

A Comparative Study of Patient Severity and Quality of Care between MedCath Heart Hospitals and Peer Hospitals for 2007 Discharges

Executive Summary – January 2009

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MedCath heart hospitals primarily focus on serving the unique needs of patients suffering from cardiovascular disease. However, each of MedCath's hospitals is licensed as a general acute care hospital. Each hospital operates a physician-staffed, 24/7 emergency department which received all types of patients.

Purpose

The Lewin Group prepared this report for MedCath to determine how cardiac care services provided in MedCath heart hospitals compare on measures of patient severity and quality of care to cardiac services provided in peer community hospitals that perform open-heart surgery across the country (including major teaching hospitals). The Lewin Group has also performed a similar study each of the past seven years. The consecutive seven years of reports, covering Medicare discharges from 2000 to 2007, have found highly consistent results.

Methods

- Nine MedCath heart hospitals were compared with 1,181 peer hospitals that perform open-heart surgery in the United States. Peer hospitals are defined as short-term general hospitals, including major teaching hospitals. The peer hospitals consist of:
 - 1) Peer Community Hospitals – 973 non-major teaching hospitals, and
 - 2) Major Teaching Hospitals – 199 major teaching hospitals that have an interns- and residents-to-bed ratio of 0.25 and above.

The entire peer hospital group represents about one-fifth of all short-term general hospitals nationwide.

- Comparative services were based on MedCath's primary service line and mapped to 24 procedural and medical APR-DRGs selected from MDC 5 (Diseases and Disorders of the Circulatory System).
- For most study variables, the discharge data for the peer group of hospitals has been severity adjusted to be comparable to the MedCath data. To accomplish this, the Lewin Group analyzed fiscal year 2007 MedPAR data for MDC 5 cases using an APR-DRG cardiac case mix index (CMI). Cardiac case mix index calculations were based on Medicare discharges and were calculated using the general approach used by the Centers for Medicare and Medicaid Services (CMS).
- Quality of care was measured through an analysis of in-hospital risk adjusted mortality, severity adjusted average length of stay, discharge destination and patient complications. All data are for Medicare patients.

Findings

- As a group, MedCath heart hospitals have a 25% higher APR-DRG cardiac case mix index for cardiac patients than the peer community hospitals.

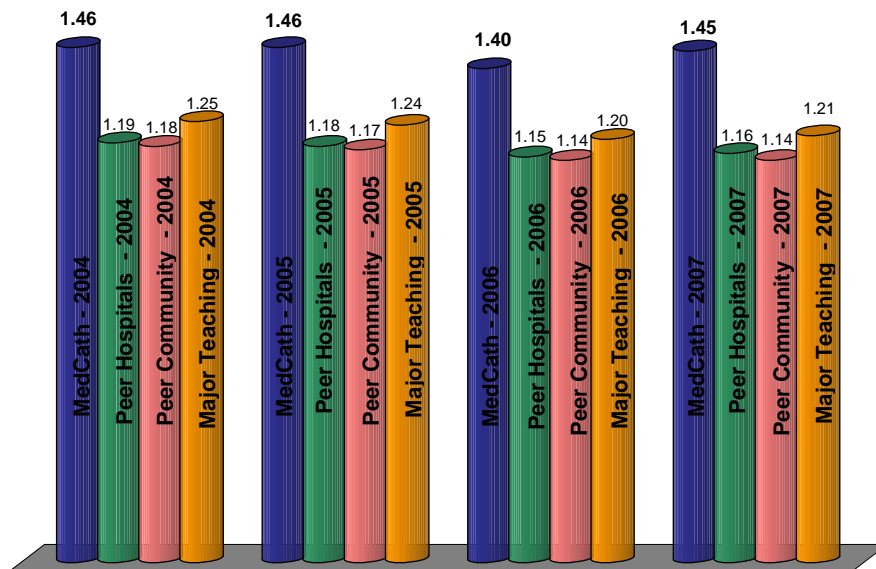
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Prepared by The Lewin Group

