UNDERSTANDING THE ECONOMICS OF OUTPATIENT CARE

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Collectively the authors have had the opportunity to examine more than two dozen hospitals' financial analyses of their cancer programs. Almost every analysis was incorrect. Hospitals tended to underestimate the bottom line by as much as 40 to 60 percent.

Other articles have presented data on Diagnosis Related Group (DRG) profit and loss variations for key cancer DRGs.[1,2] However, the 71 DRGs that have been identified as cancer DRGs do not provide a full picture of the cancer program product line.

The cancer program or cancer clinical service line is more difficult to analyze than many other hospital product or service lines for a variety of reasons, including: the multiple admissions associated with oncology patients; hospital use of standard accounting systems that do not track patients but instead track discharges by DRG; and the lack of effective cost accounting software. Many other hospital product lines are relatively easy to identify by DRG.

There were two fundamental problems with the financial analyses of hospital cancer programs examined. First, most administrators selected several specific DRGs and attempted to use them as indicators for the entire product line. For example, in several cases, hospital administrators confined their monitoring of the cancer program product line to MDC (major diagnostic category) 17. However, MDC 17 accounts for less than a third of all cancer patient admissions. Fundamentally, the range of diagnoses of cancer patient admissions contraindicates this approach. Second, hospitals that attempted to analyze cancer program finances using cancer patients as the unit-of-analysis frequently ignored the importance of multiple admissions.

In this paper, data from a single institution are presented to demonstrate the importance of linking multiple admission DRG information to cancer registry records in order to develop useful financial analyses of a cancer program.

The importance of multiple admission data

DRG information for all cancer patients admitted to Memorial Medical Center (MMC), Springfield, Illinois, was entered into the CHOP-DS II cancer data system. This system which links tumor registry information to financial information, provided the analyses displayed in this paper. DRG and financial information were obtained for every admission for each cancer patient.

Exhibit 1 (below) shows the percent of 1987 cancer DRG patients who were admitted to the hospital. Seventy-three percent of all MMC patients were admitted once, an additional 19 percent were admitted twice, 5 percent were admitted three times, and three percent of all patients had more than three admissions.

Exhibit 2 (page 12) displays the percent of cancer patient admissions that were generated by patients with one admission versus multiple admissions. As these two exhibits suggest, half of all cancer patient admissions are generated by one-quarter of cancer patients (the multiple admission patients), while the other half of cancer patient admissions are generated by the remaining three-quarters of cancer patients (the single admission patients).

In reviewing the actual DRGs under which cancer patients were admitted at five institutions, admissions were categorized under MDCs as well as 230 DRGs. A high volume of patients were admitted

EXHIBIT 1

Percentage of Patients with Single and Multiple Admissions

Single Admission	=	73%
Two Admissions	=	19%
Three Admissions	=	5%
More Than Three Admissions	=	3%

EXHIBIT 2

Percent of Admissions

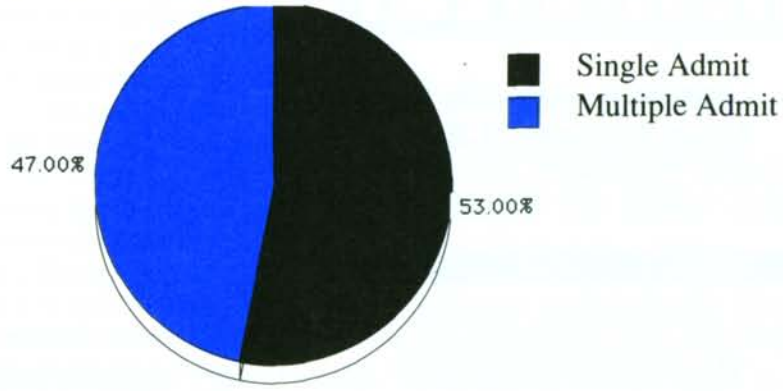


EXHIBIT 3

Frequency of Non-Small Cell Lung DRGs

(N = 111)

