CHART
Center for Health Analytics, Research & Transformation at NJHA

BULLETIN

COVID-19's Impact on Patient Volume in the Post-Acute Setting

In previous bulletins, NJHA's Center for Health Analytics, Research and Transformation (CHART) has examined the impact of COVID-19 on hospital utilization in 2020. The impact of the pandemic on patient volume, however, is not isolated to acute-care facilities. Like hospitals, post-acute care settings – such as skilled nursing facilities (SNFs), inpatient rehabilitation facilities (IRFs), home health agencies (HHAs) and long-term care hospitals (LTCHs) – have also experienced overall declines in patient utilization. Throughout all of 2020, claims data show that New Jersey hospitals treated 1 million fewer patients versus the prior year – a net reduction of 21 percent. This figure includes inpatient admissions, same-day medical and surgical procedures, and emergency department visits. Many elective procedures, such as hip and knee replacements, ceased for a period of time as a result of an executive order issued in May 2020. However, even after elective procedures were allowed to resume, volume remains lower than in 2019. The combined impact of the temporary suspension of elective procedures and individuals' delaying or avoiding care has led to precipitous decreases in patient volume to post-acute settings of care, as shown below. Despite the reductions in volume, data reported by the American Hospital Association demonstrates that the severity of conditions for Medicare inpatients, as measured by case mix index (CMI) and average length of stay (ALOS), has increased significantly from the 12-month period preceding the public health emergency (PHE) to the first year of the PHE.

Percent Change from Pre-PHE to PHE Period, by Discharge Destination

Discharge Destination	Case Volume	CMI	ALOS
All Inpatient PPS Discharges	**-17.6%**	**6.3%**	**8.2%**
To HHA	-6.1%	4.6%	8.7%
To SNF	-30.2%	2.7%	8.3%
To IRF	-11.7%	3.2%	7.9%
To LTCH	-12.9%	7.1%	12.4%

Source: Medicare fee-for-service claims, Centers for Medicare & Medicaid Services, Chronic Conditions Data Warehouse, https://www2.ccwdata.org/web/guest/home.

To health! NJHA New Jersey Hospital Association

Given this noted increase in severity of illness, where patients are discharged following an acute care hospital stay is significant. Many of these patients may require multiple levels of care or other follow-up for their conditions. By analyzing New Jersey hospital claims data for all payers, CHART examined trends in discharge destination for patients who typically require post-acute care.

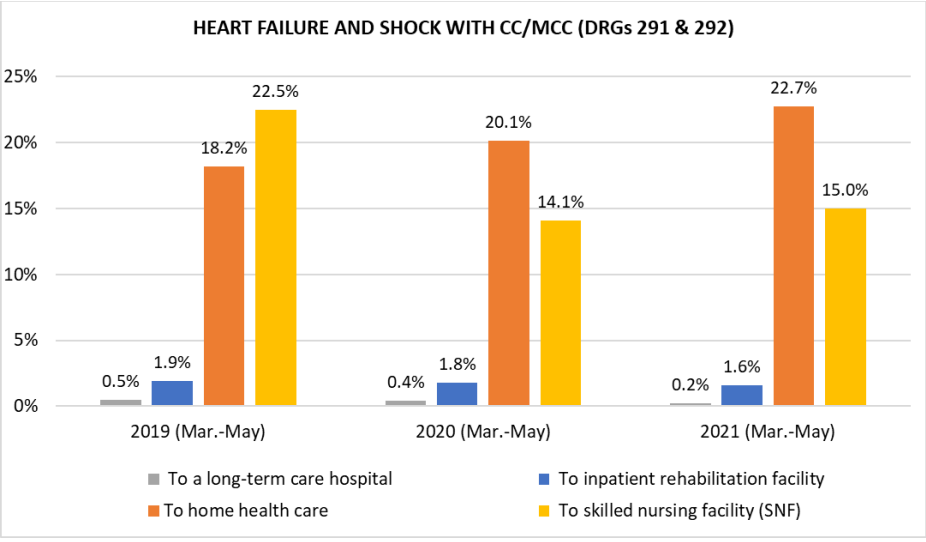
There have been many concerns noted about discharging patients to skilled nursing facilities for care during the pandemic. Workforce shortages that impact home health agencies' ability to accept new cases from hospitals are also an important aspect of this story. Further, with many family members either working from home or experiencing job loss, family caregiving may have been an option more often for many patients following a hospital stay during this time period.