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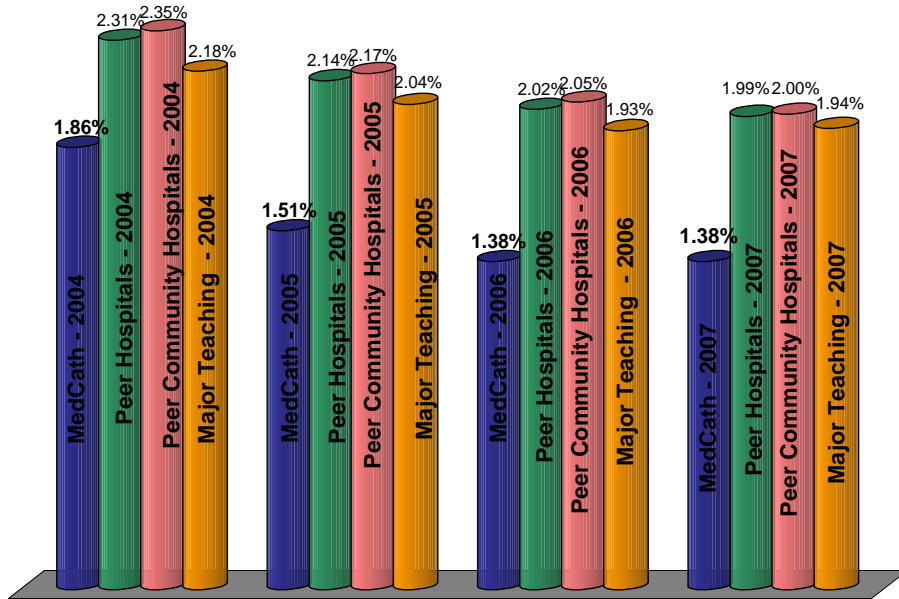
- Within APR-DRGs, MedCath hospitals have 4.75 percentage points fewer cardiac cases within APR-DRG severity levels 3 and 4 (higher severity levels) than peer hospitals.
- After adjusting for risk of mortality, MedCath heart hospitals on average exhibited a 30.7% lower in-hospital mortality rate for Medicare cardiac cases compared with the peer hospitals.
- MedCath heart hospitals also had 24.7% shorter average lengths of stay (ALOS) for cardiac cases (3.42 days) than the peer hospitals (4.54 days) after adjusting for severity.
- **For the latest study period, MedCath heart hospitals (on average) have a 25% higher case mix severity for cardiac patients than the peer hospitals, including major teaching facilities.**



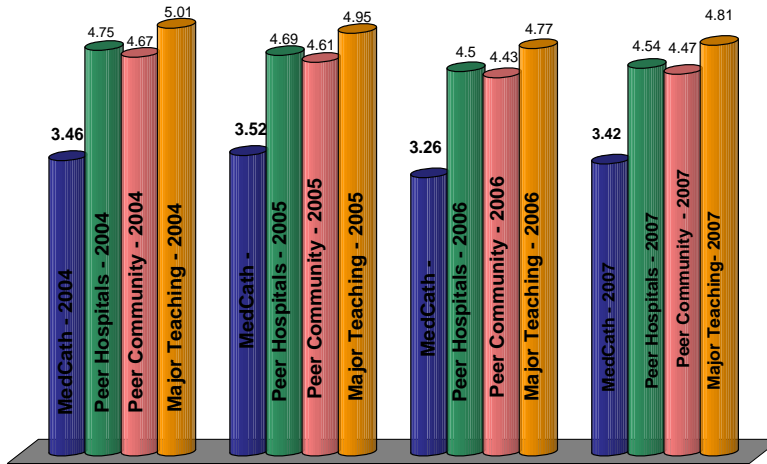
- **For the latest study period, after adjusting for risk of mortality, MedCath heart hospitals (on average) exhibit 30.7% lower in-hospital mortality rates for cardiac cases than the peer community hospitals including major teaching facilities.¹**

