

DATA ON THE EDGE

A DATA-DRIVEN APPROACH TO OPTIMIZE HOSPITAL-TO-HOSPITAL PATIENT TRANSFERS

Transfers can be both a key source of growth for high-acuity facilities and a source of pressure, as when transfers cannot be accepted due to limited available hospital capacity, thereby obstructing growth and care delivery. Managing average length of stay is a constant challenge for organizations struggling with capacity and operational efficiency. In 2023, ALOS was 6.5 days for comprehensive academic medical centers (CAMCs), 5.3 days for large specialized medical centers (LSMCs) and 4.6 days for community hospitals. But there is a critical element of the ALOS story that is not often closely examined from a utilization standpoint: the dynamic of patient transfers. A detailed understanding of the clinical characteristics of transfer patients is essential in setting a sound strategy to optimize your transfer process and preserve capacity for growth while also maintaining access to care for patients.

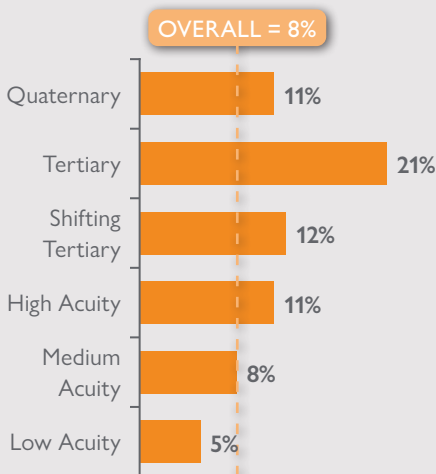
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To learn more, check out Vizient data resources on [page 4](#).

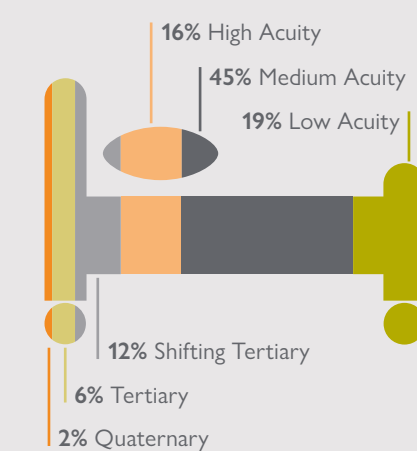
One-Third of Hospital Transfers Are for Specialized Care

2023 Hospital Transfer Utilization Snapshot

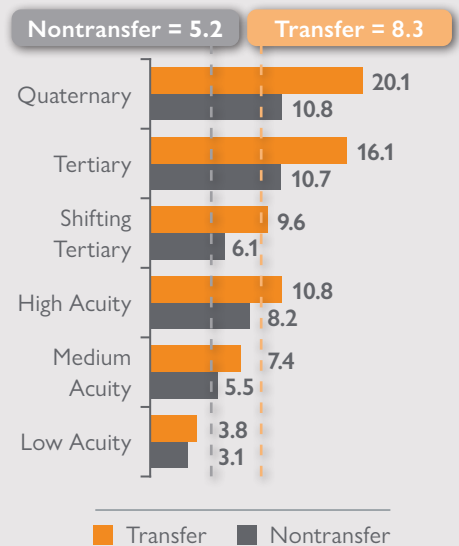
% TRANSFERS



TRANSFER VOLUME DISTRIBUTION



ALOS



Note: Analysis excludes 0–17 age group. Source: Vizient Clinical Data Base. Irving, TX: Vizient, Inc.; 2024. <https://www.vizientinc.com>.

Hospital transfers represented 8% of overall inpatient volumes in 2023 across Clinical Data Base (CDB) members, a trend which has remained consistent for the past three years. As expected, the percentage of patients transferred in high-acuity categories—ranging from 11% for high acuity to 21% for tertiary—is higher compared to the overall average of 8%.

When looking at overall transfer volume, the proportion of total volume that is categorized as low and medium acuity is 64%, and these are mostly medical, versus surgical, transfers. Effective management of the transfer process, including supporting system hospitals in retaining appropriate volume, will be essential to preserve capacity to accommodate growth in the future.

Finally, the ALOS for transfer patients is three days higher when compared to nontransfer patients overall, and ALOS is also higher for transfer patients across all acuity categories, with much greater observed differences for tertiary and quaternary care. Considering Sg2 forecasts overall ALOS to increase by 6% in the next 10 years, hospital transfers will intensify capacity constraints—assuming the proportion of hospital transfers remains the same.