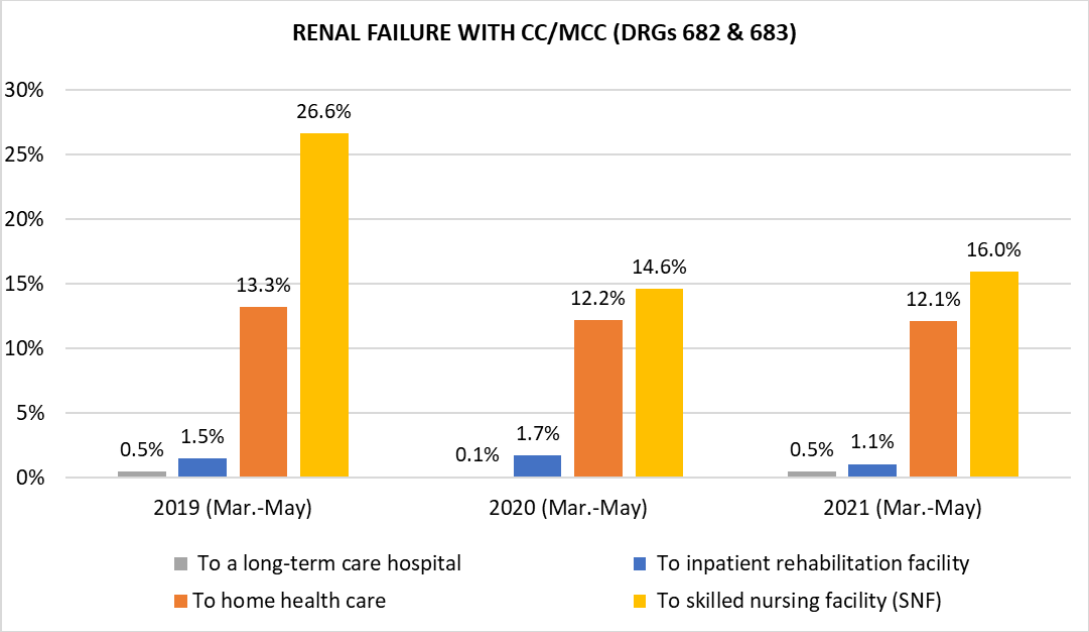
CHART reviewed New Jersey hospital inpatient discharges to IRFs, LTCHs, SNFs and HHAs for heart failure and shock, diabetes, renal failure, acute myocardial infarction, ischemic stroke and hip and knee replacement procedures. Three time periods were initially compared: March through May for 2019, 2020 and 2021. While claims data for April and May 2021 is still incomplete, looking at the percentage of discharges by destination provides insight related to trends.

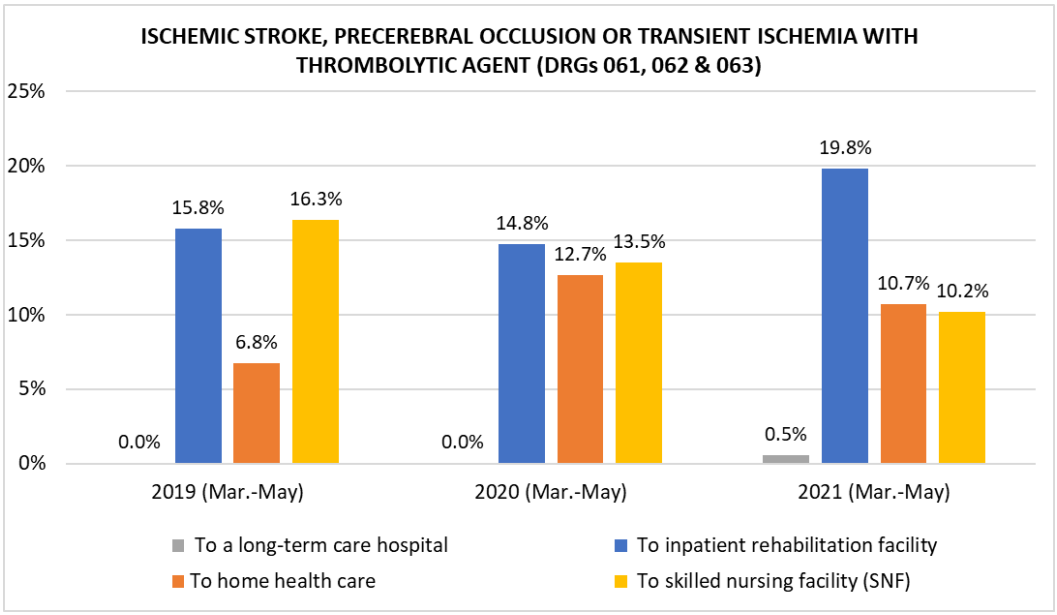
The data demonstrate that compared to March – May 2019, there was a steep decline in discharges to SNFs in March – May 2020 for all the DRGs analyzed, except for hip and knee replacements, which remained relatively stable for SNFs. There was, however, a significant increase in hip and knee replacement patients being discharged to IRFs in March – May 2020, compared to the same period in 2019.

