CHAPTER

Case Study: Metropolis Health System

25

BACKGROUND

1. **The Hospital System**
   Metropolis Health System (MHS) offers comprehensive healthcare services. It is a midsize taxing district hospital. Although MHS has the power to raise revenues through taxes, it has not done so for the past seven years.

2. **The Area**
   MHS is located in the town of Metropolis, which has a population of 50,000. The town has a small college and a modest number of environmentally clean industries.

3. **MHS Services**
   MHS has taken significant steps to reduce hospital stays. It has developed a comprehensive array of services that are accessible, cost-effective, and responsive to the community's needs. These services are wellness oriented in that they strive for prevention rather than treatment. As a result of these steps, inpatient visits have increased overall by only 1,000 per year since 1998, whereas outpatient/same-day surgery visits have had an increase of over 50,000 per year.

   A number of programmatic, service, and facility enhancements support this major transition in the community's institutional health care. They are geared to provide the quality, convenience, affordability, and personal care that best suit the health needs of the people whom MHS serves.

   - Rehabilitation and Wellness Center—for outpatient physical therapy and return-to-work services, plus cardiac and pulmonary rehabilitation, to get people back to a normal way of living.
   - Home Health Services—bringing skilled care, therapy, and medical social services into the home; a comfortable and affordable alternative in longer-term care.
   - Same-Day Surgery (SDS)—eliminating the need for an overnight stay. Since 1998, same-day surgery procedures have doubled at MHS.
   - Skilled Nursing Facility—inpatient service to assist patients in returning more fully to an independent lifestyle.
   - Community Health and Wellness—community health outreach programs that provide educational seminars on a variety of health issues, a diabetes education

center, support services for patients with cancer, health awareness events, and a women's health resource center.
- Occupational Health Services—helping to reduce workplace injury costs at over 100 area businesses through consultation on injury avoidance and work-specific rehabilitation services.
- Recovery Services—offering mental health services, including substance abuse programs and support groups, along with individual and family counseling.

4. **MHS's Plant**
The central building for the hospital is in the center of a two square block area. A physicians' office building is to the west. Two administrative offices, converted from former residences, are on one corner. The new ambulatory center, completed two years ago, has an L shape and sits on one corner of the western block. A laundry and maintenance building sits on the extreme back of the property. A four-story parking garage is located on the eastern back corner. An employee parking lot sits beside the laundry and maintenance building. Visitor parking lots fill the front eastern portion of the property. A helipad is on the extreme western edge of the property behind the physicians' office building.

5. **MHS Board of Trustees**
Eight local community leaders who bring diverse skills to the board govern MHS. The trustees generously volunteer their time to plan the strategic direction of MHS, thus ensuring the system's ability to provide quality comprehensive health care to the community.

6. **MHS Management**
A chief executive officer manages MHS. Seven senior vice presidents report to the CEO. MHS is organized into 23 major responsibility centers.

7. **MHS Employees**
All 500 team members employed by MHS are integral to achieving the high standards for which the system strives. The quality improvement program, reviewed and re-established in 2005, is aimed at meeting client needs sooner, better, and more cost-effectively. Participants in the program are from all areas of the system.

8. **MHS Physicians**
The MHS medical staff is a key part of MHS's ability to provide excellence in health care. Over 75 physicians cover more than 30 medical specialties. The high quality of their training and their commitment to the practice of medicine are great assets to the health of the community.

The physicians are very much a part of MHS's drive for continual improvement on the quality of healthcare services offered in the community. MHS brings in medical experts from around the country to provide training in new techniques, made possible by MHS's technologic advancements. MHS also ensures that physicians are

offered seminars, symposiums, and continuing education programs that permit them to remain current with changes in the medical field.

The medical staff's quality improvement program has begun a care path initiative to track effective means for diagnosis, treatment, and follow-up. This initiative will help avoid unnecessary or duplicate use of expensive medications or technologies.

9. MHS Foundation

Metropolis Health Foundation is presently being created to serve as the philanthropic arm of MHS. It will operate in a separate corporation governed by a board of 12 community leaders and supported by a 15-member special events board. The mission of the foundation will be to secure financial and nonfinancial support for realizing the MHS vision of providing comprehensive health care for the community.

Funds donated by individuals, businesses, foundations, and organizations will be designated for a variety of purposes at MHS, including the operation of specific departments, community outreach programs, continuing education for employees, endowment, equipment, and capital improvements.

10. MHS Volunteer Auxiliary

There are 500 volunteers who provide over 60,000 hours of service to MHS each year. These men and women assist in virtually every part of the system's operations. They also conduct community programs on behalf of MHS.

