

Hospital Transfers of Medicare Patients

Teaching hospitals are unique because of their missions to train new physicians, advance medical research, and treat the sickest and most complex patients. While all hospitals provide a base level of care, certain hospitals, many of which are teaching hospitals, have additional capabilities to provide sophisticated diagnostic and treatment services. When a patient's medical need exceeds a hospital's capabilities, the patient is transferred to a hospital that can provide a higher level of specialized care. Teaching hospitals are the likely recipients of these transferred patients, but there is little documentation for this hypothesis. This *Analysis in Brief* attempts to answer two questions: Are teaching hospitals, particularly members of the Association of American Medical Colleges' Council of Teaching Hospitals and Health

Systems (COTH), more likely to receive a higher proportion of the transfer population than are other hospital types, and what are the characteristics of the patients transferred to these hospitals?

Methodology

This study examined patient-level data for all Medicare patients from the Medicare claims-level database (MedPAR) for fiscal year 2006, the most recent data available at time of analysis.¹ MedPAR includes information such as patient demographics, diagnosis, source of admission, and days of care. Medicare beneficiaries are patients 65 and older or patients with a qualifying disability or disease.² A "transfer patient" was defined as a patient admitted to an acute care hospital from another. Patient-level

data were available for 3,560 general, nonfederal acute-care hospitals, which were classified into three categories: COTH members (277; 8%), other teaching hospitals (740; 21%), or nonteaching hospitals (2,543; 71%). Members of COTH generally comprise the largest teaching hospitals in the country [as defined by their intern/resident-to-bed (IRB) ratio] and share common missions of patient care, education, and research.³

Results

Transfers. In FY 2006, there were 321,567 patient transfers (see Table 1). Teaching hospitals treated 72 percent of these patients. While COTH hospitals comprise only eight percent of all hospitals in this analysis, they cared for 42 percent of total transfers. Furthermore, COTH hospitals

Table 1. Number of Patient-Transfer Cases to Hospitals by Hospitals' Teaching Status and Bed Size, 2006

| Hospital Bed Size | COTH ^A | | | | Other Teaching | | | | Nonteaching | | | |
|---------------------|-------------------|------------------|-------------------|---------------------|------------------|------------------|-------------------|---------------------|------------------|------------------|-------------------|---------------------|
| | No. of Hospitals | No. of Transfers | | | No. of Hospitals | No. of Transfers | | | No. of Hospitals | No. of Transfers | | |
| | | Total | Pct. ^B | Median ^C | | Total | Pct. ^B | Median ^C | | Total | Pct. ^B | Median ^C |
| Fewer than 200 beds | 17 | 1,340 | 0.4% | 38 | 329 | 12,560 | 3.9% | 6 | 2,086 | 40,434 | 12.6% | 1 |
| 200-299 beds | 37 | 5,408 | 1.7% | 45 | 208 | 24,611 | 7.7% | 46 | 285 | 20,999 | 6.5% | 21 |
| 300-399 beds | 59 | 17,844 | 5.6% | 221 | 108 | 22,696 | 7.1% | 89 | 120 | 19,038 | 5.9% | 55 |
| 400-499 beds | 54 | 25,279 | 7.9% | 377 | 52 | 16,795 | 5.2% | 214 | 35 | 5,835 | 1.8% | 91 |
| 500+ beds | 110 | 86,154 | 26.8% | 582 | 43 | 18,596 | 5.8% | 322 | 17 | 3,978 | 1.2% | 191 |
| All | 277 | 136,025 | 42.3% | 297 | 740 | 95,258 | 29.6% | 27 | 2,543 | 90,284 | 28.1% | 1 |

Source: AAMC analysis of FY2006 CMS MedPAR data

^A COTH = Council of Teaching Hospitals and Health Systems

^B Percentage of total transfers in 2006 (321,567)

^C The median number of transfers does not take into account hospitals that receive zero transfers.

¹ The Centers for Medicare and Medicaid Services administers the Medicare Program and maintains the MedPAR database for the public. External analysis of the database was conducted for the AAMC by Vaida Health Data Consultants.

² Patients with end-stage renal disease are eligible for Medicare. See <http://www.medicare.gov/MedicareEligibility/Home.asp?dest=NAVHomeGeneralEnrollment#TabTop> for information on Medicare eligibility.

