

COVID 19

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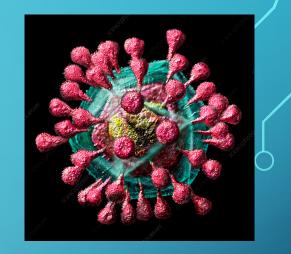
OBJECTIVES

• Understand

- Global and local epidemiology of COVID 19
- Risk factors, and preventive measures in COVID
- Practices required to effectively prevent infection in the University and hospital setting

OUTLINE

- What is COVID?
- Why has it been called a pandemic?
- How can it spread?
- Signs and symptoms of COVID
- Who are at risk?
- How to protect yourself and your loved ones
- Precautions to take while in the University and clinical rotations/work
- How take care of your physical and mental
- Questions?



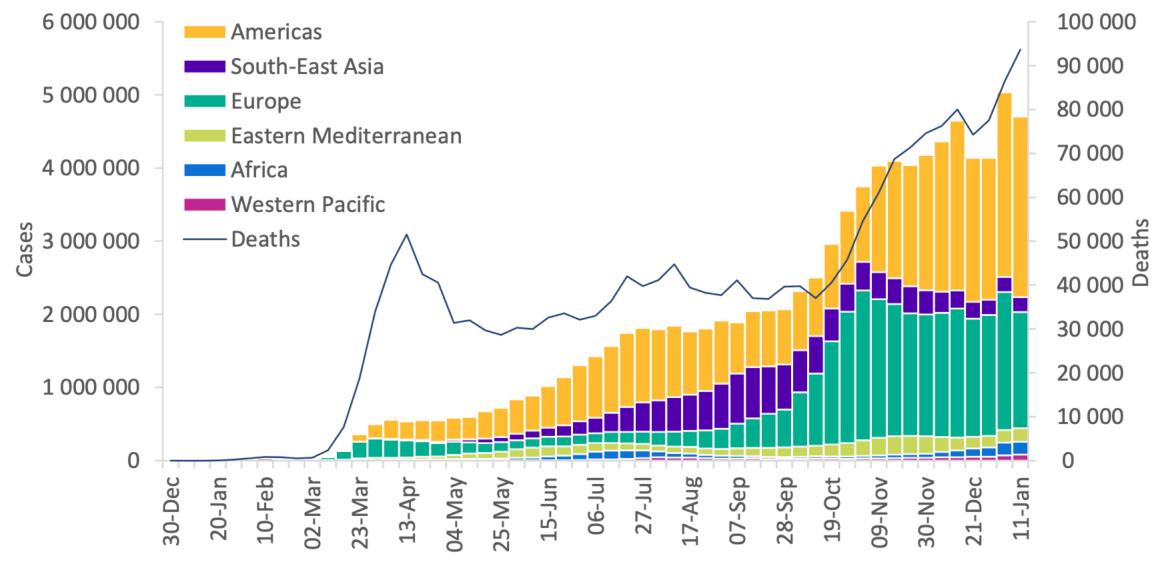
CORONA VIRUS



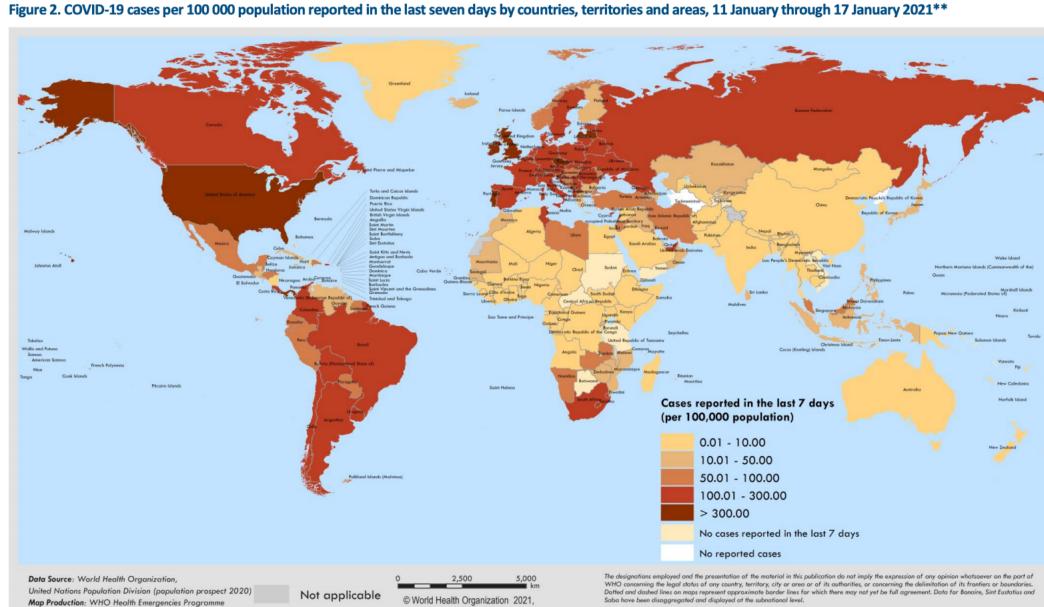
- These are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).
- A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans; COVID 19