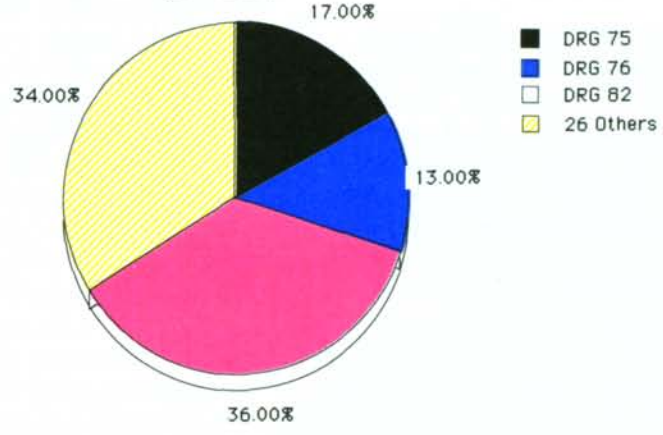
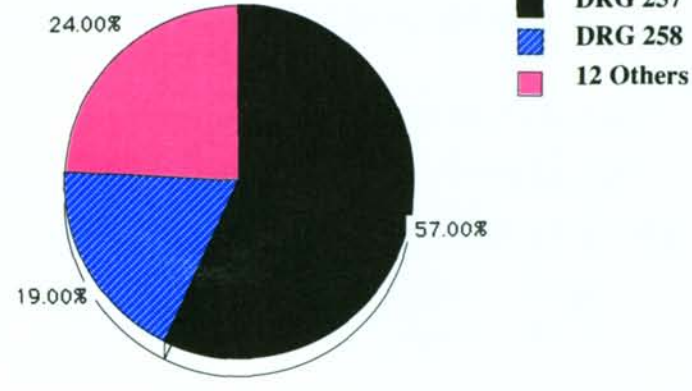


EXHIBIT 4

Frequency of Breast DRG

(N = 54)



under non-cancer-specific DRGs, such as pneumonia. Given the problem with multiple DRGs and the breadth of cancer patient discharge diagnoses, a hospital administrator who focuses on single cancer patient admissions or on a few specific cancer DRGs will miss a significant portion of cancer program revenues, perhaps as much as 40 percent.

Estimating site-specific DRG profit and loss

When DRG and financial information from all admissions are linked to tumor registry records a variety of analyses can be performed that will prove useful to senior cancer program decisionmakers. For example, informed cancer program leadership will want to determine what kinds of marketing strategies and promotions they should undertake. For instance, should more breast cancer cases be targeted through a screening clinic? Should the program be the first in line to assist the local unit of the American Cancer Society (ACS) with its annual hemoccult screening or allow the opportunity to pass to a competitor? Do they want to commit major dollars to cancer construction/renovation, i.e. a new radiation therapy department, renovate the oncology unit? Is cancer as a product line profitable? Should the institution's limited resources be channeled to another product line, i.e. women's health? Of course, the answers to such questions will largely be dependent upon the institution-specific profit and loss for each DRG for each cancer patient admission.

Moreover, as senior cancer program administrators determine which cancer sites are unprofitable, they will need to find ways of improving their profit margins by shortening lengths of stay, reviewing the kinds of tests and drugs that are being ordered, and determining other variable costs that can be reduced.

Site-specific information is useful in determining whether various types of cancer patients are generating additional profits or losses. Site-specific data provide the entire picture for such admissions. Exhibit 3 illustrates the importance of analyzing cancer patient admissions by cancer site.

Typically, hospital administrators who are attempting to determine if lung cancer patients are profitable examine the lung cancer DRG (DRG 82). Yet, when all MMC non-small cell admissions were analyzed, DRG 82 accounted for only 36 per-

EXHIBIT 5
Frequency of Small Cell Lung DRG
(N =17)

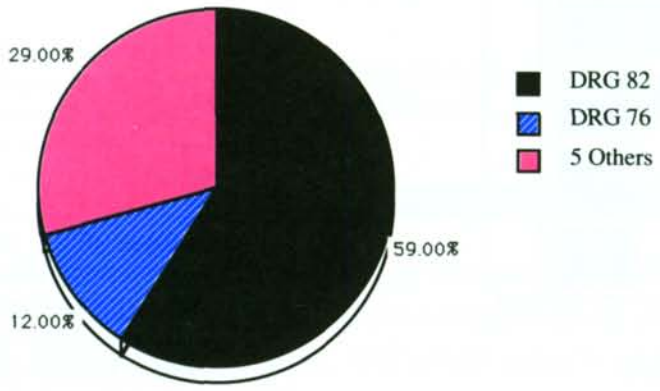


EXHIBIT 6
Highest Frequency Admissions

Type of Cancer	Number of Admissions	Profit/Loss
NSC	111	$ +16,000
Prostate	77	+57,000
Colon	57	+94,000
Breast	54	+86,000
Bladder	35	-39,000
Rectum	34	-2,000
Ovary	33	+55,000

cent of lung cancer admissions; 28 other DRGs accounted for the remaining 64 percent of admissions. If the hospital had merely examined the reimbursement and costs generated by this group of lung cancer patients under DRG 82, it would have decided that this group of patients were "losers." Yet, when financial data from all of their multiple admissions is considered, these non-small cell patients become "winners."

