

# Covid 19 and Mental Health

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# Covid 19 and Mental Health

- The COVID 19 pandemic is due to the severe acute respiratory syndrome-2 (SARS CoV-2)
- Massive global morbidity and mortality
- Latest numbers in the US
  - 79,325,576 cases
  - 943,411 deaths
- Exacerbates ongoing psychiatric conditions and is associated with new onset psychiatric disorders

# Covid 19 and Mental Health

- Clinical manifestations may vary
  - Asymptomatic
  - Symptomatic
    - Fever, cough, shortness of breath, myalgias, malaise
  - Atypical presentations
    - GI symptoms
      - Can affect body's ability to metabolize medications
  - Severe pneumonia or ARDS (adult respiratory distress syndrome) requiring treatment in ICU

# Covid 19 and Mental Health

- Neurologic symptoms
  - Polyneuropathy
  - Myopathy
  - Anosmia (loss of sense of smell)
  - Ageusia (loss of sense of taste)
  - Large artery ischemic stroke
- Anosmia and Ageusia
  - 30-75% of people lose sense of smell
  - Can last weeks to months
  - Mediated by Covid causing severe inflammation in structural cells of the olfactory system

# Covid 19 and Mental Health

- Pathophysiology of Covid 19
  - Infection of the nervous system
  - Dysregulation of cytokine activation
    - Cell mediated inflammation
  - Post infectious autoimmune mediated mechanisms
  - Hypoxia and thrombotic neuronal injury
  - Hematogenous spread of virus

# Covid 19 and Mental Health

- Psychiatric manifestations in acute illness (e.g. ICU cases)
  - Altered mental status
    - Changes in affect, behavior, movement
  - Delirium
  - Agitation
  - Disrupted executive function
  - Catatonia

# Covid 19 and Mental Health

- Risk factors for infection
  - Diabetes
  - Hypertension
  - Vascular brain disease
  - Coagulopathy
  - Obesity
  - Lung disease
  - Pre-existing mood disorders
    - Sleep dysregulation and inactivity
    - Higher levels of inflammatory markers (IL-6, CRP, TNF)
    - 30% higher risk for hospitalization if infected with Covid 19
    - 50% higher risk of death

# Covid 19 and Mental Health

- Social risk factors for infection
  - Intersectionality
    - Systemic racism
    - Economic disparity
    - Gender inequality
    - Environmental degradation
    - Increasing risk from climate change
  - Living Environment
    - Prisons
    - Community mental health systems and housing
    - Inpatient psychiatric units
    - Homeless shelters



# Covid 19 and Mental Health

- Protective factors for Covid 19
  - Masking
  - Vaccines and boosters
  - Social distancing
  - Quarantining
  - Indoor ventilation
  - Hand washing
  - Young age
  - Ability to interact outdoors
  - Vitamin D?

# Covid 19 and Mental Health

- Pandemic effects unexpected in Western societies
- Belief that modern health care, healthy lifestyles, and available medications would protect us was not upheld
- Undermined sense of safety of our societies
- Increased awareness of vulnerability and mortality
- Greatly affected our interconnectedness as a society
- Increased isolation
  - Most effective measure as seen in China but leads to significant negative effect on mental health

# Covid 19 and Mental Health

- Suddenly having to face much greater challenges in everyday life and social behavior
- Increased fight or flight behaviors
  - Stockpiling essentials (e.g. toilet paper, food)
  - Increased anxiety and panic
  - Paranoid behavior
    - Suspecting groups (e.g. Asians)
    - Having a cold or cough
    - Stigma of Covid 19 infection

# Covid 19 and Mental Health

- Leadership
  - Fractured
  - Trying to reassure communities
  - Disorganized countermeasures
  - Contradictory
- Disinformation
  - Confusion, mistrust, frustration
  - Changing recommendations from authorities
  - Fear
  - Leading to distrust of authorities
- Media
  - Excessive coverage of the issues
  - Catastrophizing
  - Sensationalism

# Covid 19 and Mental Health

- Stigma of Covid infection
  - Stops people from accessing services
  - Limits effectiveness of public health measures
  - Shame
  - Guilt
  - Leaders of all kinds modeling appropriate behavior
    - Praise
    - Clear and direct messaging

