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
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• 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
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• 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
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• Psychiatric manifestations in acute illness (e.g. ICU cases)
  • Altered mental status
    • Changes in affect, behavior, movement
  • Delirium
  • Agitation
  • Disrupted executive function
  • Catatonia
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- 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
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• 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
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- Protective factors for Covid 19
  - Masking
  - Vaccines and boosters
  - Social distancing
  - Quarantining
  - Indoor ventilation
  - Hand washing
  - Young age
  - Ability to interact outdoors
  - Vitamin D?
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• 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
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• 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
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- 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
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- 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
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• 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
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• 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?
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• 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?
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• 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
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• 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
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• 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
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• 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
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• 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
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• 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
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• 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
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• 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
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• 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
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• 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”
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• **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
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• 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
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• 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
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• 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
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- Aftermath
  - Dental health
    - Half of all dentists 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
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• 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
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• Questions?