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Discharge processes in a skilled nursing facility affected by COVID-19

INTRODUCTION

Transitions across acute and post-acute settings are complex processes that became more challenging during the COVID-19 pandemic. Prolonged hospital stays may result in deconditioning, necessitating patient discharge to skilled nursing facilities (SNFs)¹ for rehabilitation when discharge home is deemed unsafe. Although return home from SNF is the goal for these patients, a safe SNF discharge often requires additional support from home health care (HHC) or from patients' families.² Prior work has examined hospital discharge practices for COVID-19 patients,³ but has not investigated post-acute SNF discharge patterns. Understanding the challenges to safe discharge at every healthcare transition is necessary for systems planning. To understand how post-acute SNF discharge was affected by the COVID-19 pandemic, we studied discharge processes for SNF patients with COVID-19.

METHODS

This was a retrospective cohort study of consecutive individuals discharged from hospital to a large urban SNF who developed COVID-19 symptoms with a positive COVID-19 PCR or antibody test between March 1, 2020 and June 1, 2020. To focus on the impact post-acute COVID-19 had on discharge planning of short-term SNF residents, we excluded patients whose COVID-19 onset

was more than 30 days before or more than 100 days after SNF admission.

Using the facility's electronic medical record (EMR), we reviewed all medical, nursing, social work, and other notes to examine discharge planning processes. Charts were abstracted on average 186 days after the day of COVID-19 symptom onset. Specifically, we identified whether discharge planning was initiated, whether discharge was successful, and whether there was evidence that discharge was complicated by COVID-19-related challenges. The relationship between COVID-19-related barriers and successful discharge was examined with a chi-square test.

Directed content analysis⁴ was used to analyze EMR notes to identify COVID-19-related factors impacting discharge planning. The analysis was started deductively to develop the initial coding structure. Multiple codes could be applied to each case. The team then met collaboratively to discuss preliminary perceptions and refine coding definitions. Analysis then became inductive to identify emerging themes.

RESULTS

Of 122 included patients, the median age was 79 (interquartile range [IQR], 69–86), 60 (49%) were female, 16 (13%) Black, 8 (7%) White, and 9 (7%) Hispanic, and for 85 (71%) race was not recorded.

Discharge planning was initiated in 99 (81%) post-acute patients, of which 82 were successfully discharged. Median length of stay for those discharged was 37.5 days (IQR 23–64). Discharge sites included home (68 [83%]), assisted living facilities (9 [11%]), relatives' homes (3 [4%]), and hotels (2 [2%]).

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Of those who had discharge planning initiated ($n = 99$), 44 were affected by COVID-19-related barriers. Twenty-two percent of those with COVID-19-related barriers were not discharged from SNF, versus 13% of those

TABLE 1 Summary of salient COVID-19-related factors impacting discharge planning at a skilled nursing facility

COVID-19-related factors impacting discharge planning at a skilled nursing facility	Number of times the code was applied
Health-specific reasons	
Development of symptoms	16
Logistics related to new oxygen requirement	4
Hospitalization	5
Receiving family members sick with COVID-19 themselves	2
Challenges related to establishing post-SNF care	
Unwillingness/hesitancy to receive COVID-positive patients	
Assisted living unwilling to receive COVID-positive patients	7
Home care agencies unwilling to receive COVID-positive patients	6
Family hesitant to receive COVID-positive patients	6
Staffing problems	
Challenges establishing home care services due to staffing shortages	3
Unable to hire non-HHA-related help as a direct result of the COVID-19 crisis	2
Delays caused by social distancing requirements	
Inability/unwillingness for friend/family members to travel to the SNF	3
Guardianship courts closed	1
Managed long-term care services reinstatement delayed: assessments could not be done on site	2
Clinical follow-up appointments canceled/unable to be established	1
Laboratory-related challenges: delayed COVID-19 results	1

Note: A total of 49 patients were affected by COVID-19-related barriers. Of these, 44 had discharge planning initiated. Multiple codes could be applied to each case.

not affected ($p = 0.19$). Salient COVID-19 factors impacting discharge included health-specific reasons (e.g., new oxygen requirements), challenges related to establishing post-SNF care (e.g., unwillingness or hesitancy from assisted living facilities, home care agencies, or families to receive COVID-19 patients), and laboratory-related challenges (e.g., delayed COVID-19 results) (Table 1).

DISCUSSION

Our study found that almost half of post-acute SNF patients diagnosed with COVID-19 who had discharge planning initiated were affected by COVID-19-related barriers. Several systems-level factors impede establishment of post-SNF care for COVID-19 patients, resulting in delayed discharge home. Delayed discharge may prevent a SNF from accepting new patients, triggering effects on other aspects of the healthcare continuum such as hospital length of stay. This is particularly relevant during times of surge when hospitals face crisis-level shortages of beds.

The most common reason for delayed discharge was hesitancy from formal (e.g., home care) and informal caregivers (e.g., families) to receive COVID-19 patients. Although some speculated that stay-at-home orders may facilitate hospital discharge because family would be available at home,⁵ many Americans live in homes where they cannot follow isolation recommendations to COVID-19 limit spread.⁶ Similarly, while the U.S. Department of Health and Human Services' guidelines on "Discharge Planning and Care Coordination during COVID-19" outline access to personal protective equipment (PPE) for direct service workers to ensure safe discharge,⁷ HHC workers reported inadequate access to PPE.⁸

Several elements outside a single institution's control will affect discharge planning. Faster COVID-19 PCR turnaround time is an important step forward.⁹ HHC and durable medical equipment are also needed to facilitate many patients' recovery. Building partnerships between SNFs with agencies and vendors could mitigate delaying factors. The need for increased SNF discharge planning resources and stronger HHC infrastructure during times of stress to the healthcare system is clear. The specter of additional impending pandemics remains a serious concern¹⁰; future pandemic preparedness should consider post-acute settings' needs.

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CONFLICT OF INTEREST

No conflict of interest, financial or other, exists.

AUTHOR CONTRIBUTIONS



All authors meet the criteria for authorship stated in the Uniform Requirements for Manuscripts Submitted to Biomedical Journals: study concept and design: Himali Weerahandi, Wingyun Mak, Orah R. Burack, Joann P. Reinhardt, Kenneth S. Boockvar; acquisition of data: Himali Weerahandi, Wingyun Mak, Orah R. Burack, Joann P. Reinhardt, Kenneth S. Boockvar; analysis and interpretation of data: all authors; drafting of the manuscript: Himali Weerahandi; critical revision of the manuscript for important intellectual content: all authors.

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