped to accommodate COVID specific workspaces e.g. do you need a special COVID assessment area outside the A&E dept?
  - Staffs may need to be reassigned and retrained for COVID specific jobs e.g. do you need a special COVID-19 team to handle COVID patients in the theater?
  - If it is a department, you may need to do all these in line with the general hospital policies
  - For private hospitals, you MUST practice standard precaution and have an SOP for early identification of suspected cases and their transfer to treatment centres

All these need to be done before the pandemic hits your hospital

Infection prevention and control recommendations for COVID-19…1



Infection prevention and control recommendations for COVID-19…2



NEWS DESK

KEEPING THE CORONAVIRUS FROM INFECTING HEALTH-CARE WORKERS

What Singapore's and Hong Kong's success is teaching us about the pandemic.

nde

More calming Headlines From ASIA

Consider a couple of data points. Singapore so far appears not to have had a single recorded health-care-related transmission of the coronavirus, despite the hundreds of cases that its medical system has had to deal with. That includes one case

SO, WHAT DID THEY DO IN SINGAPORE?

For all patient-doctor interactions, doctors wear:

- Wear regular surgical masks
- Use gloves and
- Observe proper hand hygiene
- Disinfect all surfaces in between patient consults.

WHAT WAS DONE FOR ALL SUSPECTED CASES

- Separated from the rest of patient population
- Treated in separate wards
- Treated by separate teams wearing PPE

Surgical face masks as PPE?

NO. They are not designed for personnel protection and do not closely fit around the face and mouth. Their design is intended for preventing contamination of the surgical wound from the aerosols generated by the surgical team

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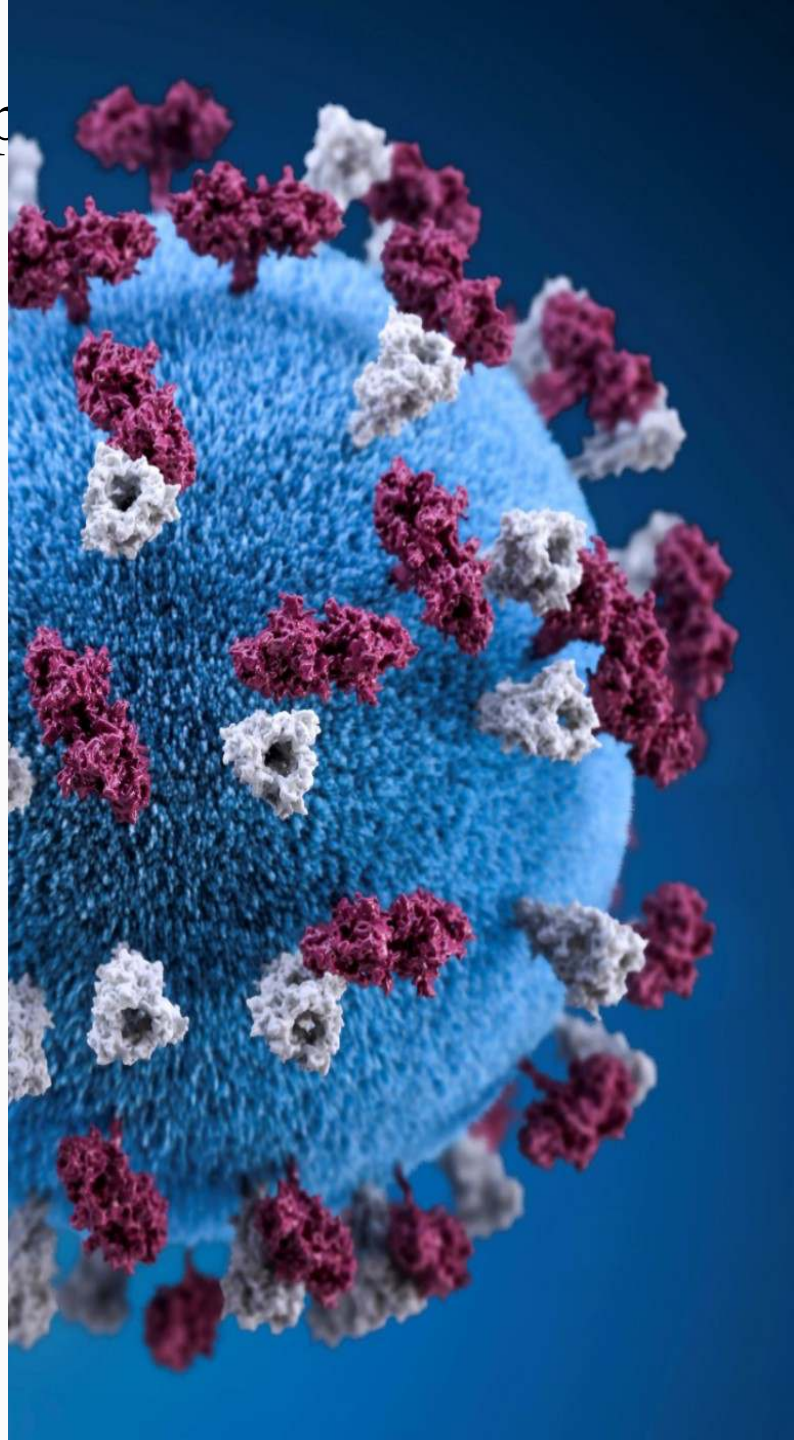
- Surgical masks are not reliable protections against known/suspectedCOVID-19 patients, but they are useful to prevent personnel against an accidental aerosol challenge from an asymptomatic carrier of SARS-CoV-2 during the incubation phase.
- Equally if a health worker is in the asymptomatic incubation phase, this will reduce the aerosol challenge towards an uninfected patient or coworker.
- By reducing the viral load acquired, such facemasks are protective for personnel as they are likely to reduce the severity of illness, especially at the height of the pandemic

