Appendix I

Scope & Methodology

Appendix I: Scope and Methodology

This appendix provides information on the key aspects of our analysis of physician investment in specialty hospitals. First, this appendix describes the process we employed to select hospitals for the survey. Second, it discusses the survey instrument used to collect data from specialty hospitals and a sample of competitor acute care hospitals. Third, it addresses issues related to data reliability and limitations. Finally, it addresses the response rate.

Hospital Selection

We selected two groups of hospitals for this analysis – the universe of specialty hospitals as we know it to exist and a sample of competitor acute care general hospitals.

A. Specialty Hospitals

We attempted to identify all physician-owned hospitals that met our definition of a specialty hospital. We began with the universe of 76 specialty hospitals identified in the HHS MMA Study. The HHS study defined physician-owned specialty hospitals using, in part, the MedPAC criteria from its March 2005 MMA Study. MedPAC's requirements in turn were that at least 45 percent of the hospital's Medicare cases be cardiac, orthopedic, or surgical in nature, or that at least 66 percent of the hospital's Medicare cases be in two major diagnostic categories (MDCs), with the primary one being cardiac or orthopedic, or the primary type of cases within an MDC being surgical. Hospitals must have had a minimum volume of at least 25 total Medicare cases during 2002 and submitted Medicare cost reports and claims for 2002. HHS, in its study required under section 507 of the MMA, placed one additional requirement that cardiac and orthopedic hospitals must have performed at least five major procedures. To summarize, for purposes of our study, to be considered a cardiac specialty hospital, 45 percent or more of the hospital's Medicare cases must have been in the Major Diagnostic Category (MDC) 5, Diseases and Disorders of the Circulatory System. An orthopedic hospital must have had 45 percent or more of its cases in MDC 8, Diseases and Disorders of the Musculoskeletal System and Connective Tissue. A surgical hospital must have had 45 percent or more of its discharges involve a surgical procedure.

Building upon the number of specialty hospitals identified in the HHS MMA Study, we added those 49 specialty hospitals that had requested an advisory opinion as to whether they were under development. These facilities were added because they projected that they would be primarily engaged in the care and treatment of patients with a cardiac or orthopedic condition, or patients receiving a surgical procedure. The hospitals that had requested an advisory opinion did not have to meet any case volume criteria or have filed a cost report. We also identified other hospitals as specialty hospitals based on Medicare claims data. The above steps in our selection process resulted in our identifying 130 physician-owned specialty hospitals for inclusion in our survey. The list of the 130 hospitals appears at Appendix II, Table 1.[1]

[1] Subsequent to our transmission of the survey, we received information that suggests that a few hospitals are not physician-owned or may have changed the scope of the services they provide. CMS will continue

B. Competitor Acute Care Hospitals

The second group consisted of a sample of competitor general acute care hospitals. In order to identify which acute care hospitals are competitors of specialty hospitals, we first identified the markets in which specialty hospitals are located. We identified the health referral regions (HRR) in which each of the cardiac specialty hospitals was located, by using the Dartmouth Atlas for Healthcare. Researchers at the Dartmouth Atlas Project (DAP) defined HRRs as health care markets for tertiary medical care where there was at least one hospital that performed major cardiovascular procedures and neurosurgery. We also identified the hospital service areas (HSAs) in which each of the orthopedic and surgical hospitals is located.[2] As designated by researchers at DAP, HSAs represent local health care markets for hospital care. DAP defined HSAs by assigning zip codes to the hospital areas where the greatest proportion of their Medicare residents were hospitalized. We then identified competitor acute care hospitals for each of the HRRs and HSAs in which specialty hospitals are located by employing the same criteria used by GAO in its report *Operational and Clinical Changes Largely Unaffected by Presence of Competing Specialty Hospitals*, GAO Report, GAO-06-520R, (April 2006). For purposes of that report, GAO identified those general hospitals in regional health care markets with a specialty hospital that opened since the start of 1998.

The selection process yielded 320 competitor hospitals. The list of the 320 hospitals appears at Appendix II, Table 2.