Figure 1: COVID-19 cases reported weekly by WHO Region, and global deaths, as of 17 January 2021**

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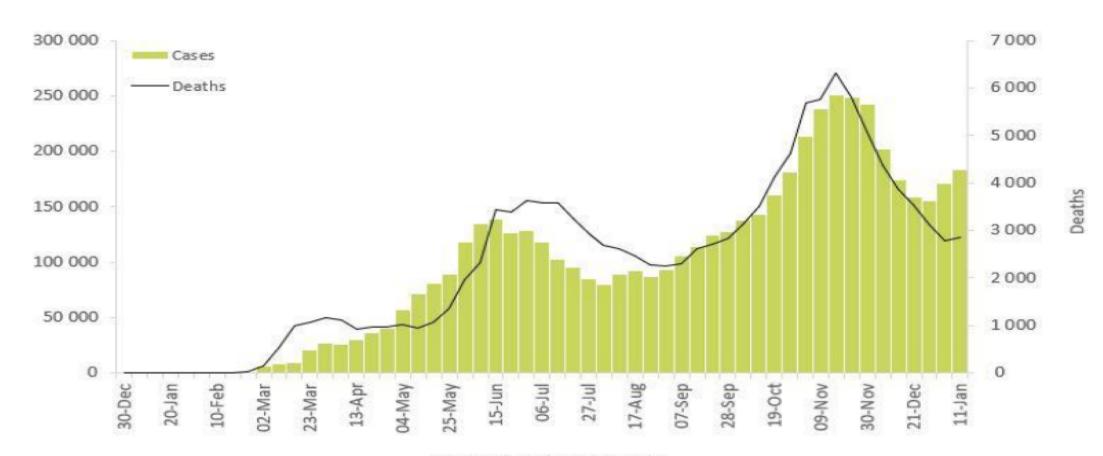


Reported week commencing



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**See data, table and figure notes



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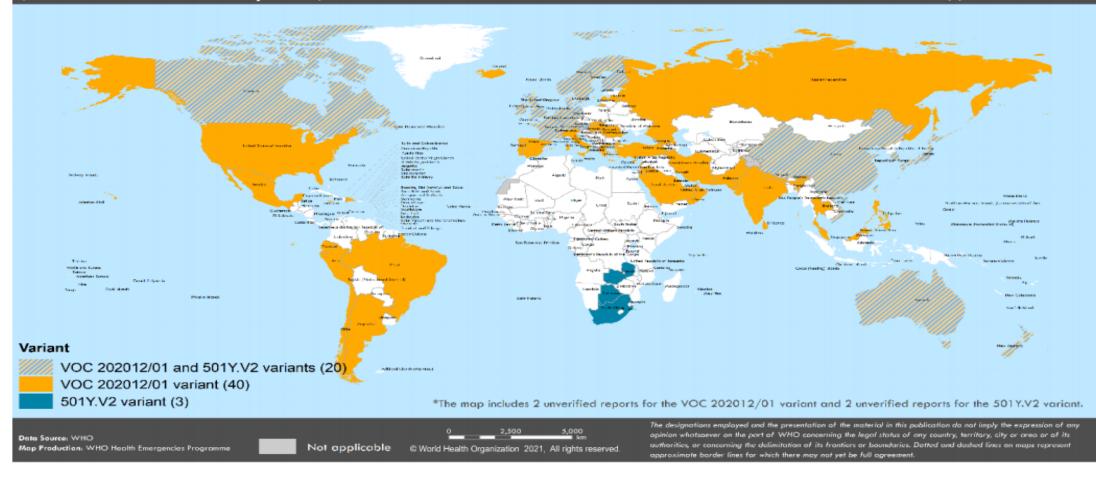
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Reported week commencing