SOCIAL DISTANCING IN THE CLINIC as practiced in singapore

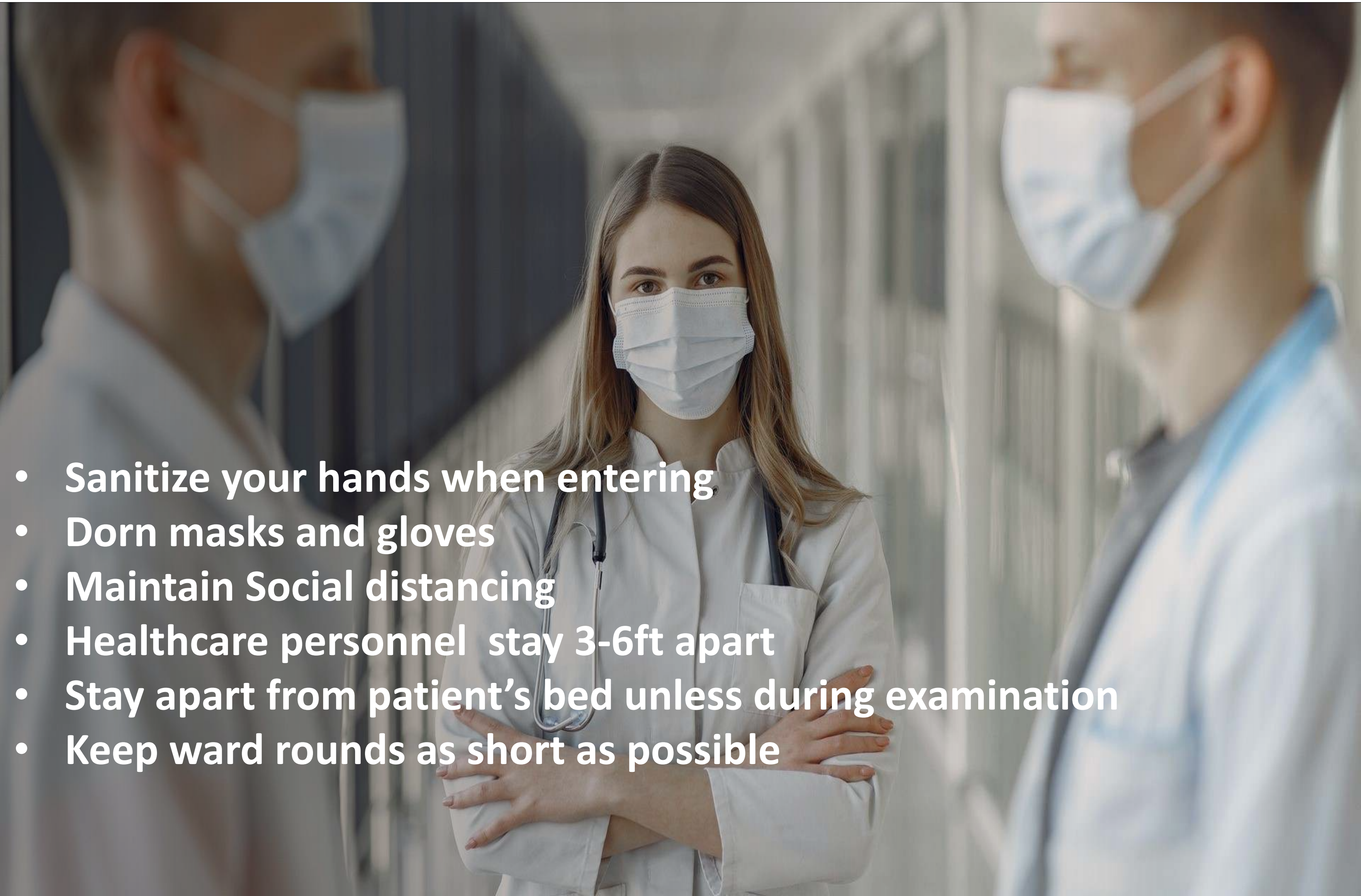
- Chairs are placed 6 feet apart
- Direct interactions among staff members are conducted at a distance
- Doctors and patients stay six feet apart except during physical examinations

Suggested procedures for Managing the sop during the pandemic

- Stagger patients' appointments: to avoid overcrowding
- Have spill-over tents if too many patients
- Reschedule or cancel non-urgent outpatient visits
- Encourage online consultation (Social media, Telemedicine)
- Symptomatic patients who needed to be seen should contact the doctor before coming
- Wipe examination couch with Sodium Hypochlorite after each examination
- Change glove and clean hands after each examination



- Maintain social distancing in the clinic
- Mask and Gloves at all time
- Patients should wear masks also
- Maintain at least 3ft between doctor and patient by proper placement of chairs
- Only approach the patient when you need to examine
- Open well ventilated rooms preferred to A/C unless clinic has **HEPA** filters



- Sanitize your hands when entering
- Dorn masks and gloves
- Maintain Social distancing
- Healthcare personnel stay 3-6ft apart
- Stay apart from patient’s bed unless during examination
- Keep ward rounds as short as possible

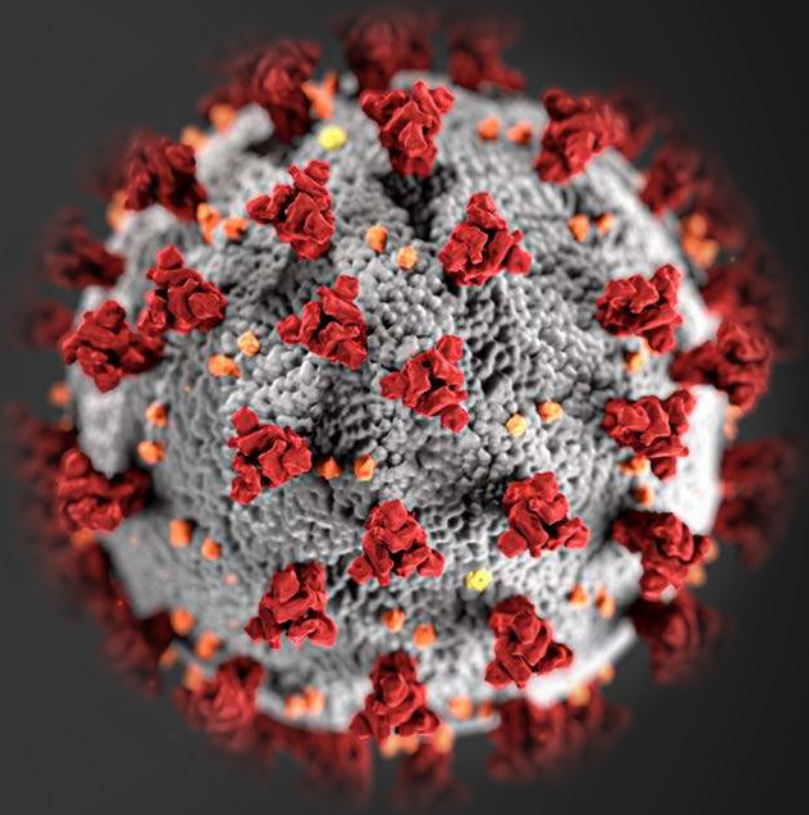
What Surgery should you do during the pandemic?

