

increased more in thought unpleasantness and depressed feelings. To understand the community context, community distress markers were analyzed using Artificial Intelligence (AI)-based assessments of public Twitter posts from Bronx County during the same periods. These Twitter posts also showed a surge of COVID-related topics at the onset of the Bronx outbreak. Language analysis showed a 2019-2020 increase in Bronx community markers of anxiety, depressivity, and negatively-valenced affect extracted from Twitter. We observed 2019-2020 change in both individuals' well-being (via intensive reports) and in their communities (via Twitter). Contextualizing these with the increased COVID-19 discussion online suggests that these may reflect common pandemic effects.

## Session 1055 (Paper)

### COVID-19 Outcomes for Older Adults

#### AGE DIFFERENCES IN BECOMING COVID LONG-HAULERS AND IN POST-ACUTE SEQUELAE OF SARS-COV-2

Qiao Wu, and Eileen Crimmins, *University of Southern California, Los Angeles, California, United States*

People who have had COVID-19 can suffer from the continuation of Post-Acute Sequelae of SARS-CoV-2 (PASC), also known as “long COVID”, for months after infection. Understanding PASC is important for treatment, care, and projecting future health of the population. Since older adults are at higher risk of severe illness and consequences from COVID, we hypothesize that they are more likely to become COVID long-haulers and report more symptoms at the time of diagnosis and three months after. We use a nationally representative sample of adults from the Understanding America Study COVID-19 Survey, from March to December 2020, to estimate the prevalence of long COVID and identify the most common long-term symptoms and how they vary by age. We use multilevel models to examine the determinants of symptom count and change over time. Among the 608 people with a COVID diagnosis, 83 (13.7%) aged over 65; almost half (47.9%) reported symptoms three months after diagnosis; the proportion did not differ across age groups. The most common symptoms were fatigue (25.0%), runny/stuffy nose (18.9%), body aches (16.4%), sneezing (15.1%), and headache (13.6%). These symptoms were consistent across age groups, while people aged 65 and older reported significantly less cough ( $\chi^2=3.96$ ;  $P=0.05$ ) and headache ( $\chi^2=4.24$ ;  $P=0.04$ ) compared to their younger counterparts. Neither the mean at the time of the diagnosis nor the rate of change of the symptom count varied across age groups. Our analyses suggest that age is not a significant determinant of PASC symptom count or becoming a COVID long-hauler.

#### BEYOND CHRONOLOGICAL AGE: FRAILITY AND MULTIMORBIDITY PREDICT IN-HOSPITAL MORTALITY IN PATIENTS WITH COVID-19

Alberto Zucchelli,<sup>1</sup> Alessandra Marengoni,<sup>2</sup> Davide Vetrano,<sup>3</sup> Luigi Ferrucci,<sup>4</sup> Laura Fratiglioni,<sup>5</sup> Roberto Bernabei,<sup>6</sup> Graziano Onder,<sup>7</sup> and Giuseppe Romanelli,<sup>8</sup> *1. Università degli Studi di Brescia,*

*Karolinska Institutet, Stockholms Lan, Sweden, 2. University of Brescia, Brescia, Lombardia, Italy, 3. Karolinska Institutet, Solna, Stockholms Lan, Sweden, 4. National Institute on Aging, Baltimore, Maryland, United States, 5. Karolinska Institutet 17175, Stockholms Lan, Sweden, 6. Catholic University of Rome, Rome, Lazio, Italy, 7. Italian National Institute of Health, Rome, Lazio, Italy, 8. Università degli Studi di Brescia, Università degli Studi di Brescia, Lombardia, Italy*

Background: We evaluated whether frailty and multimorbidity predict in-hospital mortality in patients with COVID-19 beyond chronological age. Methods: 165 patients admitted from March 8th to April 17th, 2020, with COVID-19 in an acute geriatric ward in Italy were included. Pre-disease frailty was assessed with the Clinical Frailty Scale (CFS). Multimorbidity was defined as the co-occurrence of  $\geq 2$  of these in the same patient. The hazard (HR) of in-hospital mortality as a function of CFS score and number of chronic diseases in the whole population and in those aged 70+ years were calculated. Results Among the 165 patients, 112 were discharged, 11 were transferred to intensive care units and 42 died. Patients who died were older (81.0 vs. 65.2 years,  $p<0.001$ ), more frequently multimorbid (97.6 vs. 52.8%;  $p<0.001$ ) and more likely frail (37.5 vs. 4.1%;  $p<0.001$ ). Less than 2.0% of patients without multimorbidity and frailty, 28% of those with multimorbidity only and 75% of those with both multimorbidity and frailty died. Each unitary increment in the CFS was associated with a higher risk of in-hospital death in the whole sample (HR=1.3; 95%CI=1.05-1.62) and in patients aged 70+ years (HR=1.29; 95%CI=1.04-1.62), whereas the number of chronic diseases was not significantly associated with higher risk of death. The CFS addition to age and sex increased mortality prediction by 9.4% in those aged 70+ years. Conclusions Frailty identifies patients with COVID-19 at risk of in-hospital death independently of age. Multimorbidity contributes to prognosis because of the very low probability of death in its absence.

#### COVID-19 CASES, HOSPITALIZATIONS, AND DEATHS IN NURSING HOMES: FACTORS IMPACTING THE SECOND SURGE

Sean Fleming,<sup>1</sup> Danya Qato,<sup>2</sup> Alexandra Wallem,<sup>2</sup> Paulina Keczynska,<sup>2</sup> Linda Wastila,<sup>2</sup> Tham Le,<sup>2</sup> and Jeanne Yang,<sup>2</sup> *1. University of Maryland Baltimore, University of Maryland Baltimore, Maryland, United States, 2. University of Maryland School of Pharmacy, Baltimore, Maryland, United States*

As of March 2021, over 128,000 nursing home (NH) residents have died due to COVID-19 complications, accounting for one-third of all U.S. COVID-19 deaths. Early studies highlighted factors which heightened residents' risk—facility size and profit status, CMS Five-Star quality rating, race, and high Medicaid share. Despite improved nationwide social distancing and access to protective equipment, between October-December 2020 nursing home cases, hospitalizations, and deaths peaked to highest levels since the pandemic's advent. The purpose of this study is to quantify previously unexamined associations between resident, facility, and geographic characteristics and COVID-19 infections, hospitalizations, and fatalities in nursing homes during this second surge. In this cross-sectional study, we constructed a novel