The auxiliary funds its programs and makes financial contributions to MHS through money it raises on renting televisions and vending gifts and other items at the hospital. In the past, its donations to MHS have generally been designated for medical equipment purchases. The auxiliary has given $250,000 over the last five years.

11. Planning the Future for MHS

The MHS has identified five areas of desired service and programmatic enhancement in its five-year strategic plan:

I. Ambulatory Services
II. Physical Medicine and Rehabilitative Services
III. Cardiovascular Services
IV. Oncology Services
V. Community Health Services

MHS has set out to answer the most critical health needs that are specific to its community. Over the next five years, the MHS strategic plan will continue a tradition of quality, community-oriented health care to meet future demands.

12. Financing the Future

MHS has established a corporate depreciation fund. The fund's purpose is to ease the financial burden of replacing fixed assets. Presently, it has almost $2 million for needed equipment and renovations.

I. MHS CASE STUDY

Financial Statements

- Balance Sheet (**Exhibit 25-1**)
- Statement of Revenue and Expense (**Exhibit 25-2**)

Exhibit 25–1 Balance Sheet

Metropolis Health System
Balance Sheet
March 31, 2___

Assets		Liabilities and Fund Balance	
Current Assets		Current Liabilities	
Cash and Cash Equivalents	$1,150,000	Current Maturities of Long-Term Debt	$525,000
Assets Whose Use Is Limited	825,000	Accounts Payable and Accrued Expenses	4,900,000
Patient Accounts Receivable (Net of $1,300,000 Allowance for Bad Debts)	7,400,000	Bond Interest Payable	300,000
Other Receivables	150,000	Reimbursement Settlement Payable	100,000
Inventories	900,000		
Prepaid Expenses	200,000	Total Current Liabilities	5,825,000
Total Current Assets	10,625,000	Long-Term Debt	6,000,000
Assets Whose Use Is Limited		Less Current Portion of Long-Term Debt	<525,000>
Corporate Funded Depreciation	1,950,000	Net Long-Term Debt	5,475,000
Held by Trustee under Bond Indenture Agreement	1,425,000	Total Liabilities	11,300,000
Total Assets Whose Use Is Limited	3,375,000	Fund Balances	
Less Current Portion	<825,000>	General Fund	21,500,000
Net Assets Whose Use Is Limited	2,550,000	Total Fund Balances	21,500,000
Property, Plant, and Equipment, Net	19,300,000	Total Liabilities and Fund Balances	$32,800,000
Other Assets	325,000		
Total Assets	$32,800,000		

Exhibit 25–2 Statement of Revenue and Expense

Metropolis Health System
Statement of Revenue and Expense
for the Year Ended March 31, 2___

Revenue		
Net patient service revenue	$34,000,000	
Other revenue	1,100,000	
Total Operating Revenue		$35,100,000
Expenses		
Nursing services	$5,025,000	
Other professional services	13,100,000	
General services	3,200,000	
Support services	8,300,000	
Depreciation	1,900,000	
Amortization	50,000	
Interest	325,000	
Provision for doubtful accounts	1,500,000	
Total Expenses		33,400,000
Income from Operations		$1,700,000
Nonoperating Gains (Losses)		
Unrestricted gifts and memorials	$20,000	
Interest income	80,000	
Nonoperating Gains, Net		100,000
Revenue and Gains in Excess of Expenses and Losses		$1,800,000

- Statement of Cash Flows (**Exhibit 25-3**)
- Statement of Changes in Fund Balance (**Exhibit 25-4**)
- Schedule of Property, Plant, and Equipment (**Exhibit 25-5**)
- Schedule of Patient Revenue (**Exhibit 25-6**)
- Schedule of Operating Expenses (**Exhibit 25-7**)

Statistics and Organizational Structure

- Hospital Statistical Data (**Exhibit 25-8**)
- MHS Nursing Practice and Administration Organization Chart (**Figure 25-1**)
- MHS Executive-Level Organization Chart (**Figure 25-2**)

Exhibit 25–3 Statement of Cash Flows

Metropolis Health System
Statement of Cash Flows
for the Year Ended March 31, 2___