Figure 3. Countries, territories and areas reporting SARS-CoV-2 VOC 202012/01 and SARS-CoV-2 501Y.V2 variant as of 19 January 2021

World Health Organization

Countries, territories, areas reporting VOC 202012/01 and/or 501Y.V2 variants (situation as of 19 January 2021)



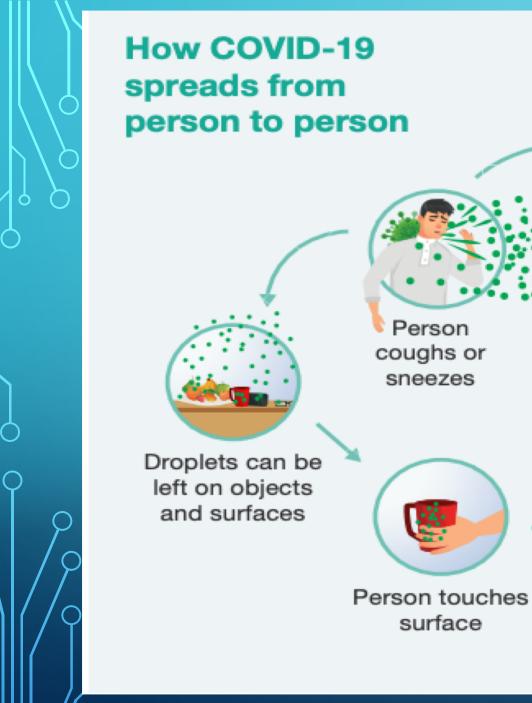
COVID situation in KSA



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CLINICAL PICTURE OF COVID 19





Droplets inhaled by another person

Virus passed on via

nose, mouth or eyes

- Droplets released when a person sick with COVID-19 coughs, sneezes or talks, can be inhaled.
- Droplets can be breathed in when you come in close contact with someone sick while hugging or shaking hands.
- Droplets can be left on objects and surfaces.
 If you touch something contaminated and touch your face, you may fall ill.



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Difficulty in breathing



Muscle pain



Fever or chills

Headache



Sore throat



Loss of taste or smell



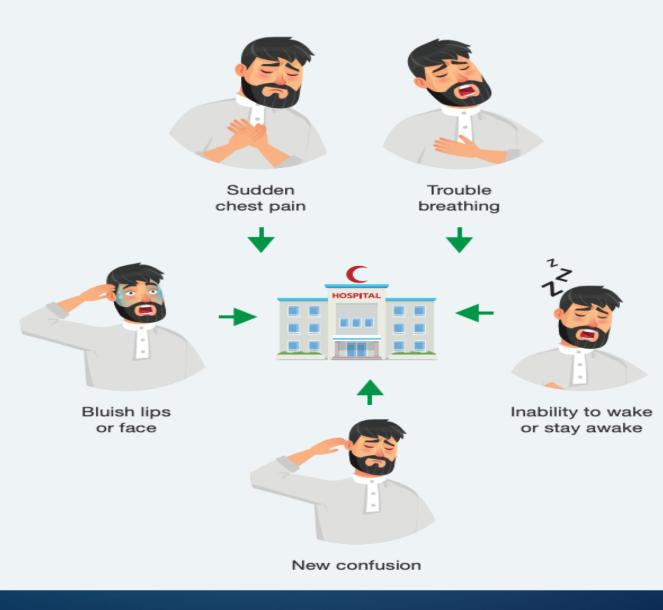


Suspected COVID-19 case is defined as:

Clinical presentation	Epidemiological link
 1-Patient with acute respiratory illness ¹(sudden onset of at least one of the following: fever² (measured or by history), cough, or shortness of breath) AND in the 14 days prior to symptom onset, met at least one of the following epidemiological criteria 	Had a history of travel abroad or Has visited or being a resident of high-risk area for COVID-19 in the kingdom ³ or A close physical contact ⁴ prior to symptom onset with a confirmed COVID-19 case or Working in healthcare facility
2-Any admitted Adult patient with unexplained sever acute respiratory illness (SARI), either Community Acquired Pneumonia (CAP) or Hospital Acquired Pneumonia (HAP).	Not required

¹Some patients may present with gastrointestinal symptoms like diarrhea and nausea prior to developing fever and lower respiratory tract signs and symptoms.







How to wash your hands



Wet your hands with water



Rub right palm over left hand with fingers interlaced and repeat with the other hand



Rub your thumb clasped in palm of your hand and repeat with the other hand



Apply enough soap to cover your hands



Rub your hands together and clean in between your fingers



Rub the tips of your fingers on the palm of your other hand, repeat on other hand



Rub your hands palm to palm

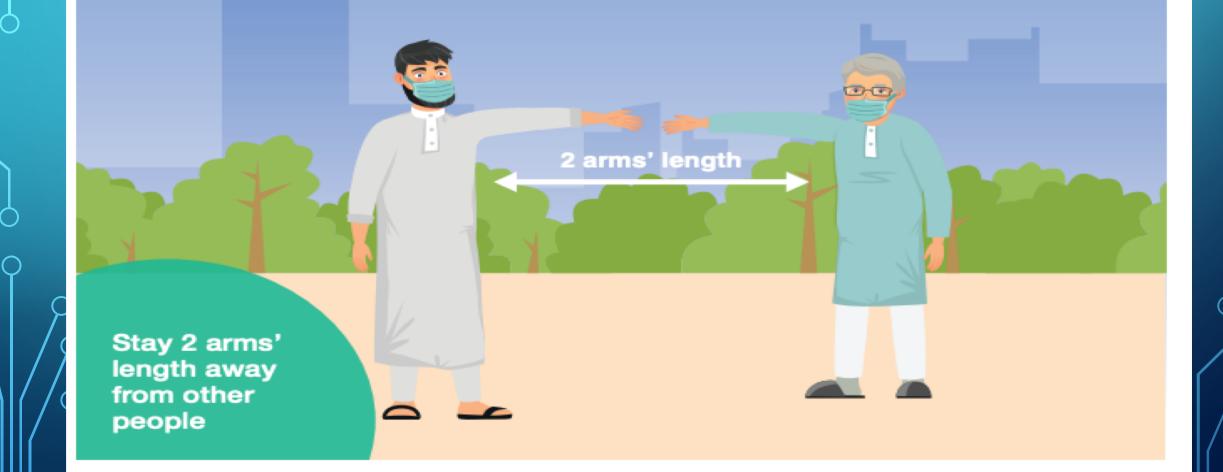


Rub the back of your fingers against your palms



Rinse hands with water

Practice physical distancing

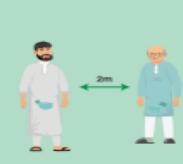


How to protect yourself and others



Wash your hands often

with soap and water for at least 20 seconds or use a hand sanitizer with at least 60% alcohol



Stay 2 metres away from people

who don't live with you and avoid sharing items

Cover your coughs and

sneezes

with a tissue or your elbow, throw the tissue in the bin and wash your hands



Wear a mask

covering your nose, mouth and chin whenever you go out



Clean and disinfect

frequently touched objects and surfaces with soap and water and then use a disinfectant



Wear a mask

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Use an alcohol-based hand sanitiser



Practice physical distancing

WHEN AND HOW TO WEAR MASKS?

• <u>https://youtu.be/esM_ePHn0aw</u>

HOW TO ACESS COMMUNITY TRANSMISSION?