# Covid 19 and Mental Health

- BMJ Study Jan 2022
  - Looked at almost 154,000 Covid patients in the Veteran Health Administration
  - Patients had no mental health issues for at least 2 years prior to infection
  - Compared them to controls who had all of the same risk factors except Covid infection
  - People who had Covid had
    - 39% more likely to develop depression
    - 35% more likely to develop an anxiety disorder
    - 38% more likely to be diagnosed with stress or adjustment disorders
    - 41% more likely to be diagnosed with a sleep problem

# Covid 19 and Mental Health

- Psychiatric issues worsened by pandemic
  - Substance use disorders
    - 100,306 fatal drug overdoses for the 12 months ending in April 2021, up 28.5 percent from the 78,056 fatalities in the same period ending in April 2020
    - Increase in alcohol and other substance of abuse, up 12%
  - Domestic violence
    - Exacerbated by close proximity, quarantine
  - Anxiety disorders
    - GAD, PTSD, OCD worsened
      - Wearing PPE
    - Social anxiety?

# Covid 19 and Mental Health

- Psychiatric issues worsened by pandemic
  - Sleep
    - Up to 32% of adults reported problems sleeping
  - Worsening of chronic mental and physical health conditions
  - Financial
    - Job loss
    - Food insecurity
    - What happens when stimulus checks and eviction ban end?



# Covid 19 and Mental Health

- Psychiatric issues worsened by pandemic
  - Access problems
    - Health care
    - Medication
    - Basic services
  - Disproportionately affected communities of color
- Young adults (18-24)
  - Significant rise in substance abuse, depressive or anxiety disorders, and suicidal ideation
- Older adults with chronic mental or physical conditions and/or functional limitations are the most vulnerable and fared the worst

# Covid 19 and Mental Health

- Psychiatric issues worsened by pandemic
  - Effect on Children
    - Trauma of domestic violence
    - Loss of loved ones
    - Anxiety from unpredictable changes to routines
    - Mental health related ED visits
      - Increase of 24% for ages 5-11
      - Increase of 31% for ages 12-17

# Covid 19 and Mental Health

- Post Covid Syndrome
  - “Long Covid”
  - May be affecting up to 50 million people worldwide
  - Collection of over 200 symptoms across multiple organ systems
    - Most common
      - Cognitive and mental impairments
      - Fatigue
      - Joint pain
      - Shortness of breath
      - Myalgias
      - Cough
      - Headache

# Covid 19 and Mental Health

- Post Covid Syndrome
  - Risk factors
    - Female sex
    - More than 5 symptoms with initial infection
    - Early shortness of breath
    - Prior psychiatric illness
    - Specific biomarkers
      - CRP
      - D-dimer
      - Lymphocyte count

# Covid 19 and Mental Health

- Post Covid Syndrome
  - Chronic fluctuating pattern of presentation
  - Affects all age groups and disease severity
  - Substantial healthcare burden
  - Uncertainty over how to measure and treat
  - Pathophysiology
    - Driven by long term tissue damage (lungs, heart, brain)
    - Pathological inflammation
      - Viral persistence
      - Immune dysregulation
      - Autoimmunity

# Covid 19 and Mental Health

- What can you do for yourself
  - Adequate rest a priority
  - Limit alcohol and substance use
  - Be patient with yourself
  - Breathing exercises
  - Exercise
  - Being outdoors
  - Socializing safely
  - Balanced diet
  - Talk to others
  - Limit media exposure (e.g. doom scrolling)
  - Having a routine
  - Focus on things you can control
  - Helping others

# Covid 19 and Mental Health

- The Future of Covid
  - New studies show that infection with the Covid 19 virus likely prevents hospitalization and death for a few years
    - Vaccination increases that protection significantly
    - Two types of protection: reinfection and severe illness if reinfected
    - Much better than the initial studies showing only a few months of protection
  - Prior infection reduced the risk of hospitalization if reinfected by 90%
  - Endemic vs pandemic
    - Virus will not disappear
    - Enough people gain protection from infection and vaccines
      - Much less transmission
      - This will prevent severe infection, hospitalizations, and death in large numbers