The extent of this problem varies by cancer site. Breast cancer admissions (Exhibit 4) fell under fourteen DRGs, two which are breast-cancer specific and, thus, easily identified, and twelve others which are not. Small cell lung cancers (Exhibit 5), on the other hand, were admitted under seven DRG categories.

High volume versus profitability

Exhibit 6 illustrates the highest frequency DRG patient admissions by cancer site and their overall profitability. When contrasted with Exhibit 7, the top billings by cancer site, these data provide two different pictures of important cancer DRGs. On the basis of volume of billings, non-small cell lung cancer, colon cancer, prostate, rectum, bladder, esophagus and breast cancer appear to be the highest volume/most profitable cancer cases. If one assumes that roughly 50 percent of most billings offset fixed costs, all of these cancer sites appear to be important to the hospital.

Yet, as Exhibit 6 suggests, total billings do not always predict profitabili-

EXHIBIT 7
Top DRG Billings by Site

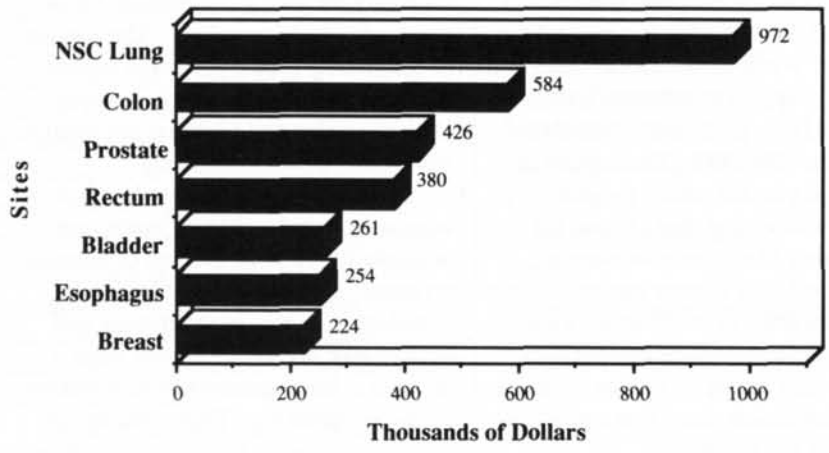


EXHIBIT 8
DRG Major Profit Sites

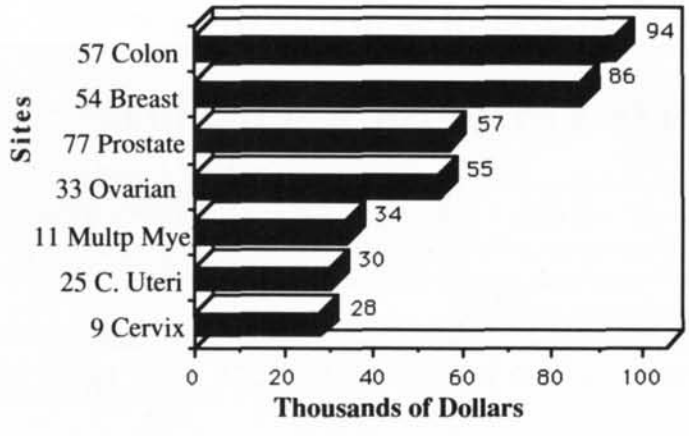
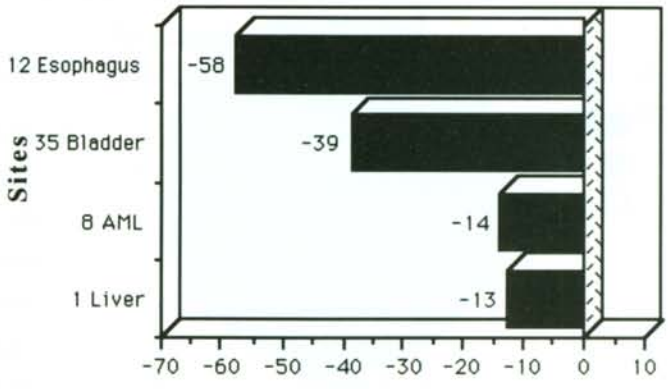


