Benefis Hospital System Post COVID-19 Recovery Program

Brad A Nieset MD

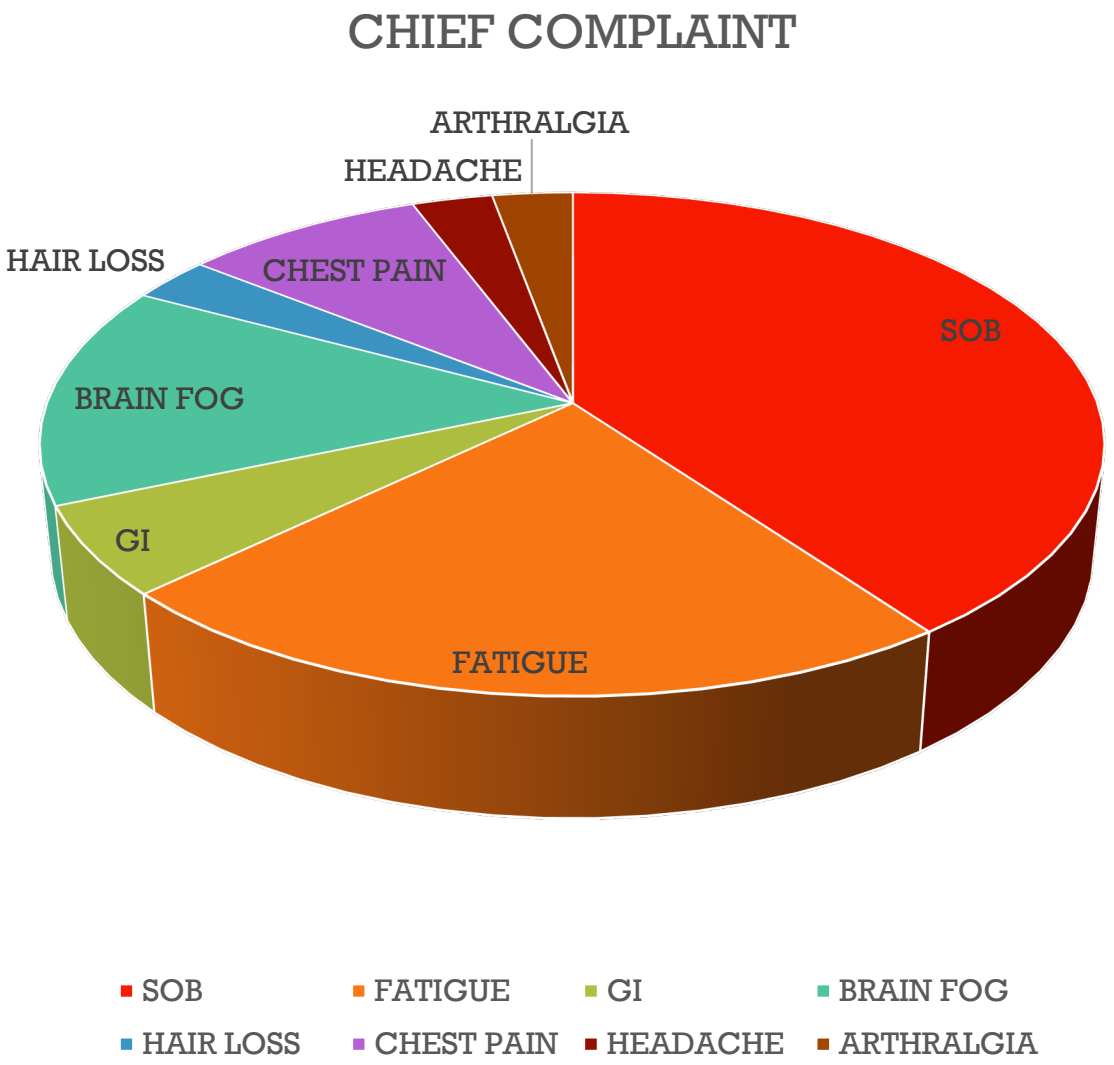
Benefis Post COVID-19 Recovery Program

- Started 3/2021
- Covers entire State of Montana
- Patients from other States seen including; FL, MD, VA,IL, WI, ID, ND, WY, UT, WA, and Alberta
- Ages 11-87 years old
- Online self referral process
- No positive testing required
- Initial telephone intake visit
- Average 1-2 in person appointments, with telehealth appointments in between