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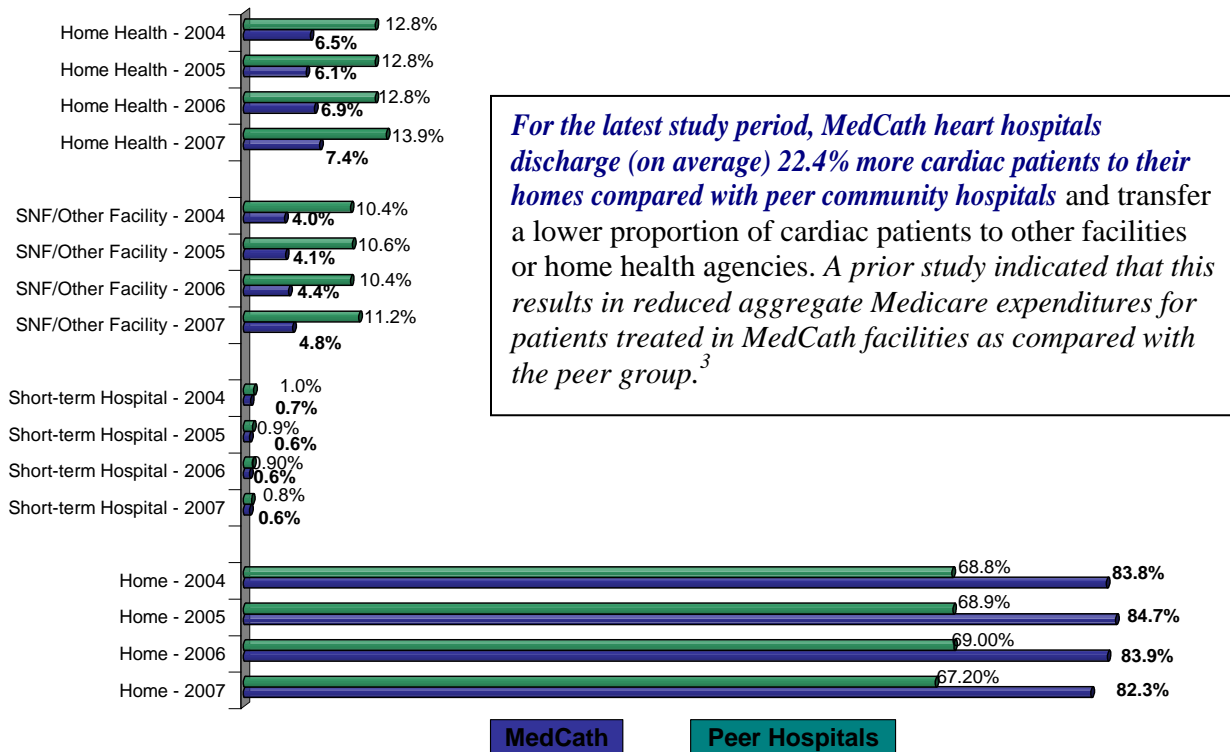
- For the latest study period, MedCath heart hospitals (on average) have 24.7% shorter severity-adjusted average length of stay (ALOS) for cardiac cases than the peer community hospitals.²



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Discharge Status:



Findings (continued)

- In addition, an analysis of secondary diagnostic codes shows that inpatients treated at MedCath heart hospitals typically show lower rates of medical complications versus those treated at the peer group community hospitals.

Conclusion

Our analysis of fiscal year 2007 data found that in comparison to the peer group of community hospitals, MedCath heart hospitals had a relatively higher APR-DRG cardiac case mix index, lower proportion of cases within severity levels 3 and 4, lower risk-adjusted mortality rates, and lower severity-adjusted average length of stay. We further found that MedCath heart hospitals discharged a higher proportion of their Medicare cardiac patients to their homes and transferred fewer discharged cardiac patients to other facilities. MedCath patients also exhibit fewer complications. These conclusions are consistent with the results found in similar studies covering fiscal years 2000 through 2007. And because MedCath heart hospitals discharged a higher percentage of cardiac patients to their homes, that may have resulted in reduced Medicare expenditures.