Statement of Cash Flows	
Operating Activities	
Income from operations	$1,700,000
Adjustments to reconcile income from operations to net cash flows from operating activities	
Depreciation and amortization	1,950,000
Changes in asset and liability accounts	
Patient accounts receivable	250,000
Other receivables	<50,000>
Inventories	<50,000>
Prepaid expenses and other assets	<50,000>
Accounts payable and accrued expenses	<400,000>
Reduction of bond interest payable	<25,000>
Estimated third-party payer settlements	<75,000>
Interest income received	80,000
Unrestricted gifts and memorials received	20,000
Net cash flow from operating activities	$3,350,000
Cash Flows from Capital and Related Financing Activities	
Repayment of long-term obligations	<500,000>
Cash Flows from Investing Activities	
Purchase of assets whose use is limited	<100,000>
Equipment purchases and building improvements	<2,000,000>
Net Increase (Decrease) in Cash and Cash Equivalents	$750,000
Cash and Cash Equivalents, Beginning of Year	400,000
Cash and Cash Equivalents, End of Year	$1,150,000

Exhibit 25–4 Statement of Changes in Fund Balance

Metropolis Health System Statement of Changes in Fund Balance for the Year Ended March 31, 2___	
General Fund Balance April 1, 2____	$19,700,000
Revenue and Gains in Excess of Expenses and Losses	1,800,000
General Fund Balance March 31, 2____	$21,500,000

Exhibit 25–5 Schedule of Property, Plant, and Equipment

Metropolis Health System Schedule of Property, Plant, and Equipment for the Year Ended March 31, 2___	
Buildings and Improvements	$14,700,000
Land Improvements	1,100,000
Equipment	28,900,000
Total	$44,700,000
Less Accumulated Depreciation	(26,100,000)
Net Depreciable Assets	$18,600,000
Land	480,000
Construction in Progress	220,000
Net Property, Plant, and Equipment	$19,300,000

Exhibit 25–6 Schedule of Patient Revenue

Metropolis Health System
Schedule of Patient Revenue
for the Year Ended March 31, 2___

Patient Services Revenue	
Routine revenue	$9,850,000
Laboratory	7,375,000
Radiology and CT scanner	5,825,000
OB–nursery	450,000
Pharmacy	3,175,000
Emergency service	2,200,000
Medical and surgical supply and IV	5,050,000
Operating rooms	5,250,000
Anesthesiology	1,600,000
Respiratory therapy	900,000
Physical therapy	1,475,000
EKG and EEG	1,050,000
Ambulance service	900,000
Oxygen	575,000
Home health and hospice	1,675,000
Substance abuse	375,000
Other	775,000
Subtotal	$48,500,000
Less allowances and charity care	14,500,000
Net Patient Service Revenue	$34,000,000

Exhibit 25–7 Schedule of Operating Expenses

Metropolis Health System
Schedule of Operating Expenses
for the Year Ended March 31, 2___

Nursing Services		General Services	
Routine Medical-Surgical	$3,880,000	Dietary	$1,055,000
Operating Room	300,000	Maintenance	1,000,000
Intensive Care Units	395,000	Laundry	295,000
OB-Nursery	150,000	Housekeeping	470,000
Other	300,000	Security	50,000
Total	$5,025,000	Medical Records	330,000
		Total	$3,200,000
Other Professional Services			
Laboratory	$2,375,000	Support Services	
Radiology and CT Scanner	1,700,000	General	$4,600,000
Pharmacy	1,375,000	Insurance	240,000
Emergency Service	950,000	Payroll Taxes	1,130,000
Medical and Surgical Supply	1,800,000	Employee Welfare	1,900,000
Operating Rooms and Anesthesia	1,525,000	Other	430,000
		Total	$8,300,000
Respiratory Therapy	525,000		
Physical Therapy	700,000	Depreciation	1,900,000
EKG and EEG	185,000	Amortization	50,000
Ambulance Service	80,000		
Substance Abuse	460,000	Interest Expense	325,000
Home Health and Hospice	1,295,000		
Other	130,000	Provision for Doubtful Accounts	1,500,000
Total	$13,100,000		
		Total Operating Expenses	$33,400,000

Exhibit 25–8 Hospital Statistical Data

Metropolis Health System
Schedule of Hospital Statistics
for the Year Ended March 31, 2___

Inpatient Indicators:		Departmental Volume Indicators:	
Patient Days			
Medical and surgical	13,650	Respiratory therapy treatments	51,480
Obstetrics	1,080	Physical therapy treatments	34,050
Skilled nursing unit	4,500	Laboratory workload units (in thousands)	2,750
Admissions		EKGs	8,900
Adult acute care	3,610	CT scans	2,780
Newborn	315	MRI scans	910
Skilled nursing unit	440	Emergency room visits	11,820
		Ambulance trips	2,320
Discharges		Home Health visits	14,950
Adult acute care	3,580		
Newborn	315	Approximate number of employees (FTE)	510
Skilled nursing unit	445		
Average Length of Stay (in days)	4.1		