- The American Center for Disease Control recommends that all **Elective Surgery be Rescheduled**

- NCDC does not have any comparative directive

Postponing Elective Surgeries: Caveats

- It is not always possible to define the medical urgency of a case solely on whether a case is on an elective surgery schedule.
- While some cases can be postponed indefinitely, some cases are associated with progressive disease (such has cancer, vascular disease and organ failure) that will continue to progress at variable, disease-specific rates.
- It is important to recognize that the decision to cancel or perform a surgical procedure must be made in the context of numerous considerations, both medical and logistical.



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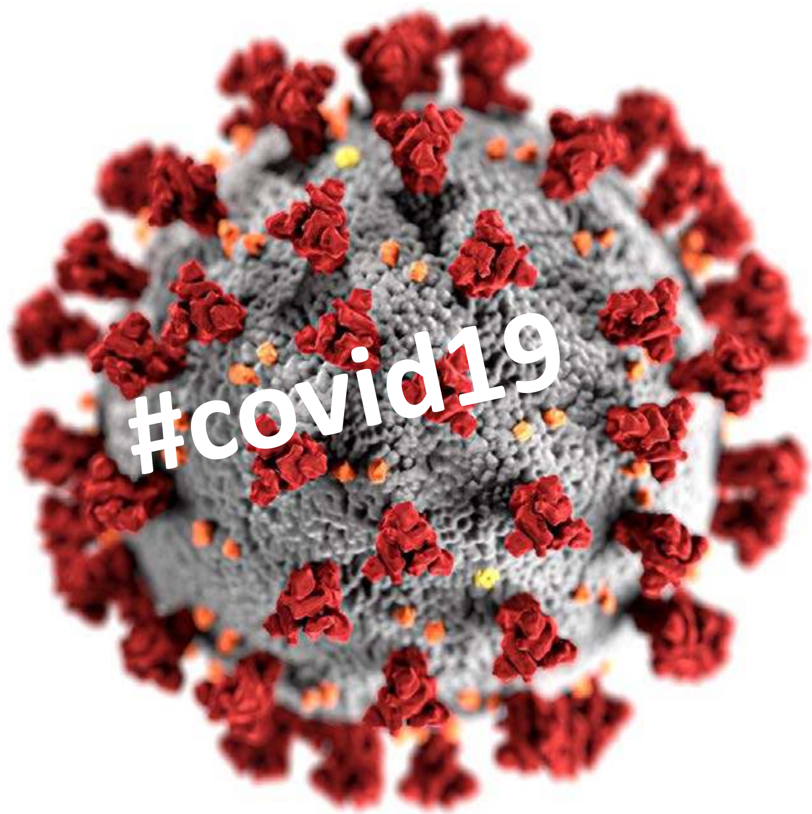
- An elective surgery does not always mean it is optional.
- It simply means that the surgery can be scheduled in advance.
- Foe example, if a condition does not have a non-operative way of managing it and it is painful, e.g. some hip fractures, then it is definitely not optional.



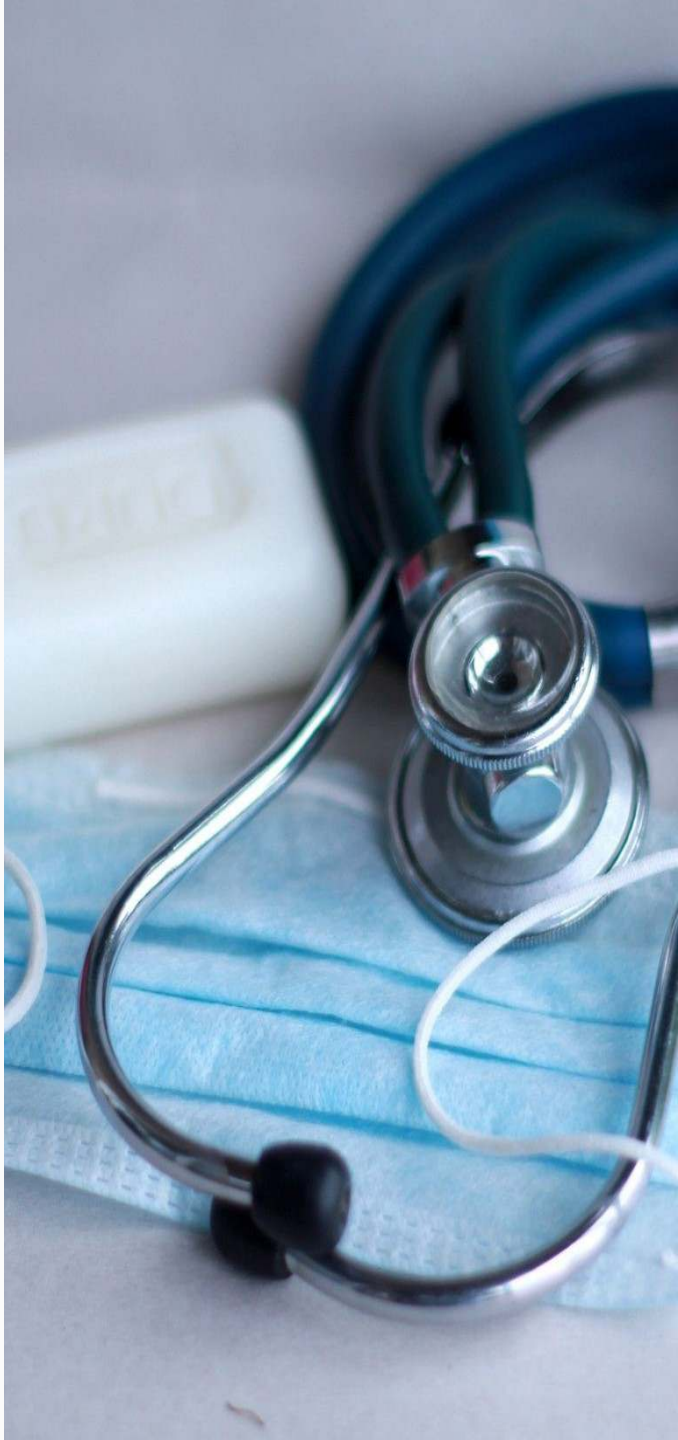
To operate or not to operate: Algorithms to help with the decision making process