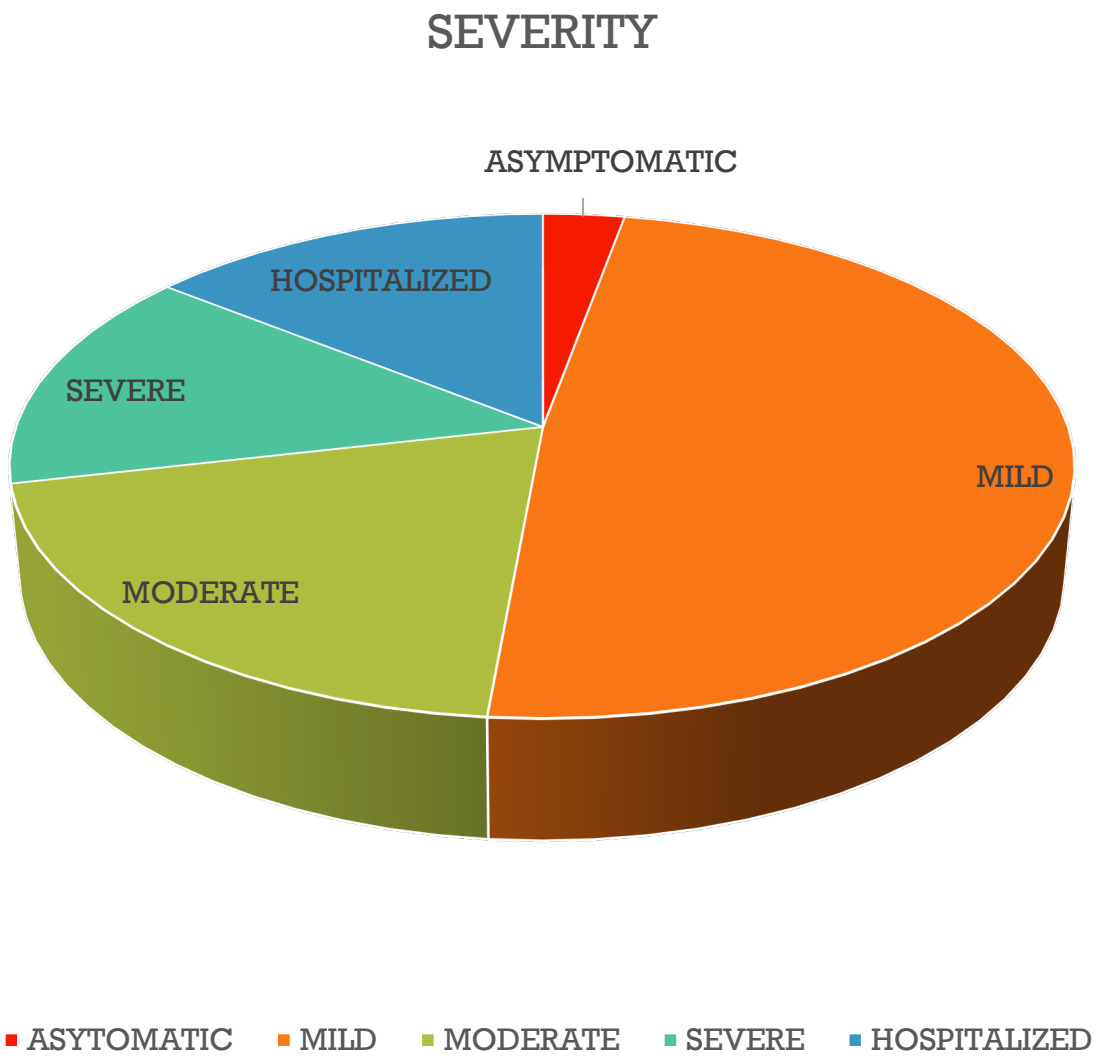
74% Female
26% Male

- large analysis of 308,010 COVID-19 adults hospitalized at US academic centers showed that males have a higher rate of respiratory intubation and longer length of hospital stay compared to females and have a higher death rate even when compared across age groups, race/ethnicity, payers, and comorbidity.

Chief Complaint



Severity of Initial Covid Illness



Neurological Symptoms

- -Brain Fog; attention, concentration, finding words, short term memory, timing (studies 67% 1/2022)
- -Vertigo (studies 12-20% 1/2022)
- -Neuropathy - hands / feet (studies 15.2% 10/2021)
- -Tremors
- -Tinnitus (15% 1/2022)
- -Diarrhea (studies 15% 1/2022)
- -Ageusia- Loss of Taste (Studies 7-11%) (10% 9/2021)
- -Dysgeusia - Altered Taste
- -Anosmia- Loss of Smell (Studies 7-11%) (10% 9/2021)
- -Dysosmia- Altered Smell
- -Headache (Studies 2%) (9.1% 10/2021)
- -Arthralgia (Studies 9%)
- -Abdominal Pain (studies 7% 1/2022)
- -Dysautonomia; orthostatic dizziness, sweating, bloating, incontinence, blurriness
- -Early Satiety
- -Weight Loss
- -Nausea

Cardio-Pulmonary Symptoms

- -Post Exertional Malaise (Studies 69%)
- -Fatigue (Studies 63%) (61% 2022)
- -Dyspnea with Exertion (Studies 22.9%) (55% 2022)