# Covid 19 and Mental Health

- Vaccine protection
  - Unclear at this point
  - Depends on mutations of the original virus (i.e. Omicron, Delta)
  - Possibly yearly shots similar to the flu shot



# Covid 19 and Mental Health

- Aftermath
  - Moved out of pandemic to endemic?
  - Still assessing the effects of the pandemic on mental health
- Plastic Surgery
  - Increased use of video conferencing and social media
  - Accentuates idealized facial features
  - Most aware of the nose
  - Privacy from family, friends, coworkers
  - No need to take a leave from work

# Covid 19 and Mental Health

- Aftermath
  - Alarming decline in worldwide mental health
    - Mental Health Million project of Sapien Labs
    - Utilizes MHQ (Mental Health Quotient) a free online tool
    - Economic Prosperity not protective; negative correlation
    - Higher education was associated with better mental well being
    - 18-24 year olds reported poorest mental health
    - From sample in 2019 vs 2020 vs 2021
    - 2019 to 2020 8% decline; 2020 to 2021 3% decline
    - Large increase in people who were “depressed or struggled”

# Covid 19 and Mental Health

- Aftermath
  - Alarming decline in worldwide mental health
    - Most dramatic finding was in age differential (as compared to gender, etc.)
      - Two to threefold difference between younger and older adults
      - Impact of social isolation?
    - Time spent on the internet
      - Eats into the time spent building a sense of social self
      - Social self – how you see yourself in relation to others, how you relate to others, and ability to form strong stable relationships and maintain them
    - Sedentary time
      - Emotional and biologic impact
      - Directly related to screen use
      - Produces greater inflammation

# Covid 19 and Mental Health

- Aftermath
  - Murder rate rose 30%
    - 21,570 murders in 2020
    - 16,670 in 2019; increase of 4900
    - Increase across the board – big cities, small towns, and everywhere in between
  - Possible factors
    - Economic hardship
    - Police pulling back secondary to pandemic
    - George Floyd's killing May 2020
    - More people carrying firearms
      - Firearms were used in 77% of murders (highest on record)
      - Fear and sense of safety

# Covid 19 and Mental Health

- Aftermath
  - Eating Disorders
    - Anorexia Nervosa, Bulimia, and binge eating disorder
    - More common than bipolar disorders and autism, on par with substance use disorders
    - Increase of 15.3% in 2020
      - Seen globally but more so in east and south Asia
    - School closures, cancellation of extracurricular activities, and social isolation all led to significant disruption
    - For those at risk or with eating disorders, these disruptions worsened or triggered symptoms

# Covid 19 and Mental Health

- Aftermath

- Tic severity and social media use in children and adolescents
  - Increase in tic disorders but unclear why
  - Tic disorder – neurologic disorder that causes sudden repetitive involuntary muscle movements and sound
  - Tiktok in particular
  - Girls experiencing “explosive tic onset” that mimics videos from Tiktok
  - 65% of survey used social media 4-5 times a day for an average of 5.6 hours
  - 90% reported increased social media use during Covid
  - Patients did not develop new tics but preexisting ones worsened
  - Seeing others tic behaviors can exacerbate their own symptoms

# Covid 19 and Mental Health

- Aftermath
  - Dental health
    - Half of all dentist were seeing an increase in stress related conditions
      - Grinding
      - TMJ/Jaw pain
      - Chipping teeth
    - A quarter saw a rise in cavities and gum disease
    - Secondary to changes in diets and hygiene
    - Loss of dental insurance
    - Rise in prescriptions of SSRI's
      - SSRI's can cause grinding, clenching, dry mouth

# Covid 19 and Mental Health

- Aftermath
  - Family members of Covid patients in intensive care may develop anxiety depression, or post traumatic symptoms
    - Recent study in JAMA Apr 2022
    - Family members described distrust, loss of control, and uncertainty around difficult decisions
    - Experiences worsened by rapid decline in Covid patients and level of restrictions
    - 63% of those surveyed had PTSD
      - Higher scores in women, Hispanic people, and those with prior mental health treatment
    - 31% of those surveyed had anxiety or depression



# Covid 19 and Mental Health

- Questions?