EXHIBIT 9

MMC DRG Major Loss Sites



ty—a factor that may take on increasing importance as the profit margin on all patients decreases. Non-small cell lung cancer patients, for example, had billings of $972,000, but a modest net profitability of $16,000. While breast cancer cases had total billings approximately one-quarter as large ($224,000), profitability was five times greater ($86,000). These types of comparisons provide cancer program managers with a great deal of food for thought. Very likely some mixture of profitable and high volume cancer patients should be targeted in the program's marketing and promotional campaigns. Certainly, such strategies will be necessary to offset cancer cases that consistently fall below the profit line.

Exhibits 8 and 9 illustrate total profit and loss by cancer site, providing yet a third look at the cancer program product line. Here we see the importance of a group of GYN patients and the potential losses generated by a few esophageal, bladder, AML, and liver cancer patients.

Overall, the ability to sort DRG and financial information by cancer site should provide many cancer programs with the necessary additional information for programmatic decisionmaking. The survival of community cancer programs requires senior managers to be able to integrate clinical, quality and financial information with strategic decisionmaking.

The cancer program product line is unusually complex, but, in many cases, accounts for 10 to 20 percent of hospital revenues. (Hospitals that intend to be dominant in cancer programming will need to take several additional steps if they are to have appropriate information for decisionmaking. Those that do not take these steps are likely to make incorrect strategic decisions.) ■

[1] Young, John L., and others. "Hospital Reimbursement, Charges, and Profit and Loss for Cancer and Cancer-Related DRGs," *Oncology Issues*, 3:4, Fall 1988, p. 9.
[2] Mortenson, Lee E., and others. "Variations In Cancer DRG Profit and Loss by Hospital Size and Region of the Nation," *Oncology Issues*, 3:4, Fall 1988, p. 16.

ONCOLOGY SYMPOSIUM SCHEDULED

An international symposium entitled, "Quality of Life in Current Oncology Practice and Research," will be held on February 25 at St. Mary's Medical Center, Long Beach, CA. The hospital, which is affiliated with the UCLA School of Medicine, will be offering seven hours of CME and Nursing Continuing Education Contract Hours to attendees.

For registration information, contact St. Mary's Department of Medical Education, 1050 Linden Ave., P.O. Box 887, Long Beach, CA 90801. Phone: 213/491-9352.

LETTERS

Proposed RCT Category Draws Fire

I was much interested in the request from the Oncology Nursing Society for ACCC's opposition to the American Medical Association's (AMA's) proposal for the development of a new category of health care provider, a Registered Care Technologist (RCT). (See the "President's Corner," *Oncology Issues*, Fall 1988.)

When this was brought up at the AMA last June, I was strongly opposed to its creation. I see no reason to have another category of nursing. We need to go back to the old registered nurse training schools where nurses are trained to take care of patients directly in the hospital. I am bitterly opposed to academic training without primarily training the nurse to take care of the patients at the bedside. I have been interested in this issue for a good many years.

At one time, I served on the Committee of the Pennsylvania Medical Society for Relationships with Allied Professions. At that time, the National League of Nursing was promoting baccalaureate nursing programs and wanted to do away with registered nursing schools. We are now paying the penalty for this attitude, both in the lack of nurses and in the quality of bedside nursing care. The old RN schools should be reinstated with the addition of the academic studies that are now present in most of the RN schools that still exist.—Joseph M. Stowell, M.D., Director of the Cancer Program, Altoona (PA) Hospital.

It appears that the AMA is trying to create a monster with the RCT program. Who would train these people? What would be the licensing mechanism? How could one establish and maintain quality control?

Over the years, nursing has had identity problems with BSNs, MSNs, AAs, Diploma Nurses, and LPNs. Recently, however, nursing seems to be evolving into a true profession with educational and professional standards, clinical specialization, and even Board Certification. The RCT program seems to be a major step backward.—*Carl G. Kardinal, M.D., Principal Investigator, Ochsner CCOP, New Orleans, LA.* ■