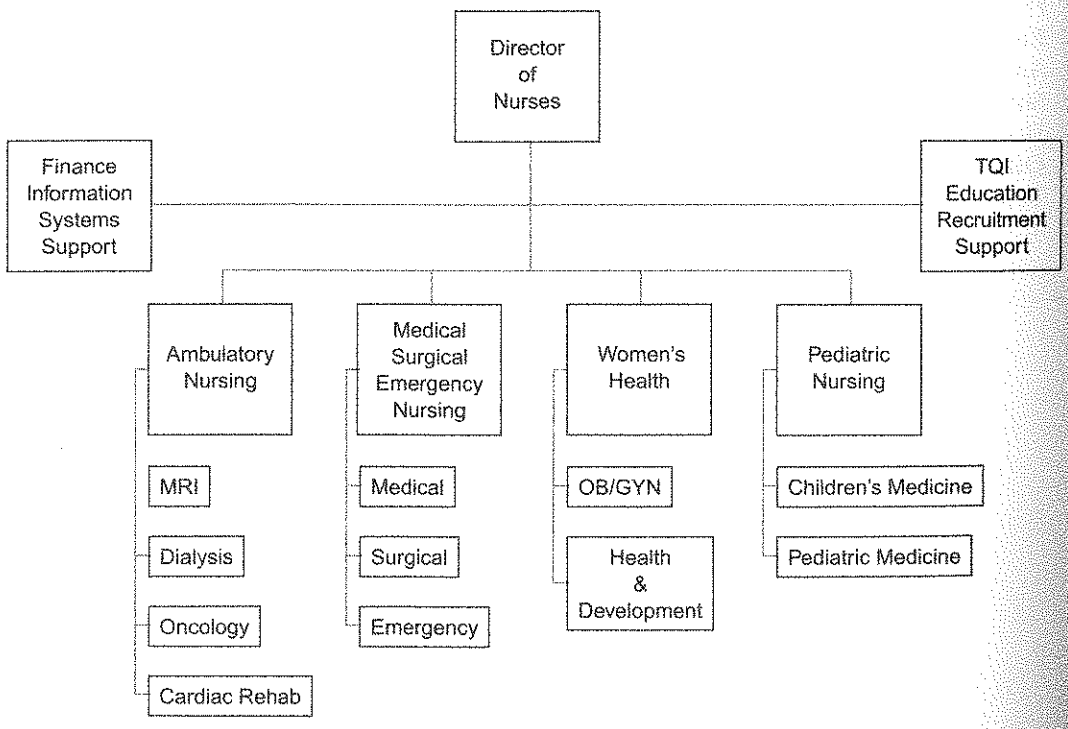

Figure 25–1 MHS Nursing Practice and Administration Organization Chart.
Courtesy of Resource Group, Ltd., Dallas, Texas.