- No (active) cases
- Imported / Sporadic cases
- Clusters of cases
- CT1: Low incidence of locally acquired widely dispersed cases detected in the past 14 days
- CT2: Moderate incidence of locally acquired widely dispersed cases detected in the past 14 days
- CT3: High incidence of locally acquired widely dispersed cases in the past 14 days
- CT4: Very high incidence of locally acquired widely dispersed cases in the past 14 days

Table 1: Situational Level assessment matrix usingtransmission level and response capacity indicators to guideadjustment of PHSM

	Response capacity		
Transmission level	Adequate	Moderate	Limited
No cases	0	0	1
Imported/Sporadic cases	0	1	1
Clusters of cases	1	1	2
Community - CT1	1	2	2
Community - CT2	2	2	3
Community - CT3	2	3	3
Community - CT4	3	3	4

- Situational Level O corresponds to a situation with no known transmission of SARS-CoV-2 in the preceding 28 days. The health system and public health authorities are ready to respond, but there should be no restrictions on daily activities.
- Situational Level 1 is a situation where basic measures are in place to prevent transmission; or if cases are already present, the epidemic is being controlled through effective measures around the cases or clusters of cases, with limited and transient localized disruption to social and economic life.
- Situational Level 2 represents a situation with low community incidence or a risk of community transmission beyond clusters. Additional measures may be required to control transmission; however, disruptions to social and economic activities can still be limited.

- Situational Level 3 is a situation of community transmission with limited additional capacity to respond and a risk of health services becoming overwhelmed. A larger combination of measures may need to be put in place to limit transmission, manage cases, and ensure epidemic control.
- Situational Level 4 corresponds to an uncontrolled epidemic with limited or no additional health system response capacity available, thus requiring extensive measures to avoid overwhelming of health services and substantial excess morbidity and mortality.

CONSIDERATIONS FOR IMPLEMENTING AND ADJUSTING PUBLIC HEALTH AND SOCIAL MEASURES IN THE CONTEXT OF COVID-19

- Public health and social measures (PHSM) have proven critical to limiting transmission of COVID19 and reducing deaths
- The decision to introduce, adapt or lift PHSM should be based primarily on a situational assessment of the intensity of transmission and the capacity of the health system to respond, but must also be considered in light of the effects these measures may have on the general welfare of society and individuals
- Indicators and suggested thresholds are provided to gauge both the intensity of transmission and the capacity of the health system to respond; taken together, these provide a basis for guiding the adjustment of PHSM. Measures are indicative and need to be tailored to local contexts
- PHSM must be continuously adjusted to the intensity of transmission and capacity of the health system in a country and at sub-national levels
- When PHSM are adjusted, communities should be fully consulted and engaged before changes are made









TECHNOLOGY: Viral Vector (Genetically modified virus)

When injected, the vaccine instructs human cells to produce the SARS-CoV-2 spike protein - the immune system's main target in coronaviruses. **EFFICACY: 62-90% PROCESS:** Passed all three trials

MAJOR BUYERS: EU (400 million doses), US (300 million doses), UK (100 million doses) THAILAND: 26 million doses PRICE: US\$ 4 per dose

DOSED REQUIRED: 2

Pfizer-**BioNTech**

TECHNOLOGY: mRNA The new mRNA technology tricks the body into making the viral protein itself which, in turn, triggers an immune response EFFICACY: 95% **PROCESS:** Passed all three trials

MAJOR BUYERS: EU countries (200 million doses), US (100 million doses) PRICE: US\$20 per dose **DOSED REQUIRED: 2**

Sinovac

TECHNOLOGY: Inactivated vaccine Using the dead Covid-19 virus itself to trigger an immune response EFFICACY: 50-70% (varies in tested countries) PROCESS: Phase 3 trials MAJOR BUYERS: Indonesia (40 million doses), Philippines (25 million doses) THAILAND: 2 million doses PRICE: US\$5 per dose **DOSED REQUIRED: 2**



Sputnik V

TECHNOLOGY: Adenoviral vector-based platform The technology delivers the genetic instructions for SARS-CoV-2 antigens directly into patients' cells, triggering an immune response **EFFICACY: 91.4%**

PROCESS: Phase 3 trials ongoing MAJOR BUYERS: Brazil (10 million doses), Argentina (10 million doses) Bolivia (2.6 million doses), India (contracted to locally produce 100 million doses)