Home health agency volume has remained relatively stable for diabetes, renal failure, and hip and knee replacement, but has increased for heart failure, acute myocardial infarction and ischemic stroke. This suggests that patients with diabetes and renal failure may have been managed without Medicare-funded home health services. However, these patients may have utilized other private pay or Medicaid-funded personal care services or had a family or other caregiver. Hip and knee replacement patients may have utilized outpatient rehabilitation services if they were not being discharged to a SNF or Medicare-certified home health agency.

Discharge volume to IRFs for these conditions, while small as an overall proportion of discharged patients, also was severely affected by the spring 2020 COVID-19 surge. Only ischemic stroke and hip and knee replacement patients remained a strong portion of the IRF patient volume during spring 2020. Long-term care hospitals had a similar experience with volume declines for patients typically admitted. However, both IRFs and LTCHs played a significant role in admitting COVID-19 patients from general acute care hospitals who had been on a ventilator for long periods of time and required intensive rehabilitation or who were still on a ventilator and required more time to attempt weaning.




RENAL FAILURE WITH CC/MCC (DRGs 682 & 683)
30%
25%
20%
15%
10%
5%
0%
0.5%
1.5%
13.3%
26.6%
0.1%
1.7%
12.2%
14.6%
0.5%
1.1%
12.1%
16.0%
2019 (Mar.-May)
2020 (Mar.-May)
2021 (Mar.-May)
To a long-term care hospital
To inpatient rehabilitation facility
To home health care
To skilled nursing facility (SNF)


ISCHEMIC STROKE, PRECEREBRAL OCCLUSION OR TRANSIENT ISCHEMIA WITH THROMBOLYTIC AGENT (DRGs 061, 062 & 063)
25%
20%
15%
10%
5%
0%
0.0%
15.8%
6.8%
16.3%
0.0%
14.8%
12.7%
13.5%
0.5%
19.8%
10.7%
10.2%
2019 (Mar.-May)
2020 (Mar.-May)
2021 (Mar.-May)
To a long-term care hospital
To inpatient rehabilitation facility
To home health care
To skilled nursing facility (SNF)