Making decisions can be very difficult, and as the ACS adviceds " ***Plans for case triage should avoid blanket policies***". There is a need to be systematic about it

ACS have recommended two scoring systems to aid in this decision making process:

I. Elective Surgery Acuity Scale (**ESAS**)

II. Medically Necessary Time-Sensitive (**MeNTS**) Prioritization



Elective Surgery Acuity Scale (ESAS)

Tiers	Definition	Examples	Action
Tier 1a	Low acuity surgery/healthy patient Outpatient surgery Not life-threatening illness	Carpal tunnel release Corrective osteotomy	Postpone surgery
Tier 1b	Low acuity surgery/unhealthy patient		Postpone surgery
Tier 2a	Intermediate acuity surgery/healthy patient Not life threatening but potential for future morbidity and mortality. Requires in hospital stay	Low risk cancer Non urgent spine Some fracture cases	Postpone surgery if possible
Tier 2b	Intermediate acuity surgery/unhealthy patient		Postpone surgery if possible
Tier 3a	High acuity surgery/healthy patient	Most cancers Highly symptomatic patients	Do not postpone
Tier 3b	High acuity surgery/unhealthy patient		Do not postpone

A tool that helps in surgical decision making in triaging operations in the pandemic

Some Guidelines on ESAS

- Patients are allocated into tiers depending on whether the case is acute or not
- Each tier is then divided into subgroups A and B depending on if patient is healthy or unhealthy
- Both the patients' medical needs, and the logistical capability of the hospital should be taken into consideration.
- The medical need for a given procedure should be established by the consultant in charge to determine what medical risks will be incurred by case delay.
- Remember, although COVID-19 is a clear risk to all, it is but one of many competing risks for patients requiring surgical care.
- Thus, surgical procedures should be considered not based solely on COVID-associated risks, but rather on an assimilation of all available medical and logistical information.

https://www.facs.org/covid-19/clinical-guidance/elective-case

Medically Necessary Time-Sensitive (MeNTS) Prioritization

- 21 factors are divided into 3 broad categories:
  - procedure (7 factors)
  - disease (6 factors)
  - patient (8 factors).
- Each factor is scored on a scale of 1 to 5
- Total score ranges from 21 to 105 is computed for each case
- The higher the score:
  - the greater the risk to the patient,
  - the higher the utilization of health care resources, and
  - the higher the chance of viral exposure to the health care team

Can be entered on a Microsoft Excel Spreadsheet for automatic calculation of the scores

Medically Necessary Time-Sensitive (MeNTS) Worksheet

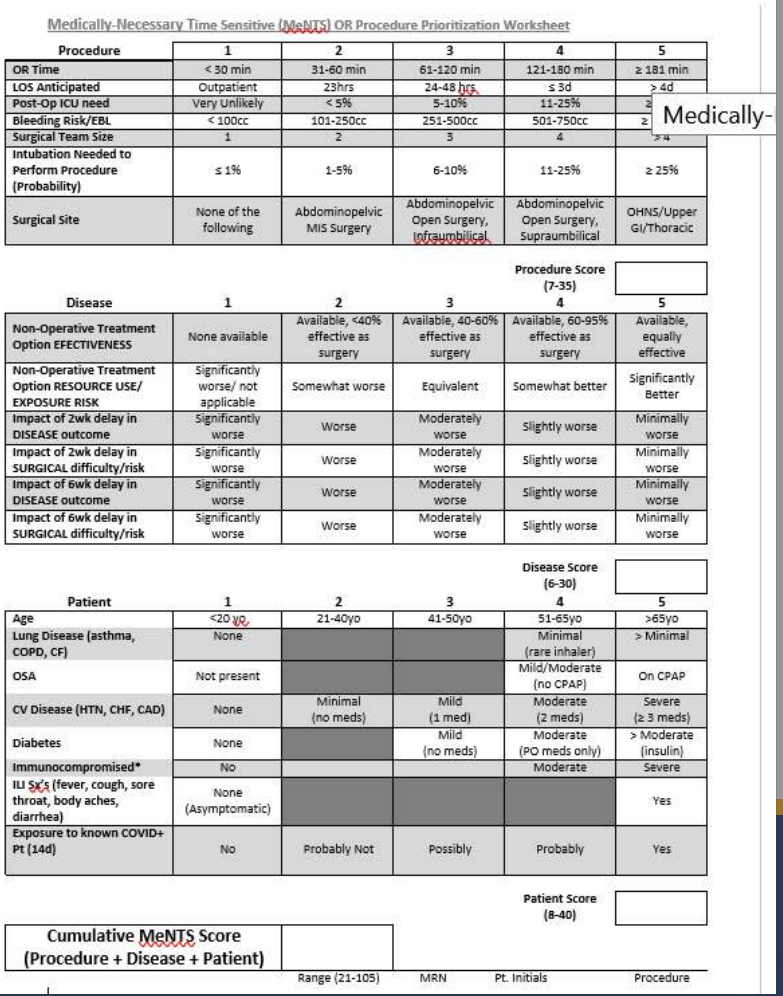
Reference

Prachand VN et al. Medically Necessary, Time-Sensitive Procedures: Scoring System to Ethically and Efficiently Manage Resource Scarcity and Provider Risk During the COVID-19 Pandemic. Journal of the American College of Surgeons https://www.journalacs.org/article/S1072-7515(20)30317-3/abstract

Worksheet Example [Internet]. American College of Surgeons. [cited 2020 May 10]. Available from: https://www.facs.org/media/press-releases/2020/covid-scoring-system0414/worksheet

Worksheet Example

Sample worksheet for the Medically Necessary Time-Sensitive (MeNTS) Prioritization process.
Source: University of Chicago Medicine and Biological Sciences.



