INTRODUCTION

Nursing home demographics and services have changed in the last few decades as more community residing patients receive short-term post-acute hospital services in nursing facilities typically perceived as caring for functionally dependent long-term care older individuals.\(^1\)

During the initial wave of COVID-19 illness in the spring of 2020 in New York State, nursing homes came under scrutiny due to large numbers of deaths and therefore to concerns related to appropriate facility preparedness and infection control practices.\(^2\) However, deaths in the nursing home may have occurred among community residing patients transferred from hospitals with serious illness requiring hospitalization and subsequent post-acute nursing home based care. Therefore, deaths of these latter patients in the nursing home may add to the impression of poor care and/or lack of appropriate preparedness or infection control practices.

We describe excess mortality within nursing homes among patients transferred from our hospital during the COVID-19 pandemic.

METHODS

NYU Langone Hospital—Long Island (formerly known as Winthrop University Hospital) has a robust post-acute care network consisting of six affiliated local skilled nursing facilities.

Between March 1 and May 31, 2020 NYU Langone Hospital—Long Island admitted and transferred 447 patients to any skilled nursing facility (SNF) for post-acute care. Of these 447 patients, 196 were transferred to one of these six affiliated facilities.

We report the number of deaths during this time among the patients transferred to one of the six affiliated facilities. This period of widespread COVID-19 activity was consistent with that reported for New York City.\(^3\) This timeframe is compared to the same 3-month periods for 2018 and 2019.
Data for deaths in affiliated facilities, total transfers and transfers to affiliates (2018/2019 vs. 2020) are presented in Table 1. Deaths were compared using the chi-square test.

### RESULTS

Between March 1 and May 31, 2020 NYU Langone Hospital—Long Island admitted and discharged 447 patients to all SNFs, 192 of whom (43%) had a hospital diagnosis of COVID-19. Of these 447 community patients, 196 were transferred to one of our six affiliated SNFs and 251 to all other facilities. Sixty-one of these 196 (31%) patients had a hospital diagnosis of COVID-19 illness. Among the 251 patients transferred to non-affiliated facilities, 131 (52%) had a hospital diagnosis of COVID-19 illness ($p < 0.0001$).

Fewer patients were discharged to any SNF during this time in 2020 compared to the experience of either of the prior 2 years (8.1 transfers per day in 2018–2019 vs. 4.9 transfers per day in 2020) (Table 1).

During this time frame 19 of these 196 (9.7%) patients died while at the affiliated SNF compared to 28 deaths among 767 (3.7%) transferred during the same period in 2018–2019 ($p < 0.0005$; 2020 vs. 2018–2019 death rate). Among those transferred to our affiliated facilities, was increased almost three-fold compared to the prior years of 2018 and 2019. These excess deaths occurred among community patients who were hospitalized for COVID-19 and then transferred and died due to COVID-19 illness, or who were just very sick patients who went to nursing homes despite COVID-19 concerns and died of unrelated illness, or sick individuals who may have become infected with COVID-19 at the nursing home. Given the reduction in total transfers, we surmise that those that were in fact transferred were among the sickest. Attributing death among a cohort of unusually ill patients simply as a nursing home death cannot inform these circumstances.

### DISCUSSION

Death rate is an important benchmark when considering measures of quality care both in hospitals and in nursing homes.

Between March 1 and May 31, 2020, fewer patients were transferred from our hospital to any SNF. Of 447 transferred patients, 192 (43%) had a hospital diagnosis of community acquired COVID-19 infection. The death rate among those transferred to our affiliated facilities, was increased almost three-fold compared to the prior years of 2018 and 2019. These excess deaths occurred among community patients who were hospitalized for COVID-19 and then transferred and died due to COVID-19 illness, or who were just very sick patients who went to nursing homes despite COVID-19 concerns and died of unrelated illness, or sick individuals who may have become infected with COVID-19 at the nursing home. Given the reduction in total transfers, we surmise that those that were in fact transferred were among the sickest. Attributing death among a cohort of unusually ill patients simply as a nursing home death cannot inform these circumstances.

### CONCLUSION

Nursing homes play an important role in the delivery of post-acute care hospital services. This “step down” provision of subacute care for these community patients is different from the goals and care typically delivered to long-term care residents. Generalizations about overall nursing home care including deaths need to account for these population differences before conclusions can be drawn about overall care in these facilities. Deaths in the nursing home among community residents with a hospital admission before nursing home transfer in the COVID-19 era is one such example.

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This article has not been previously published and is not being considered for publication elsewhere, in whole or in part, in any language.

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### CONFLICT OF INTEREST

No conflict of interest exist for any of the authors.
Research on the front lines of COVID-19 in hospitalized older adults with dementia

On February 3, 2020, as a geriatrician-hospitalist and clinical researcher working in New York State’s largest healthcare system, I was thrilled to start enrollment for my first National Institute on Aging grant. The clinical trial aimed to improve behavioral and psychological symptoms of dementia in hospitalized older adults with Alzheimer’s disease and related dementias. While the previous 3 months was spent providing dementia care training to nursing assistants, it was now time to begin patient and caregiver recruitment.

My research team hit the ground running, reaching our recruitment goals within the first 3 weeks... We were gaining traction to recruit ahead of schedule—what a way to start our first grant! Suddenly, everything stopped in its tracks, as the full force of COVID-19 overcame New York City. Hospitals were suddenly overflowing with COVID-positive patients, construction workers were commissioned to build temporary units and morgues on hospital grounds, and all clinical staff, were called back to full-time clinical duty. Research was suspended, patients were relocated throughout the hospital, and panicked caregivers were left outside the hospital walls. I was suddenly a frontline responder in the epicenter of a pandemic, and the next 4 months were a blur.

When our study was finally allowed to resume in July 2020, only fragments remained from what we had built: Our units had been physically dismantled and relocated, trained staff members were no longer active on these units, and those who remained were simply overwhelmed. We sorted through the rubble and began to redesign our protocol to conform to new COVID restrictions, giving consideration to the safety and accessibility of patients, nursing assistants, caregivers, and research team who all played an integral role in the success of this study.

Only months ago, I had educated nursing assistants on the importance of engaging persons with dementia with a friendly smile, close contact, touch, speaking clearly, and spending time at the bedside. With the new COVID restrictions, these techniques became impossible.