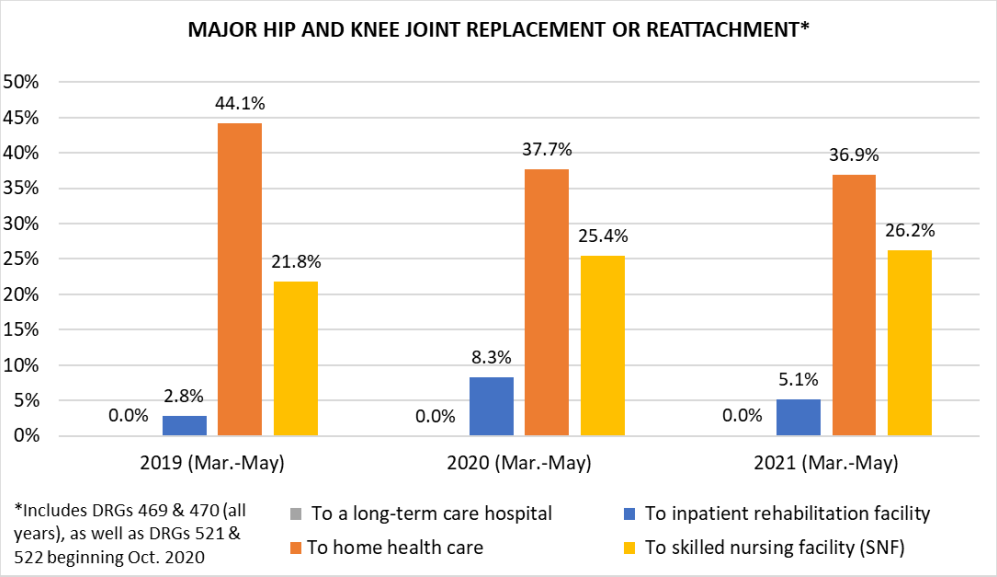
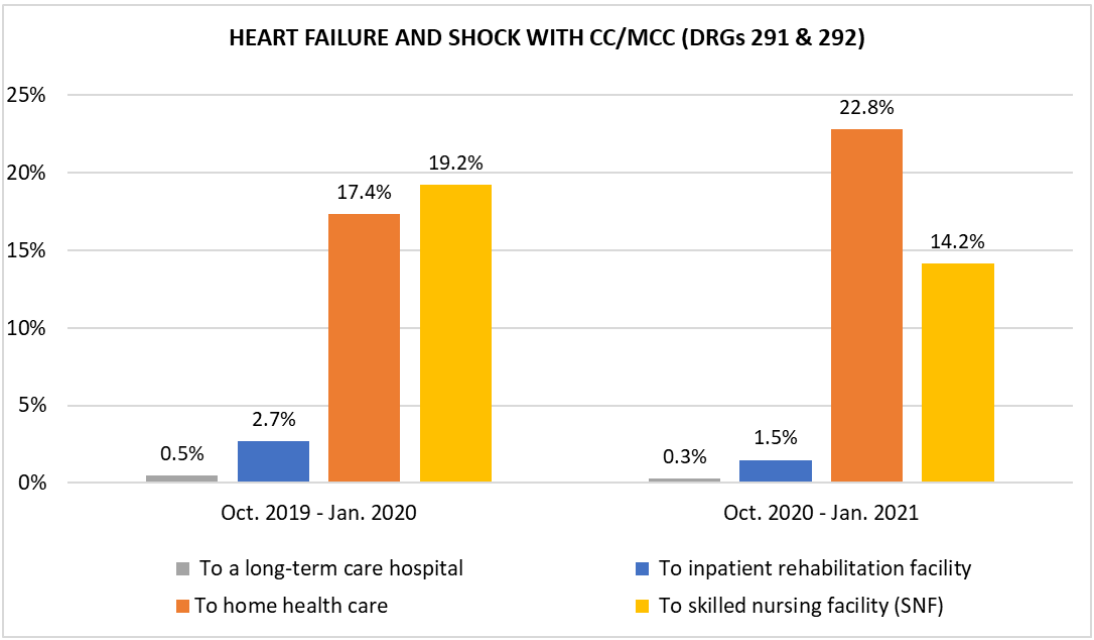
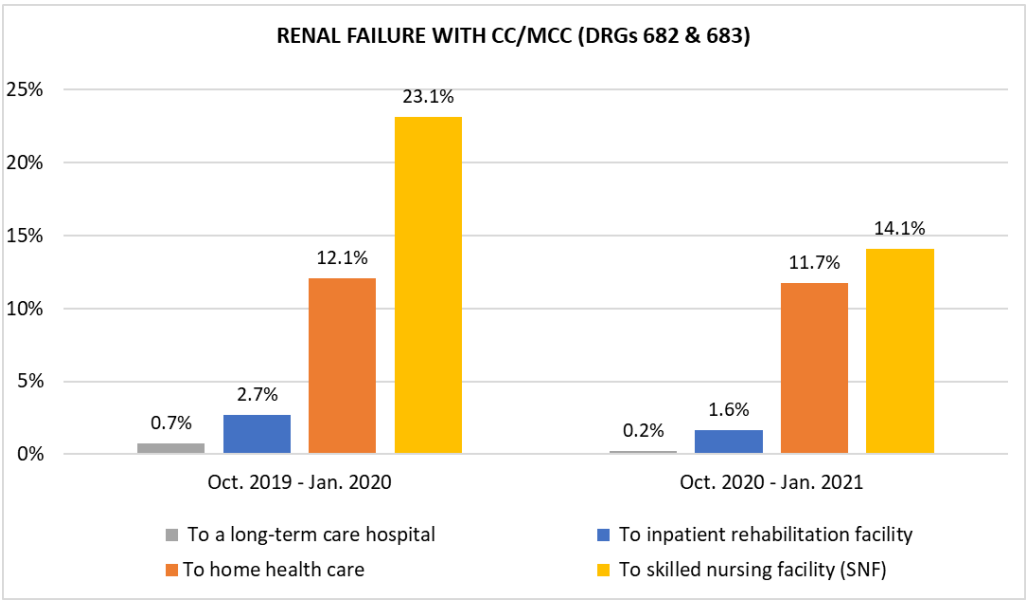