Medically-Necessary Time Sensitive (MeNTS) OR Procedure Prioritization Worksheet

Procedure	1	2	3	4	5
OR Time	< 30 min	31-60 min	61-120 min	121-180 min	≥ 181 min
LOS Anticipated	Outpatient	23hrs	24-48 hrs	≤ 3d	> 4d
Post-Op ICU need	Very Unlikely	< 5%	5-10%	11-25%	≥
Bleeding Risk/EBL	< 100cc	101-250cc	251-500cc	501-750cc	≥
Surgical Team Size	1	2	3	4	> 4
Intubation Needed to Perform Procedure (Probability)	≤ 1%	1-5%	6-10%	11-25%	≥ 25%
Surgical Site	None of the following	Abdominopelvic MIS Surgery	Abdominopelvic Open Surgery, Infraumbilical	Abdominopelvic Open Surgery, Supraumbilical	OHNS/Upper GI/Thoracic

Procedure Score (7-35)

Disease	1	2	3	4	5
Non-Operative Treatment Option EFECTIVENESS	None available	Available, <40% effective as surgery	Available, 40-60% effective as surgery	Available, 60-95% effective as surgery	Available, equally effective
Non-Operative Treatment Option RESOURCE USE/ EXPOSURE RISK	Significantly worse/ not applicable	Somewhat worse	Equivalent	Somewhat better	Significantly Better
Impact of 2wk delay in DISEASE outcome	Significantly worse	Worse	Moderately worse	Slightly worse	Minimally worse
Impact of 2wk delay in SURGICAL difficulty/risk	Significantly worse	Worse	Moderately worse	Slightly worse	Minimally worse
Impact of 6wk delay in DISEASE outcome	Significantly worse	Worse	Moderately worse	Slightly worse	Minimally worse
Impact of 6wk delay in SURGICAL difficulty/risk	Significantly worse	Worse	Moderately worse	Slightly worse	Minimally worse

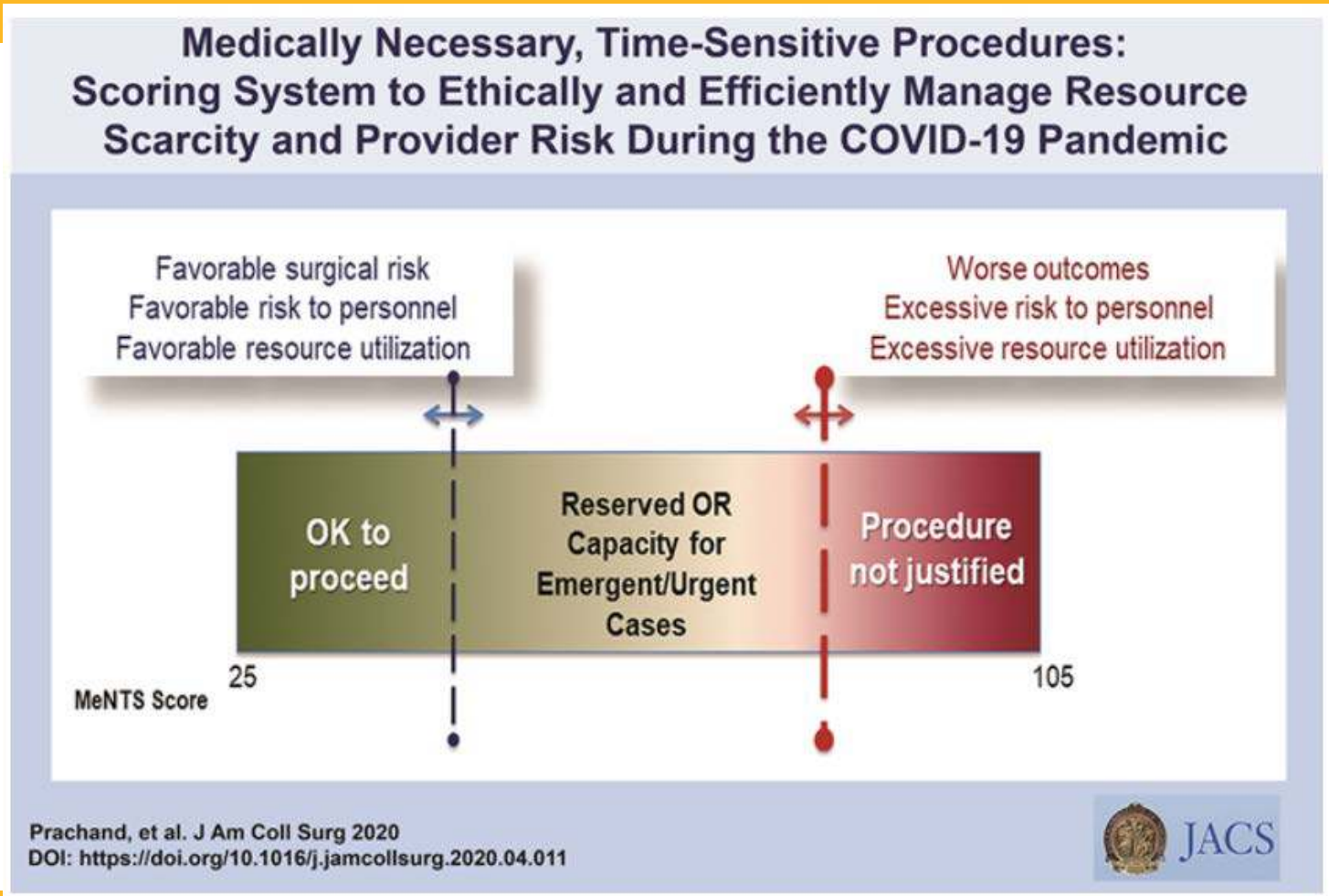
Disease Score (6-30)

