

# Assessing Covid-19 vulnerability using Covid-age in people with severe mental illness

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## Background

First case of Covid-19 was reported during late 2019, since then it has caused unprecedented social and economic hardship to the entire world population. Availability of vaccines against Covid-19 offers some glimmer of hope. Even though every one is at risk of getting infected with Covid-19, some are more vulnerable to developing severe illness with increased mortality if they were infected. Higher prevalence of metabolic syndrome and other medical comorbidities among people with severe mental illness in theory should make this population more vulnerable to Covid -19. We were interested in testing this hypothesis. We used "Covid- age" to assess the vulnerability of people with severe mental illness.

## Aim/Objective

Our aim was to assess the vulnerability of people with severe mental illness to Covid-19. Vulnerability is defined as the risk that an individual would develop serious illness and die, if they were to get infected by Covid-19. People with severe mental illness are vulnerable to medical comorbidities, cardiovascular risk factors and metabolic syndrome. This in turn made us hypothesize that this population group is likely to be more vulnerable to Covid-19. We decided to test this hypothesis by calculating the Covid-age of our patients.

## Methods

After obtaining Clinical Audit Consent from the Clinical Director, we carried out a cross sectional survey on our patients to identify Covid-age on a total of 45 patients with severe mental illness.

Data for the study were gathered from reviewing patient's medical record and their medication list.

32 patients were from four psychiatric rehab and recovery high support community residences, all the residents were included in the study no inclusion or exclusion criteria used.

13 inpatients with history of severe mental illness and prolonged inpatient admission were included in the study.

We used Covid-age calculator provided in ALAMA (The Association of Local Authority Medical Advisors, UK) website to calculate the Covid-age of individual patients.

The calculator arrives at Covid age of a person by adding the patients actual age and age equivalents of ethnicity, gender and other medical comorbidities.

## Results

Average Covid- age was found to be higher than their average actual age in 100% of the study population. This increase in average Covid-age also placed them at higher vulnerability risk level to Covid-19 when compared to their average age. Average Covid-age was increased by 19 years, 18 years and 8 years for the people aged between 30-49 years, 50-64 years and 65-79 years respectively.

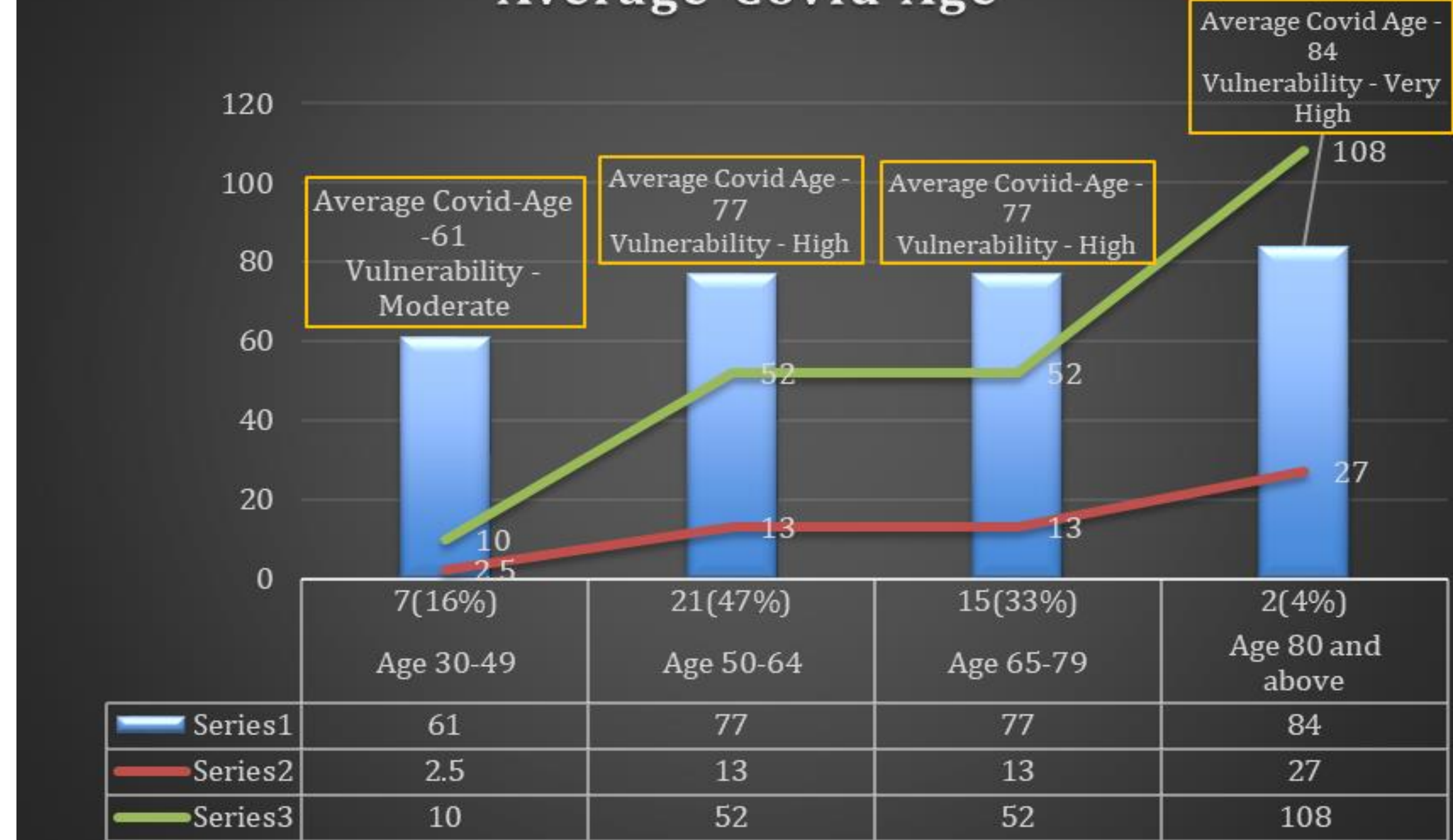
Factors other than the age, gender and ethnicity that contributed to increase in Covid-age were