PRICE: US\$10 per dose **DOSED REQUIRED: 2**

TECHNOLOGY: mRNA

Moderna



A new type of vaccine which uses messenger

RNA, which contains instructions for human cells to make proteins that mimic part of the coronavirus, to trigger an immune response. EFFICACY: 95%

PROCESS: Passed all three trials MAJOR BUYERS: EU (160 million doses), US (100 million doses), Canada (40 million doses) PRICE: US\$33 per dose **DOSED REQUIRED: 2**

Johnson & Johnson

TECHNOLOGY: Uses a cold virus to deliver genetic material from the coronavirus into the body to prompt an immune response. EFFICACY: Expected to be released by the end of January

PROCESS: Phase 3 clinical trials ongoing MAJOR BUYERS: EU (160 million doses), US (100 million doses), Canada (40 million doses) PRICE: Estimated US\$10 per dose **DOSED REQUIRED: 1**

Source: World Health Organization (WHO), agencies, respective companies

BANGKOK POST GRAPHICS

Platform	Attributes	Doses
mRNA	Fast development, speed low to medium manufacturing scale	2
DNA	Fast development, medium manufacturing scale	2
Viral vector	Medium development High manufacturing scale	1 or 2
Protein Subunit	Medium to fast development High manufacturing scale	2

COVID VACCINE. MEDSCAPE.

https://emedicine.medscape.com/article/2500139-overview?src=%3Fsrc%3Demailthis

BACK-TO-COLLEGE TIPS Protect Yourself from COVID-19

Watch your distance

Stay at least 6 feet apart from others, when possible

Wash your hands

or use hand sanitizer with at least 60% alcohol

Wear a mask in public spaces and common areas





The more closely you interact with others and the longer that interaction, the higher the risk of COVID-19 spread.

DORM

- Avoid sharing items with roommates or others.
- If you do, clean and disinfect before sharing or using.

SHARED BATHROOM

- Avoid placing toothbrushes directly on counter surfaces.
- Use totes for personal items to limit contact with other surfaces in the bathroom.

CLASSROOM

- · Enroll in online classes if they fit your educational needs.
- Wipe down your desk with a disinfectant wipe if possible.
- Skip seats or rows to create physical distance between other students.
- Avoid placing your personal items (e.g., cell phone) on your desk.

DINING HALL & MEALS

- Avoid sharing food, drink, utensils or other items with people.
- Pick up grab-and-go options for meals if offered.
- Avoid buffets and self-serve stations.

LAUNDRY ROOM

- Clean and disinfect surfaces that others have touched (e.g., buttons on the washing machine).
- Wash masks in warmest appropriate water setting for the fabric.



TAKE THE FOLLOWING:

- Mask
- Tissues
- Hand sanitizer
- Disinfection wipes
- (if possible)

cdc.gov/coronavirus

AS A MEDICAL STUDENT HOW CAN I PROTECT MYSELF, MY LOVED ONES, AND COMMUNITY FROM GETTING INFECTED?

PROTECT YOURSELF IN THE UNIVERSITY

- Risk for transmission of COVID-19 can be categorized according to the below criteria:
 - Lowest Risk: Faculty and students engage in virtual-only learning options, activities, and events.
 - More Risk: Small in-person classes, activities, and events. Individuals remain spaced at least 1.5

 2 meters apart and do not share objects (e.g., hybrid virtual and in-person class structures or staggered/rotated scheduling to accommodate smaller class sizes).
 - Highest Risk: Full-sized in-person classes, activities, and events. Students are not spaced apart, share classroom materials or supplies, and mix between classes and activities.





Guidelines for the Teaching Methods

(During Covid-19 pandemic)

in the College of Medicine

1441 - 1442 (First Semester)



PROMOTING BEHAVIORS THAT REDUCE SPREAD

- Checking the temperature of students at the entrance of building/hospital
- Staying Home or Self-Isolating when appropriate
- Hand Hygiene and Respiratory Etiquette
 - Recommend and reinforce handwashing with soap and water for at least 20 seconds
 - Wash hands immediately after: arriving at college, entering classroom, finishing lunch, touching shared objects, using the bathroom, coughing, sneezing, and blowing one's nose, and arriving at home.
- Masks/Cloth Face Coverings
- Shared Objects
 - Avoid sharing electronic devices, books, pens, calculators, and other learning aids.