Patient	1	2	3	4	5
Age	<20 yo	21-40yo	41-50yo	51-65yo	>65yo
Lung Disease (asthma, COPD, CF)	None			Minimal (rare inhaler)	> Minimal
OSA	Not present			Mild/Moderate (no CPAP)	On CPAP
CV Disease (HTN, CHF, CAD)	None	Minimal (no meds)	Mild (1 med)	Moderate (2 meds)	Severe (≥ 3 meds)
Diabetes	None		Mild (no meds)	Moderate (PO meds only)	> Moderate (insulin)
Immunocompromised*	No			Moderate	Severe
ILI Sx's (fever, cough, sore throat, body aches, diarrhea)	None (Asymptomatic)				Yes
Exposure to known COVID+ Pt (14d)	No	Probably Not	Possibly	Probably	Yes

Patient Score (8-40)

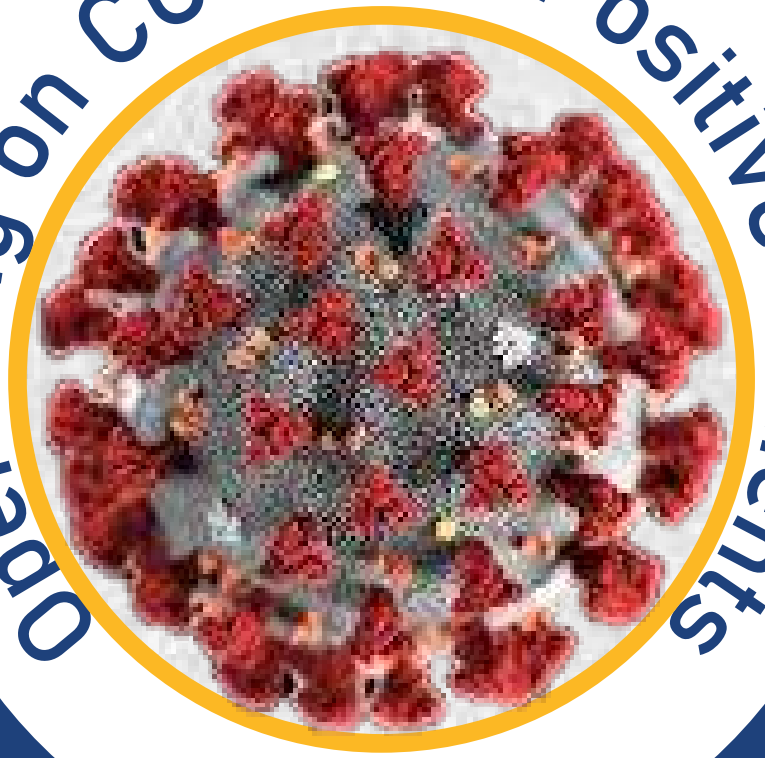
Cumulative MeNTS Score (Procedure + Disease + Patient)				
	Range (21-105)	MRN	Pt. Initials	Procedure

Medically Necessary Time-Sensitive (MeNTS): Decision Strip



Using the score from the prioritization table, this strip will help the surgeon decide on whether to or operate or postpone the surgery

Operating on COVID-19 Positive Patients



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Intraoperative Care: General Guidelines

- Patients should receive appropriate and timely surgical care, including operative management, based on sound surgical judgment and availability of resources.
- Consider nonoperative management whenever it is clinically appropriate for patients.
- Consider waiting on results of COVID-19 testing in patients who may be infected.
- Avoid emergency surgical procedures at night when possible due to limited team staffing.

Key aspects in operating on patients with COVID-19

General

- If possible, postpone surgeries on COVID-19 patients until they test negative to two consecutive tests
- All known or suspected COVID-19-positive patients requiring surgical intervention must be treated as positive until proven otherwise in order to minimize infection spread.
- If the scheduled surgical procedure does not require a general anesthetic and if the clinical situation allows, patients should continue to wear a protective mask for the entire duration of the procedure

AIM: To protect staff and all non-COVID cases

Key aspects in operating on patients with COVID-19….II

Transportation to the theater

i. Patient must wear gloves, disposable gowns and be masked if not intubated

ii. Transfer routes must be precisely planned and be as short as possible

iii. Route must have been cleared to minimize anyone coming close or crossing the patient

iv. All items used for transportation (including lifts, ambulances, stretchers etc.) must be properly sanitized after

v. Personnel transporting patient must wear full PPE

AIM: to minimize the possibilities of infecting others

Key aspects in operating on patients with COVID-19….III

Theater utilization

i. Each theater should have a COVID operating suite (COS)

ii. The COS should have laminar air flow and frequent air exchange

iii. There might be a dedicated support team (Nurses, anaesthesiologist and porters) to handle all COVID cases

iv. There should be a filter area that demarcates COS from the rest of the theater.

v. This place must have PPEs, hand hygiene stations, and dedicated infectious disease waste bins .

vi. All unnecessary equipment should be moved away from this area

AIM: to minimize the possibilities of contaminating other parts of the theater and infecting others

Key aspects in operating on patients with COVID-19….IV

Receiving the patient

i. In-transit surgical patients proceeding through the theater block must not stop in the anesthetic bay, recovery room, or any place other than the COS

ii. All staff should wear PPE*

iii. Only essential staffs should be present

iv. A record of all staff who are involved must be kept

AIM: to minimize the possibilities of contaminating other parts of the theater and infecting others

Key aspects in operating on patients with COVID-19….V

Operating Room Procedure

- Once the operation starts, all efforts must be made to use what is available in the room and minimize staff transiting in and out the OR risk.
- Alcohol solutions for hand hygiene must always be available
- Disposable materials are preferred
- Keep operation time as short as possible
- Once in the OR, staffs should not leave until the operation is completed, and if they leave. they should not re-enter

AIM: to minimize the possibilities of contaminating other parts of the theater and infecting others

Key aspects in operating on patients with COVID-19….VI

Aerosol Generating Procedures (AGP)