- 1.High BMI (60%)
- 2.Type 2 Diabetes(49%)
- 3.Hypertension(42%)
- 4.Cerebrovascular disease(24%)
- 5.Asthma (22%)

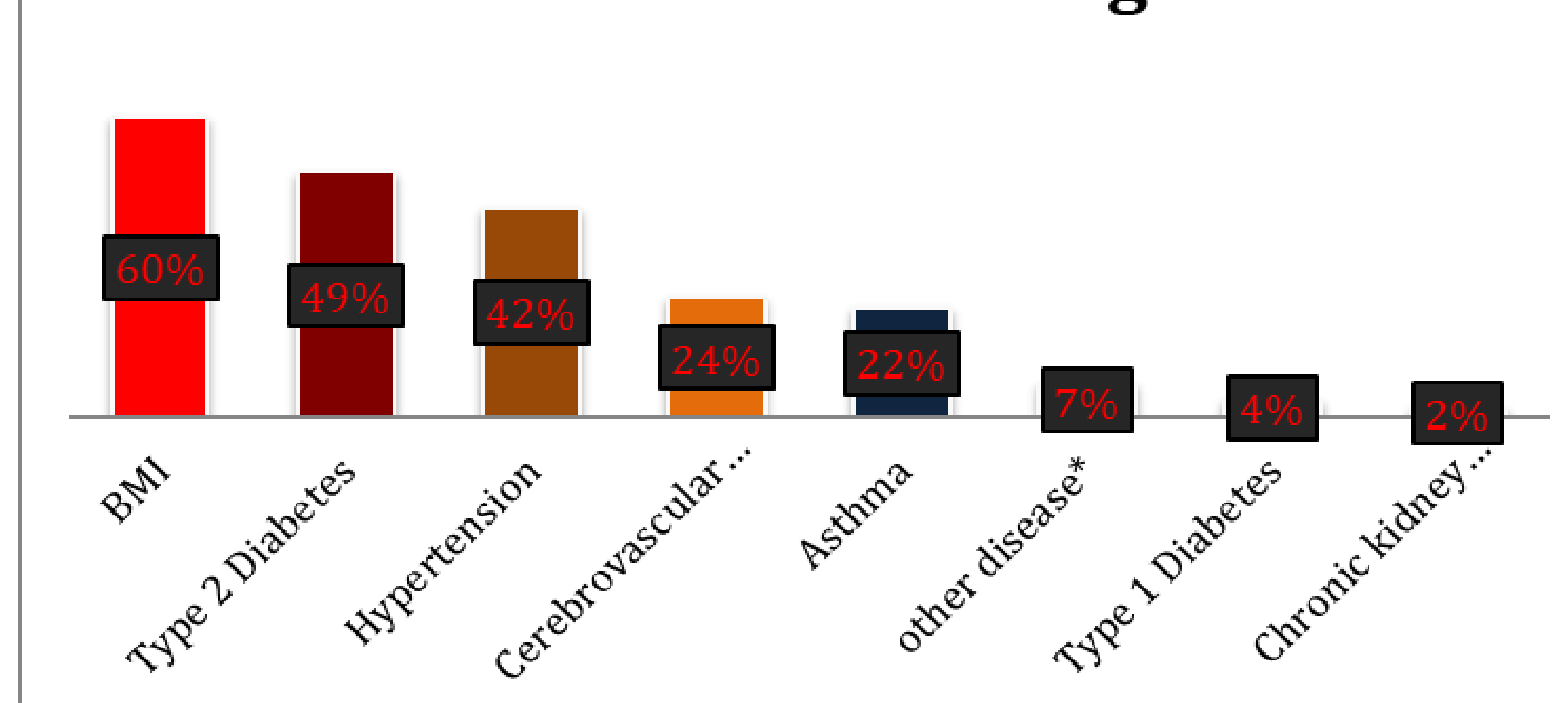
Age	no of patients	Average age	Vulnerability by average age	Average Covid age	vulnerability by average covid age
Age 30-49	7 (16%)	42	low	61	Moderate
Age 50-64	21 (47%)	59	Moderate	77	High
Age 65-79	15 (33%)	69	Moderate	77	High
Age 80 and above	2 (4%)	82	very high	84	very high

Table 1.Study population age, average age, vulnerability by average age and average Covid-age.

## Vulnerability & Fatality range/1000 by Average Covid Age



## Medical co-morbidities that influenced Covid-age



## Conclusions

This survey highlight that patient with severe mental illness are more vulnerable to Covid-19 as a result of multiple medical comorbidities. This finding does strengthen the case for this population to be prioritised in the vaccination campaign.

## Limitations

1. Small Sample Size,
2. All patients were from white ethnic background,
3. The evidence on vulnerability to Covid-19 comes from epidemiological data predominantly from UK.

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