PROMOTING BEHAVIORS THAT REDUCE SPREAD

Healthy Classrooms

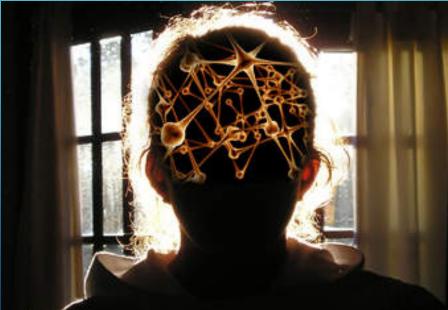
- Space seating/desks at least 2 meters apart when feasible (e.g. Leave TWO seats between students).
- Cafeteria and Restaurants
 - Grab and go
- Gathering between classes.....strictly not permissible
- Use of Elevators.....avoid as much as possible, use stairs

PROTECT YOURSELF WHILE YOU ARE IN THE HOSPITAL

- REMEMBER: PPEsurgical masks, face shield & gloves
- Always follow the guidelines.....OR, ICU, ER
- Always report any signs of illness, any one is deviating from the policies laid down
- Reduce congestion in the health clinic
 - Distance inside clinics has to be 1.5 meters
 - Compensate the clinical training by enforcing CBD, or online courses







REMEMBER: PROTECT YOUR MENTAL HEALTH

- Pandemics can be very stressful
- Stress can lead to....decrease learning curve
- Stress can be related to;
 - The COVID itself
 - How to cope with it
 - How to return back to normal life
 - Studies and keeping pace with the learning curve during the Pandemic
 - Being in the medical field......how do I protect my loved ones



HEALTHY WAYS TO COPE WITH STRESS

- Know what to do if you are sick and are concerned about COVID-19
- Know where and how to get treatment and other support services and resources, including counselling or therapy (in person or through telehealth services)
- Take care of your emotional health...... help you think clearly and react to the urgent needs to protect yourself and your family
- Take breaks from watching, reading, or listening to news
 stories, including those on social mediaKeep
 informed Listen to advice and recommendations from your
 national and local authorities