Survey Instruments

The areas of inquiry contained in the survey were based upon section 507 of the DRA, related issues in other studies of specialty hospitals, and some assertions made by both the general acute care associations, and the specialty hospital associations. Questions included in the survey were identified through a review of articles in academic journals, industry reports, periodicals, and studies conducted by CMS, MedPAC, and GAO. The survey questionnaire consisted of two major sections. Questions appearing in the first section were designed to collect hospital level information, and, where applicable, physician ownership and compensation information. Questions in the second section were intended to collect financial data, including total hospital revenue and revenue from various payers, as well as patient utilization data such as the amount of care furnished to Medicare, Medicaid, and charity care patients. The survey contained nine separate worksheets, with a total of 91 questions. In addition to those items contained in the Excel spreadsheet, we asked five supplemental questions. The survey instrument is reproduced at Appendix III.

---

to investigate the characteristics of these hospitals and will publish an updated list of physician-owned specialty hospitals on its website upon completion of its investigation.

[2] We used both HRRs and HSAs because some of the orthopedic and surgical specialty hospitals are not found in the Dartmouth Atlas of HRRs. Additionally, HSAs are more applicable, given that no cardiovascular or neurological services are being conducted at orthopedic and surgical specialty hospitals.

We tested our survey questionnaire with external experts from both the specialty and competitor hospital associations, hospital administrators from both general and specialty hospitals, chief financial officers, and accountants. These experts provided comments on the content of the survey, suggested additional areas of inquiry, and informed us about the ease of acquiring the data we were seeking and the amount of time it would take to complete the survey instrument.

Beginning in May 2006, survey questionnaires were e-mailed to the 130 specialty hospitals that we identified[3], and 320 competitor general acute care hospitals. We received 64 completed surveys from specialty hospitals (49 percent response rate) and 76 completed surveys from competitor general acute care hospitals (24 percent response rate).

Data Reliability

As an additional step to help improve consistency, we reviewed a small sample of specialty hospitals that submitted a request for an advisory opinion. We compared the information they supplied against the data they furnished on the survey. In addition, another independent group of CMS staff reviewed data to help improve the reliability and, where data could not be verified or appeared too aberrant, it was removed from the survey tabulations.

Limitations of Our Analysis

Because independent information to verify survey responses was not available, all analyses in this report are based on data that are self-reported and potentially limited by the respondent's ability or willingness to report the information accurately. As stated throughout this report, many participants did not complete selected portions of the survey instrument. It is also possible that those hospitals that had problematic information may have chosen not to participate in the survey.

Response Rate Discussion

Due to the short timeframe in which to design, compile, and analyze data, CMS concluded that e-mailing the survey to participants was the most expeditious method. CMS used the GAO file of competitor hospitals, which contained both telephone numbers and a contact name. CMS staff telephoned each of the facilities to obtain the e-mail address for the CEO/CFO or a comparable official. Some e-mails were returned and multiple efforts were made to ensure that surveys went to a valid e-mail address. In addition, the original cover note from CMS requested that participants confirm receipt of the DRA survey. CMS also sent two follow-up electronic notifications to hospitals that had not responded or returned the survey.

[3] Again, we have since determined that one hospital that we identified as a physician-owned specialty hospital is no longer a specialty hospital.

CMS shared the names of participant hospitals with associations representing both specialty and community acute care hospitals. Associations such as the American Surgical Hospital Association, American Hospital Association, and the Federation of American Hospitals, each contacted their members to encourage their participation in the survey.

Overall Survey Response rate

- Specialty Hospitals 64 out of 130 (49 percent)
- Competitor General Acute Care Hospitals 76 out of 322 (24 percent)

Note that although CMS surveyed 320 competitor hospitals, it received two surveys from general acute care hospitals that it had not surveyed. Due to the low response rate from competitor hospitals, and the fact that the two hospitals that sent the unsolicited responses were not clearly inappropriate candidates for competitor hospitals, CMS accepted the two surveys. It should be noted further that the numbers of responses received (64 for specialty hospitals and 76 for competitor hospitals) reflect surveys that were at least partially completed.[4] Many hospitals that returned surveys to CMS did not answer every question. In our discussion of the survey findings at Part IV of this report, we note, where appropriate, the number of hospitals that responded to a specific question. Finally, the number of responses does not reflect the surveys that CMS received after July 14, 2006 (which have not yet been analyzed).

[4] A list of the 140 specialty and competitor hospitals that returned the survey appears at Appendix II, Table 3.