- -Dizziness (53% 2021)
- -Decreased Exercise Capacity
- -Sleep Disturbances (Studies 26%) (24%-6/2021) unrefreshing upon awakening, fragmented
- -Dyspnea at Rest (Studies 42-66%) (23.5% 2022)
- -Anxiety (Studies 23%) (18.9% 10/2021)
- -Chest Pain/Tightness (Studies 21.7%) (22% 2022)
- -Myalgia (Studies 2%) (20% 12/2021)
- -Palpitations (20% 10/2021)
- -Cough (Studies 15.4%) (11.6% 6/2021)

Covid Variants

- Alpha "Original" Variant; March 2020- July 2021
- Delta Variant; June 2021-February 2022
- Omnicron Variant; December 2021- current

Initial Workup

- Neurocognitive testing
- CXR
- 6-minute walk test
- Spirometry
- Overnight oximetry (in home)

Neurological Pearls

- 1% Percentile results **COMMON** in Covid provoked respiratory disease with primary hypoxemia
- Low reaction time **correlates** with sleep apnea
- Low psychomotor speed, processing speed, and motor speed, **correlates** with Covid provoked respiratory disease
- MRI is not needed unless focal exam findings
- Don't focus on treating individual symptoms

Neurological Treatments

- Strattera 40mg QAM for 12 weeks
- Ritalin 5mg 1-2 BID for 12 weeks
- Aricept 10mg; ½ dose QPM for 2 weeks then increase to full dose thereafter for 12 weeks
- Exelon 4.6mg patch, apply daily for 12 weeks
- LUMINOSITY APP