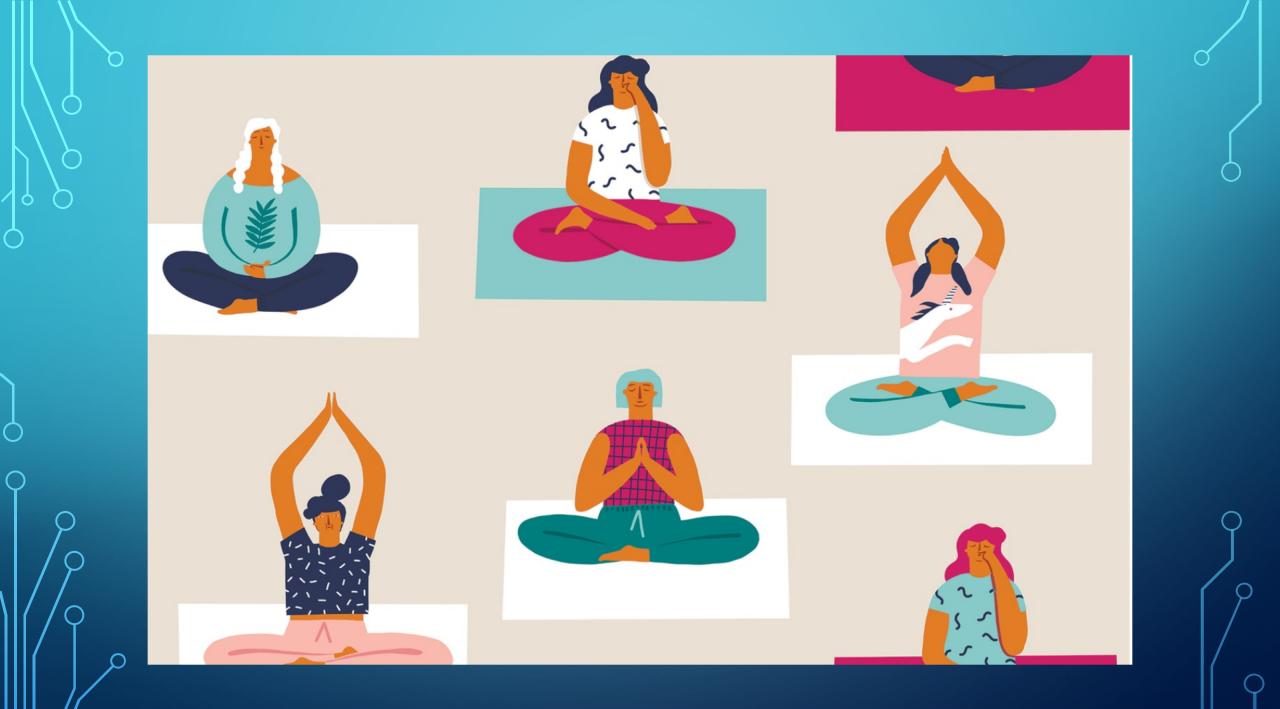
HEALTHY WAYS TO COPE WITH STRESS

Take care of your body.

- Take deep breaths (breathing exercises), stretch, or meditation
- Eat healthy, well-balanced meals
- Exercise regularly
- Get plenty of sleep
- Avoid smoking and drug use
- Have a routine. Keep up with daily routines as far as possible, or make new ones
- Make time to unwind. Try to do some other activities you enjoy other than studies
- **Connect with others:** Talk with people you trust about your concerns and how you are feeling; family, mentors, peers.....
- Socialisation can be done online, through social media, or by phone or mail

STUDY STATION





THE TYPES OF MINDFULNESS PRACTICE

• While mindfulness is innate, it can be <u>cultivated through proven techniques</u>

Here are some examples:

- <u>Seated</u>, <u>walking</u>, standing, and <u>moving</u> meditation (it's also possible <u>lying down</u> but often leads to sleep);
- Short pauses we insert into everyday life
- Merging meditation practice with other activities, such as yoga or sports
- Applications for mindfulness: https://www.mindful.org/free-mindfulness-apps-worthy-of-your-attention/
- & https://www.developgoodhabits.com/best-mindfulness-apps/

MINDFULNESS

- Mindfulness is not obscure or exotic
- Mindfulness is not a special added thing we do
- You don't need to change
- Mindfulness has the potential to become a transformative social phenomenon.
- Anyone can do it
- It's a way of living.....It brings awareness and caring into everything we do—and it cuts down needless stress. Even a little makes our lives better.
- It's evidence-based
- It sparks innovation

WHAT SHOULD I DO IF I FEEL SICK?

Report immediately

- Who and where?
 - Flue like symptoms ----- flu clinic ER (24 hrs)
 - Come in contact with a positive case or family member -----Occupational health clinicsfill in the link (contact tracing)

LESSONS LEARNT FROM COVID 19 PANDEMIC?

- What really mattershealth and healthy life style
- Slow down
- "me time"
- Family bonding
- Community services.....helping others



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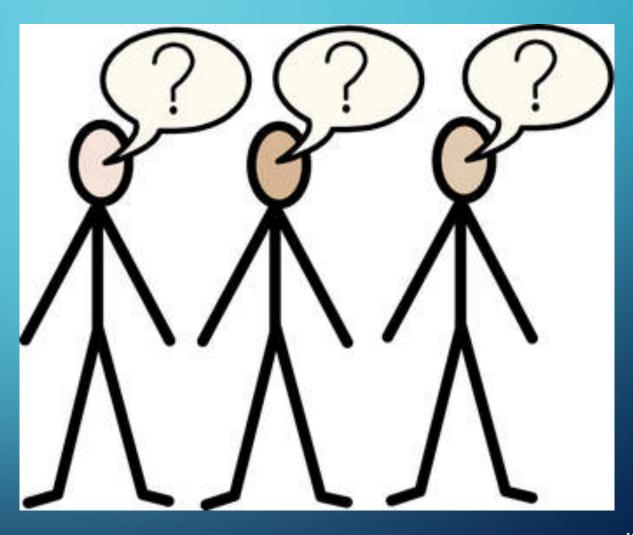
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THANK YOU FOR YOUR ATTENTION

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