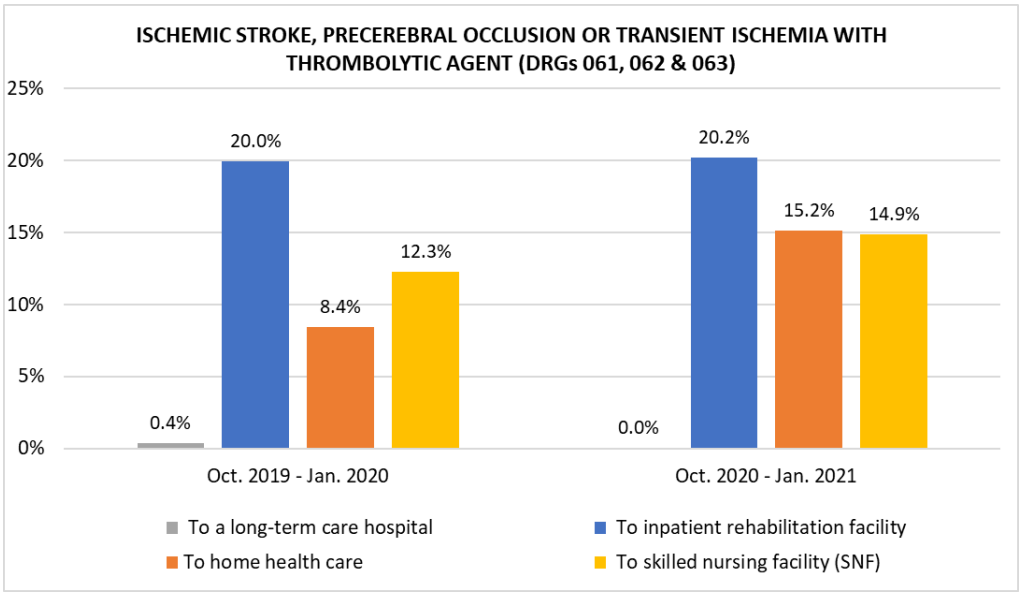
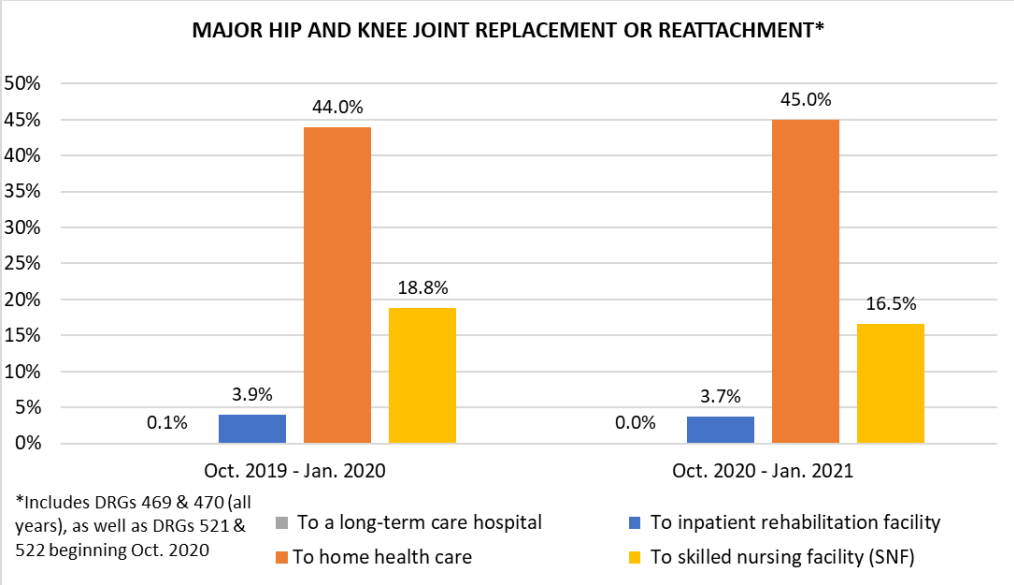