³ See <http://www.aamc.org/members/coth/> for more information.

Table 2. Median Case Mix Index by Hospitals' Teaching Status, 2006

| Type of Patient | Median Case Mix Index ^A | | | |
|-------------------|------------------------------------|----------------|--------------|------|
| | COTH ^B | Other Teaching | Non-teaching | All |
| Transfer Patients | 2.49 | 1.99 | 1.57 | 1.78 |
| Other Patients | 1.70 | 1.46 | 1.27 | 1.32 |

Source: AAMC analysis of FY2006 CMS MedPAR data

^A The median case mix index does not take into account hospitals that received zero transfers.

^B COTH = Council of Teaching Hospitals and Health Systems

received 59 percent of all transfers to teaching hospitals.

The hospitals were subdivided by bed size to determine what impact hospital size had on the number of transfers. Teaching hospitals, regardless of size, received more transfers than nonteaching hospitals. Again, COTH hospitals received a much higher number of transfers, especially among the largest hospitals. For example, the typical COTH hospital with 500 or more beds received 582 transfers in 2006, over three times that of similarly sized nonteaching hospitals and almost twice that of other similarly sized teaching hospitals.

Complexity. To determine the complexity of Medicare transfer patients, the case mix indices (CMI) of the receiving hospitals' transfer patients were examined.⁴ In general, the CMI reflects the relative complexity, severity, and cost associated with a hospital's Medicare patient load. If the CMI is high, the average patient being treated is likely to require complex care and have higher costs. Table 2 demonstrates that the CMI for transfer cases received by the typical COTH hospital was 2.49, considerably greater than those of other teaching and nonteaching hospitals, (1.99 and 1.57, respectively). Not surprisingly, the CMI for transfer patients was higher

than was the CMI for non-transfer patients in each of the three hospital groupings. In particular, the gap was greatest for COTH hospitals, despite their having a relatively high CMI for non-transfer patients.

Discussion

Teaching hospitals, particularly COTH hospitals, play a significant role in the care of transfer patients, many of whom are critically ill. Most transfers go to teaching hospitals, with a disproportionate number going to COTH hospitals. Regardless of hospital size, the typical teaching hospital received a greater number of transfers than did nonteaching hospitals. This difference was particularly notable for the larger COTH hospitals. Patients admitted as transfers and patients admitted directly to COTH hospitals were sicker and required more complex care compared with patients at other hospitals. Furthermore, transfers to COTH hospitals were even more complex than were those patients admitted normally.

This analysis focused only on Medicare beneficiaries, which are approximately 15 percent of the U.S. population.⁵ It is unclear whether this group accurately captures trends for the entire population. Even if Medicare beneficiaries differ from other patients, they are an important

and sizable segment of the population, and it is important to understand their patterns of care.

This *Analysis in Brief* has several implications. First, the role teaching hospitals, especially COTH hospitals, play in providing care to transfer patients demonstrates their value as important community and regional assets. Second, because of their complexity, the care transfer patients receive is costlier; a fact payment systems need to recognize. The Medicare program recognizes high-cost transfer cases through an outlier payment policy that covers some but not all additional costs. In addition, CMS recently modified the payment system to recognize higher cost cases. Lastly, in the context of recent interest in the management and cost of transfer patients, opportunities to increase efficiency must be reinforced. Medical records and other documentation that originate at the transferring hospital must be fully and accurately conveyed to the receiving hospital so that expensive tests and imaging are not duplicated, wasting time and resources. The importance of consistent and complete documentation in the medical record cannot be overemphasized, nor can the role of information technology to increase the interoperability of patient records across institutions, patient safety, and hospital accountability.

Authors:

Erika Steinmetz, MBA, Senior Research Analyst, Health Care Affairs, AAMC, esteinmetz@aamc.org, 202-862-6144.

Christopher B. Morse, Medical Student, University of Pennsylvania School of Medicine, cmorse@mail.med.upenn.edu.

Association of American Medical Colleges

2450 N Street, N.W.
Washington, D.C. 20037-1127
analysis@aamc.org
www.aamc.org/data/aib

⁴ See www.aamc.org/data/aib for more information regarding the CMI.

⁵ Kaiser Family Foundation. August 8, 2008. <http://www.statehealthfacts.org/>