Patient Days for Top Volume Hospital Transfers Will Rise

Top Volume Hospital Transfer MS-DRGs and 10-Year Forecast

Forecasted Trends of Top Patient Transfers DRG by IP Portfolio Category

IP Portfolio Category	Top DRG by Transfer Volume for Each IP Category	% Transfer 2023	% Change 2024–2034	
			Discharges	Discharge Days
Quaternary	219—Cardiac Valve and Other Major Cardiothoracic Procedures Without Cardiac Catheterization With Major Complication or Comorbidity	18%	0%	1%
Tertiary	25—Craniotomy and Endovascular Intracranial Procedures With Major Complication or Comorbidity	24%	8%	13%
Shifting Tertiary	64—Intracranial Hemorrhage or Cerebral Infarction With Major Complication or Comorbidity	23%	8%	10%
High Acuity	853—Infectious and Parasitic Diseases With OR Procedure With Major Complication or Comorbidity	15%	16%	12%
Medium Acuity	885—Psychoses	20%	8%	11%
Low Acuity	378—Gastrointestinal Hemorrhage With Complication or Comorbidity	9%	4%	21%

Note: Analysis excludes 0–17 age group. 0% indicates the forecast is flat (less than ±1%). **Sources:** Vizient Clinical Data Base. Irving, TX: Vizient, Inc.; 2024. <https://www.vizientinc.com>; Impact of Change®, 2024; HCUP National Inpatient Sample (NIS). Healthcare Cost and Utilization Project (HCUP) 2019. Agency for Healthcare Research and Quality, Rockville, MD; Proprietary Sg2 All-Payer Claims Data Set, 2022; The following 2022 CMS Limited Data Sets (LDS): Carrier, Denominator, Home Health Agency, Hospice, Outpatient, Skilled Nursing Facility; Claritas Pop-Facts®, 2024; Sg2 Analysis, 2024.

When assessing transfer volume, understanding the top volume transfers by MS-DRG is a critical step. Highlighted above are the highest transfer volume MS-DRGs for each IP portfolio category. The forecast for patient days associated with each of these MS-DRGs shows projected double-digit growth for most MS-DRGs between 2024 and 2034, mainly due to rising patient acuity. While the data illustrate the overall trend across hospitals, given the local market factors that influence transfer trends, assessing top volume at the local level will highlight both transfer strategy and opportunity. Pulling in additional quality and operational metrics for each of a hospital’s top transfer volume MS-DRGs, including mortality and ALOS, further supports service optimization strategy.

For example, the highest transfer volume for the quaternary category in 2023 was MS-DRG 219, Cardiac Valve and Other Major Cardiothoracic Procedures Without Cardiac Catheterization With Major Complication or Comorbidity. The benchmarking data highlighted in the Sg2 Data on the Edge report [Quality Outcomes as a Driver for Service Optimization](#) showed a nearly fourfold increase in mortality between low-volume and high-volume centers. Yet, even with an 8% in-hospital mortality rate for hospitals with fewer than 10 cases per year, 6% of the cases were transferred in from other hospitals. Pairing quality data with transfer trends supports informed decision-making that can lead to improved outcomes for patients.

Proactively Guard Against the Economic Bias That Exists in Hospital Transfers

The Vizient Transfer Index (see definition on page 5) analyzes payer data trends for hospital transfer cases. For any hospital, a transfer index roughly equal to 1.0 suggests no economic bias—ie, Medicaid and uninsured patients are being transferred at rates similar to the transfer rates for commercially insured patients. Of the 200 CAMCs and LSMCs in the sample size for this analysis, 24% had a transfer index greater than 1.2 in 2023. In other words, referring hospitals appear to be transferring Medicaid or uninsured patients at higher rates than transfers of commercially insured patients. This has equity implications when it comes to accessing high-quality specialty care for patients who have Medicaid insurance or who are uninsured. Organizations need to assess not only their transfer index but also the quality metrics associated with transfers either in development or alignment with their health equity goals.

Vizient Transfer Index for 200 CAMCs and LSMCs in 2023

Transfer Index Range	Number of Hospitals	Distribution Percentage
<0.8	30	15%
0.8–1.0	62	31%
1.1–1.2	60	30%
>1.2	48	24%

Transfer Rate Equilibrium

Note: Results limited to CAMCs and LSMCs. Analysis includes all age groups.
Source: Vizient Clinical Data Base. Irving, TX: Vizient, Inc.; 2024.
<https://www.vizientinc.com>.

Why It Matters

Hospital capacity constraints impact health systems’ ability to provide the right care to the right patients at the right time. Underlying that complex capacity equation, especially for high-acuity facilities or regional referral centers, is the management of transfers. Localized data analytics that span clinical and operational quality and market trends will help systems better understand the dynamics for interhospital transfers as they relate to acuity, payer class, geography and other key factors. Taking a data-driven approach to drive decision-making benefits patients and hospitals, both transferring and receiving. Consider the following as you localize this analysis for your organization:

- **Incorporate hospital transfer data in system network planning.** Including transfer data in the process provides a holistic view of what cases can be kept local at transfer facilities. Assessing capacity and resource constraints with the line of sight to future volume and ALOS growth will help determine a win-win situation for hospitals and patients.
- **Make strategic decisions, including service optimization planning,** based on a cross-section of volume, quality, operations and market trends data. Assessing outcomes for your top clinical transfer conditions (transferring or receiving) can inform clinical program development and expedite and improve the transfer processes for high-acuity patients needing specialized care.
- **Address health equity issues inherent in hospital transfer trends.** Receiving hospitals that are prone to be “transfer magnets” must include, and prioritize, health equity as part of network discussions to improve patient-centered care for all.
- **Overhaul the command center operations to improve regional system of care.** Refining the care paths for the command centers where transfers are managed and strengthening emergency medical services partnerships are critical to manage future demand, especially for urgent critical care cases. Redevelopment of relationships between the transfer hubs and spokes can help by balancing the clinical portfolio and even reducing tertiary/quaternary volumes to other health systems.
- **Address transfer distance to minimize the risk of patient deterioration during transfers.** According to the benchmarking data, 44% of rural transfer patients traveled over 50 miles to receiving hospitals, compared to 17% for urban and suburban patients and 8% for patients in densely urban areas. The situation will be exacerbated with more [rural hospital closures](#). Strategies to improve access such as creating additional regional referral hospitals for medical patients and evaluating the appropriate virtual health options should be considered.

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To speak with one of our experts about tertiary/quaternary strategy and network development strategy, email membercenter@sg2.com.

POWERED BY VIZIENT DATA AND DIGITAL PLATFORM

This report's analysis leverages the following proprietary data and analytics assets.

The **Vizient Clinical Data Base** is the definitive health care analytics platform for performance improvement. The CDB provides high-quality, accurate and transparent data on patient outcomes—such as mortality, length of stay, complication and readmission rates, and hospital-acquired conditions—that enable hospitals to benchmark against peers; identify, accelerate and sustain improvements; reduce variation; and expedite data collection to fulfill agency reporting requirements. Clinical benchmarking tools such as dashboards, simulation calculators, and templated and customizable reports enable you to quickly identify improvement opportunities and their potential impact.

Sg2's Impact of Change[®] model forecasts demand for health care services over the next decade, examining the cumulative effects and interdependencies of key impact factors driving change in utilization. Using both disease-based and DRG-based analyses, the forecast provides a comprehensive picture of how patients will access inpatient and outpatient services along the continuum of care.

The **Sg2 IP Portfolio Subtype** grouper translates MS-DRG discharges to six acuity-based portfolio subtypes:

- **Quaternary:** MS-DRGs mapped to Sg2's 2022 quaternary DRG list. Examples include transcatheter valve procedures; head and neck cancer procedures; kidney, liver, heart and lung transplants; and CAR T-cell therapy.
- **Tertiary:** MS-DRGs mapped to Sg2's 2022 tertiary DRG list, which is composed of AMC-centered tertiary DRGs. Examples include brain/skull surgery, hepatectomy for liver cancer and traumatic injury.
- **Shifting Tertiary:** MS-DRGs removed from Sg2 tertiary DRG list from 2017 to 2022, as these services have shifted, or are shifting, to community acute care providers. Examples include coronary artery bypass graft, endovascular procedures, lumbar/spinal fusion procedures and nephrectomy.
- **High Acuity:** Discharges with a DRG weight of >2.0. Examples include leg amputation, mechanical ventilation, fracture repair, septicemia procedures and large bowel resection.
- **Medium Acuity:** Discharges with a DRG weight of 2.0 to 1.0. Examples include primary hip/knee replacement, c-section, psychosis and congestive heart failure medical admission.
- **Low Acuity:** Discharges with a DRG weight of <1.0. Examples include vaginal delivery, intestinal obstruction, diverticulitis, urinary tract infection and diabetes medical admission.

CAR = chimeric antigen receptor.

The **Vizient Transfer Index** allows CDB members to identify whether there is potential economic bias that may be influencing the rate of patients being transferred in from other hospitals. It accomplishes this by comparing each hospital's payer-specific ratios of observed (O) transfers to modeled (M) transfers. Modeled transfers are based on aggregate transfer rates for all similar hospitals in the CDB, adjusted for payer group, case mix and age cohort. As shown in the equation below, the transfer ratio for Medicaid and uninsured patients is measured against the transfer ratio for patients with commercial insurance—hospitals with a transfer index greater than 1.0 may be receiving disproportionately more Medicaid and uninsured transfers.

$$\text{TRANSFER INDEX} = \frac{\text{(O/M transfer ratio, Medicaid and uninsured)}}{\text{(O/M transfer ratio, commercially insured)}}$$

Sg2 Intelligence is a diverse team of subject matter experts and thought leaders who represent specialties ranging from clinical service lines to enterprise strategy. The team develops strategy-specific content in the form of editorial reports, including the Data on the Edge series, and perspective-based analytics, such as the Impact of Change® forecast.

The Vizient Data on the Edge series team includes Brianna Motley; Catherine Maji; Eric Lam; Alyssa Harris; Madeleine McDowell, MD, FAAP; Jen Goff; Kerstin Liebner; Ryan Kennedy; and Sg2 Creative Services.