- Some procedures likely to generate aerosolized particles have been associated with increased coronavirus transmission: trachea intubation, non-invasive ventilation, tracheostomy, cardiopulmonary resuscitation, and manual ventilation before intubation and bronchoscopy.
- For patients who are or may be infected, AGPs should only be performed while wearing full PPE

AIM: to minimize the possibilities of contaminating other parts of the theater and infecting others

Key aspects in operating on patients with COVID-19….VII

Aerosol generating procedures: Orthopaedics

Orthopaedic procedures are not peculiarly aerosol producing *(Yeh et al, Tran et al):*

- Aerosol concentration highest:
  - i. Diathermy electrocautery is used
  - ii. Irrigation/Suction
  - iii. Closest around the wound

These are procedures general to all of surgery Yeh et al (1995)
(level of evidence: 2)

- Systematic review of aerosol generating procedures did not list a single orthopedic procedure

Tran et al 2012
(level of evidence: 1)

Yeh HC et al Characterization of Aerosols Produced during Surgical Procedures in Hospitals. Aerosol Science and Technology. 1995 Jan 1;22(2):151–61.
Tran K, et al. Aerosol Generating Procedures and Risk of Transmission of Acute Respiratory Infections to Healthcare Workers: A Systematic Review. PLOS ONE. 2012 Apr 26;7(4):e35797.

Key aspects in operating on patients with COVID-19….VIII

Aerosol generating procedures: Orthopaedics

- Aerosol concentration highest in
  i. Diathermy electrocautery is used
  ii. Irrigation/Suction
  iii. Closest around the wound

Therefore,

- Minimize usage of diathermy
- For irrigation use saline in a syringe. Avoid using pulse lavage.
- While suctioning, avoid sudden motion that can cause splashes. During suction, an assistant can hold the cover of a kidney dish over the suctioning nozzle to limit spread of aerosols

AIM: to minimize the possibilities of contaminating other parts of the theater and infecting others

Key aspects in operating on patients with COVID-19….IX

Aerosol generating procedures: Orthopaedics

What to do to reduce Risk

While there is no study identifying any particular orthopaedic procedure as aerosol generating and the only available experimental procedure did not identify any orthopaedic procedure as aerosol generating, I will advice we err on the side of caution

Yeh HC et al Characterization of Aerosols Produced during Surgical Procedures in Hospitals. Aerosol Science and Technology. 1995 Jan 1;22(2):151–61.
Tran K, et al. Aerosol Generating Procedures and Risk of Transmission of Acute Respiratory Infections to Healthcare Workers: A Systematic Review. PLOS ONE. 2012 Apr 26;7(4):e35797.

Key aspects in operating on patients with COVID-19….X

Aerosol generating procedures: Orthopaedics

Therefore, I the following precautions during surgery:

- Power tools are potential sources of aerosol as well
  i. Use osteotome and nibblers rather than oscillating saw.
  ii. Use hand drills rather than power drills where possible
  iii. Avoid using broach but if it has to be used, use with caution and consider placing a wet swab over visible cancellous bone to catch blood droplets.
- Use non-operative alternatives at all time
- Use percutaneous alternative rather than open method

AIM: to minimize the possibilities of contaminating other parts of the theater and infecting others