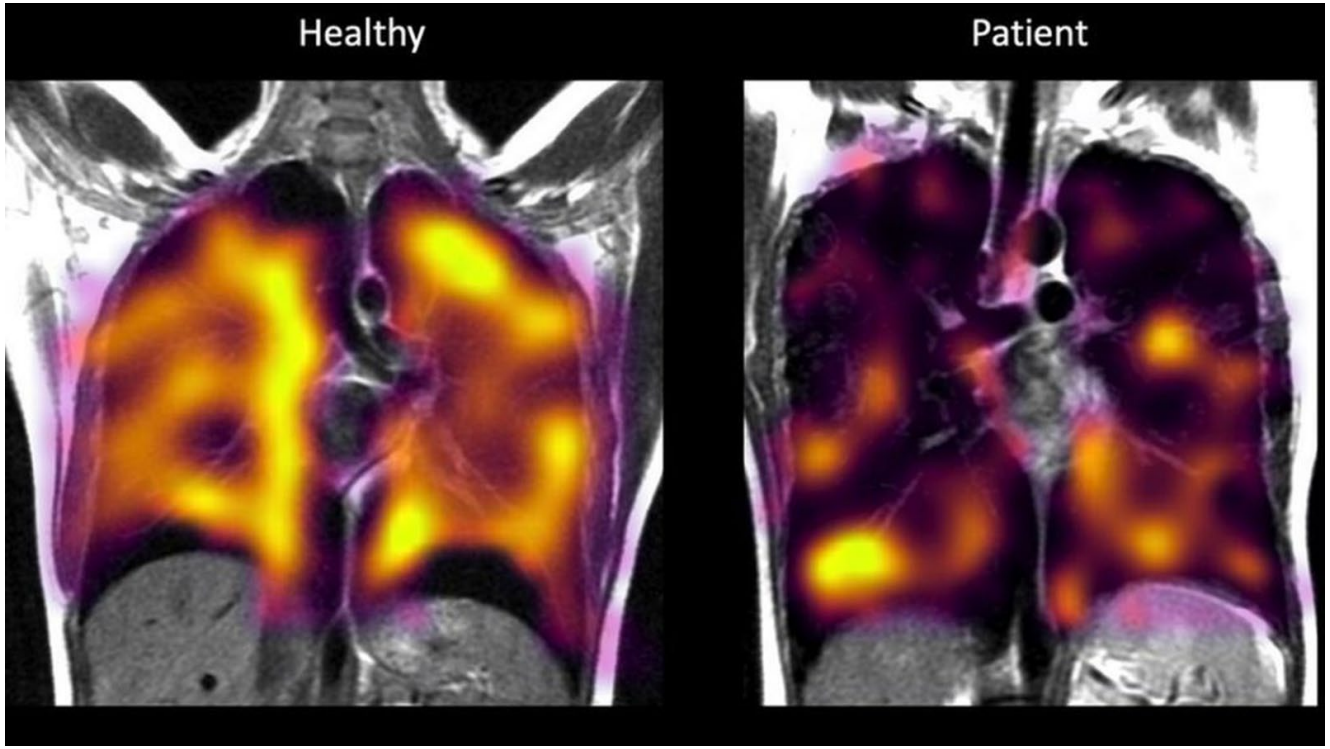
Cardio-Pulmonary Pearls

- Low risk individuals with cardiac complaints think PULMONARY
- Occupation exposure; military, RR, wildland FF
- Covid provoked DVT / PE only seen in first 30 days of illness
- In Covid patients complaining of INSOMNIA; think oxygen deficiency, NOT sleeping pill deficiency
- Covid does not cause Asthma
- Methacholine challenge test; wait 6 months post covid, due to false positive / equivocal results
- Oxygen does not treat Covid provoked respiratory disease
- If a patient is started on oxygen, do not stop it until you have cleared them with a normal ONO / O2 Titration

Respiratory Treatments

- Budesonide 0.5mg / 2 ml; nebulized BID for 12 weeks
- Advair HFA 45 mcg / 21mcg; 2 puffs BID

The team, from Oxford, Sheffield, Cardiff and Manchester compared xenon gas scans and other lung-function tests in three groups of people. Researchers found for the majority of people with long Covid, gas transfer was less effective than in healthy controls.



Questions ?

- https://www.benefis.org/coronavirus/post-covid-19-recovery-program
- https://www.benefis.org/coronavirus/medical-professionals-post-covid