CHART also examined the time periods October 2019 – January 2020 and October 2020 – January 2021 to see how the winter periods compared pre-pandemic to the second surge of COVID-19 cases in late 2020/early 2021. The trends identified during the spring 2020 period, compared to 2019, appear similar for the October through January timeframes. The data are shown below.




RENAL FAILURE WITH CC/MCC (DRGs 682 & 683)
25%
20%
15%
10%
5%
0%
0.7%
2.7%
12.1%
23.1%
0.2%
1.6%
11.7%
14.1%
Oct. 2019 - Jan. 2020
Oct. 2020 - Jan. 2021
To a long-term care hospital
To inpatient rehabilitation facility
To home health care
To skilled nursing facility (SNF)


ISCHEMIC STROKE, PRECEREBRAL OCCLUSION OR TRANSIENT ISCHEMIA WITH THROMBOLYTIC AGENT (DRGs 061, 062 & 063)
25%
20%
15%
10%
5%
0%
0.4%
20.0%
8.4%
12.3%
0.0%
20.2%
15.2%
14.9%
Oct. 2019 - Jan. 2020
Oct. 2020 - Jan. 2021
To a long-term care hospital
To inpatient rehabilitation facility
To home health care
To skilled nursing facility (SNF)



Prior to the pandemic, New Jersey was an outlier among states with respect to SNF utilization for post-acute care. This remains the case. COVID-19 appears to have reduced some SNF utilization, but it is not clear if this reduction will be long-lasting. It is also not clear how the CMS waiver of the Medicare 3-day qualifying stay has contributed to the use of SNFs after a short hospital stay. For now, the 3-day qualifying stay waiver remains in place and may continue to drive some Medicare volume to SNFs. Likewise, CMS instituted prior authorization flexibilities until early 2021 for Medicare Advantage beneficiaries that expanded access to all post-acute services, but perhaps most notably to LTCHs and IRFs. The data also point to a growth opportunity for Medicare-certified home health agencies that have or can build clinical specialty programs and achieve high quality outcomes, or that are prepared to partner with payers, health systems and others to expand value-based payment programs, including hospital-at-home.

Also prior to the pandemic, CMS had been working on a post-acute Medicare prospective payment system that would ultimately replace the IRF, LTCH, SNF and HH prospective payment strategies. Many experts and advocates are now urging CMS to revisit the underlying data and assumptions regarding substitutability of levels of care following the pandemic experience which revealed sharp contrasts in infection prevention and control and other clinical capabilities among post-acute care settings.

Finally, with specific regard to SNFs, occupancy data per the National Healthcare Safety Network from June 13, 2021, shows an overall occupancy rate of approximately 70 percent. Throughout the last year, SNF overall occupancy has fluctuated between 65 and 70 percent, which suggests that overall, New Jersey SNFs are not seeing increases in the number of long-term custodial care residents. The combination of uncertainty of Medicare volume and the challenge of custodial care census in SNFs is sure to provide much food for thought in the field in the months ahead for all post-acute providers.

Visit www.njha.com/chart/ for additional resources.