General Anaesthesia

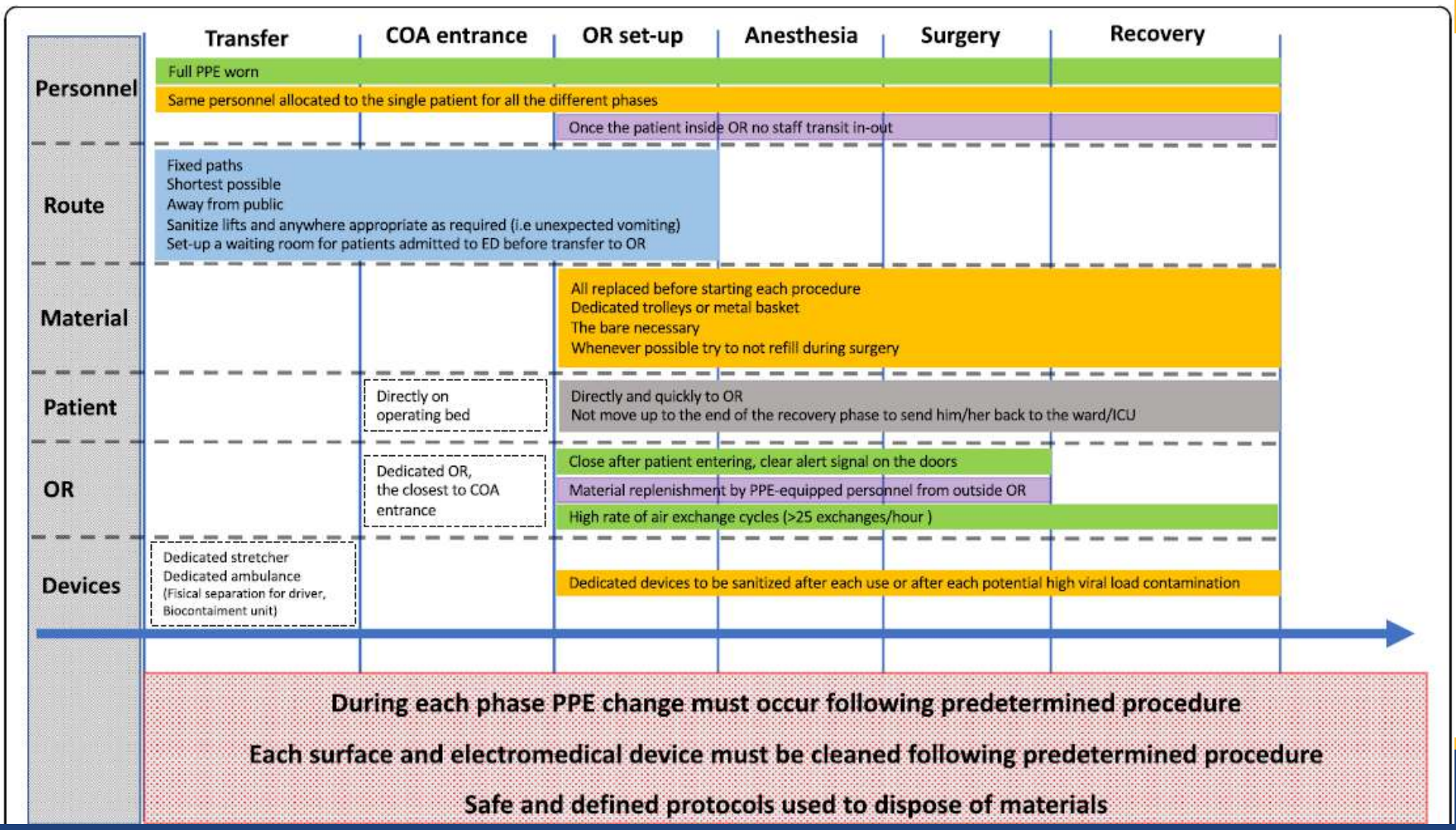
During COVID-19 pandemic

- Use **regional** rather than general **anaesthesia** whenever possible
- If GA is administered, then it should be administered in the theatre itself with minimal number of staff rather than in the anaesthetic room
- Staff members are not allowed to go in or come out of theatre for 20 minutes after intubation
- The same applies when the patient is extubated.
- Recover the patient is in the theatre, rather in the recovery room
- After recovery, patient is taken directly from the theater to the ward.

Raghavan et al. Minimising aerosol generation during orthopaedic surgical procedures- Current practice to protect theatre staff during Covid-19 pandemic. Journal of Clinical Orthopaedics and Trauma. 2020 Apr;S0976566220301387.

Coccolini F et al. Surgery in COVID-19 patients: operational directives. World J Emerg Surg. 2020 Dec;15(1):25.

Surgery on COVID Patient: Flowchart



Coccolini F et al. Surgery in COVID-19 patients: operational directives. World J Emerg Surg. 2020 Dec;15(1):25.

But there are concerns about non-operative Rx during COVID pandemic too

NSAID

- Nonsteroidal anti-inflammatory medications (NSAIDs) have been linked with a more severe form of COVID19.
- There is speculation that the drug causes “cytokine storms”.
- Taking the drug in the early stages of the disease may induce prolonged illness or more severe respiratory or cardiac complications
- The current advice is not to take NSAIDs in COVID-19 and to use paracetamol to treat symptoms.

The WHO initially advice against it, but later clarifies its stand (Sodhi et al 2020, Viswanath et al 2020.
Level of evidence: 4 (Low)

Sodhi M, Etminan M. Safety of Ibuprofen in Patients With COVID-19. Chest [Internet]. 2020 Mar 31 [cited 2020 May 4]; Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7151542/

Viswanath A, Monga P. Working through the COVID-19 outbreak: Rapid review and recommendations for MSK and allied heath personnel. Journal of Clinical Orthopaedics and Trauma. 2020 Mar;S0976566220300977.

But there are concerns about non-operative Rx during COVID pandemic too

LOCAL INJECTIONS

- Methylprednisolone has been linked to prolonged viral shedding and WHO advises against their use in COVID-19 except for patients with an associated acute respiratory distress.
- In addition, a previous study of over 15,000 cases showed that intra articular steroid administration reduces the efficacy of the influenza vaccine and sugges susceptibility to viral load.

TABLETS

- General corticosteroids have led to delayed viral shedding in MERS-CoV and SARS-CoV, as well as psychosis and avascular necrosis in SARS-CoV and increased mortality in influenza.

(Viswanath et al 2020. Clark et al 2020.)
Level of evidence: 2

Viswanath A, Monga P. Working through the COVID-19 outbreak: Rapid review and recommendations for MSK and allied heath personnel. Journal of Clinical Orthopaedics and Trauma. 2020 Mar;S0976566220300977.
Russel D Clark, Jonathan EMillar, J Kenneth Baillie. Clinical evidence does not support corticosteroid treatment for 2019-nCoV lung injury. The Lancet. 2020 Feb 15;395(10223):473–5.

Don't forget the home front too…

- Have a wash hand stand (Veronica bucket or tap and liquid soap) by the gate of your compound.
- All visitors and family members must wash their hands before entering the main house. Wipe the handles of your doors at least twice daily with 0.05%hypochlorite solution.
- You can make this by diluting Jik bleach about 70 times (Jik contains 3.5% hypochlorite solution). Clean other surfaces that are commonly touched by many people.

Don’t forget the homefront too…

- Wipe your phone with soapy linen once in the morning and at night. You may also check the website of the manufacturer for other things to do.
- Observe social distancing by foregoing all ówàḿbẹ̀s and being selective about which religious service to attend. I am aware that both RCCG & NASFAT have modified their worships in the light of the current situation.
- God is everywhere, let your faith tap into that.

FINAL THOUGHTS, WE MAY BE CALLED UPON TO BE JUST DOCTORS, NOT SURGEONS, NOT ORTHOPS. …

At some point soon, orthopaedic surgeons may have to step outside the comfort zone of trauma and orthopaedics and treat and triage any patient entering A&E

- The Royal College of Surgeons has outlined this in its "*Guidance for surgeons*" and has set out 5 key phases:
    i. Triage and deliver healthcare and protect the workforce
    ii. Maintain emergency surgery capabilities
    iii. Protect and preserve the workforce
    iv. Fulfill alternate surgical roles
    v. Fulfill alternate non-surgical roles
- It is therefore important that we:
    i. Understand the basics of COVID-19
    ii. Recognize when to escalate to respiratory medics or ICU
    iii. Are able to treat acute or emergent medical conditions as needed

BE SAFE, THINK SAFETY!

Your safety
in mind

COVID-19 Response

thank you

OTHER REFERENCES

- Angelos P. Surgeons, Ethics, and COVID-19: Early Lessons Learned. Journal of the American College of Surgeons [Internet]. 2020 Apr 10 [cited 2020 May 10];0(0). Available from: https://www.journalacs.org/article/S1072-7515(20)30301-X/abstract

- Chia CL. Being a Surgeon in the Pandemic Era. Journal of the American College of Surgeons [Internet]. 2020 Apr 18 [cited 2020 May 10];0(0). Available from: https://www.journalacs.org/article/S1072-7515(20)30315-X/abstract