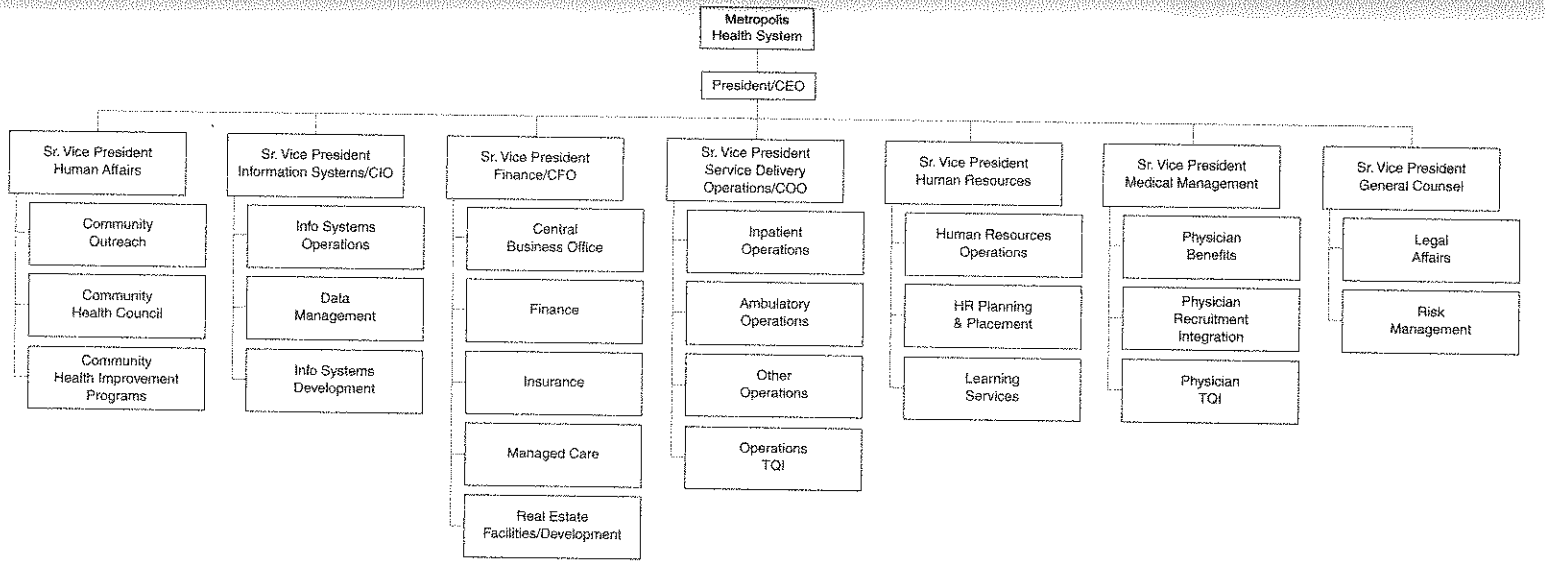

Figure 25–2 MHS Executive-Level Organization Chart.
Courtesy of Resource Group, Ltd., Dallas, Texas.

25-A Using Financial Ratios and Benchmarking: A Case Study in Comparative Analysis

Sample Hospital is another facility within the Metropolis Health System. Sample Hospital has recently been acquired by Metropolis. It is a 100-bed hospital that has been losing money steadily over the last several years. The new chief financial officer (CFO) has decided to use benchmarking as an aid to turn around Sample's financial situation. Benchmarking will illustrate where the hospital stands in relationship to its peer group.

The CFO orders two benchmarking reports: one for the hospitals that are 100 beds or less and one for all hospitals, no matter the size. The 100-beds-or-less report will allow direct comparability for Sample, while the all-hospital report will give a universal or overall view of Sample's standing. Both reports appear at the end of this case study. **Exhibit 25-A-1** is the benchmark data report for Sample General Hospital compared with hospitals less than 100 beds, whereas **Exhibit 25-A-2** is the benchmark data report for Sample General Hospital compared with all hospitals.

When the reports arrive, the CFO writes a description of how the data are arranged so that his managers will better understand the information presented. His description includes the following points:

1. The percentile rankings are intended to present the hospital's performance ranked against all other performers in the comparison group. Whether the hospital's actual performance is good or bad depends on the statistic being evaluated.
2. The first column, labeled "Annual Average Year 1," provides a historical trend of actual performance of the hospital in the previous year. It is provided for reference only so that the reader can see the trend over time.
3. The column labeled "Q1 Year 2" represents the first quarter of the current year. These are the most recent data that this service has been provided for Sample Hospital and are the data used in the comparison columns that follow.
4. The column labeled "Benchmark: 50th Percentile" represents the 50th percentile of all of the hospitals in the comparison group that supplied data for the individual line item.
5. The "Variance" column compares the data from Q1 Year 2 of Sample Hospital with the 50th percentile information from the entire comparison group.
6. The column labeled "%ile Range" indicates where Sample Hospital's individual score fell within a percentile range.

Exhibit 25–A–1 Hospital Statistical Data

Benchmark Data Report
Sample General Hospital
Compared to Hospitals of Less Than 100 Beds

	Annual Average Year 1	*Q 1 Year 2*	*Current Quarter Benchmark* 50%ile	*Variance*	*%ile Range*
Severity/Length of Stay					
Average Length of Stay	3.80	3.91	4.06	–0.15	35–40
Case Mix Index (All Patients)	1.02	1.04	1.04	0.005	50–55
Case Mix Index (Medicare)	1.24	1.26	1.19	0.07	80–85
Productivity/Labor Utilization					
FTE per Adjusted Occupied Bed	5.11	4.68	4.44	0.24	60–65
Paid Hours per Adjusted Patient Day	29.12	26.67	25.3	1.37	60–65
Paid Hours per Adjusted Discharge	110.53	104.19	109.5	–5.32	35–40
Salary Cost per Adjusted Discharge	$2,638	$2,510	$2,510	$0	50–55
Costs & Charges					
Cost per Adjusted Patient Day	$1,704	$1,608	$1,448	$161	70–75
Cost per Adjusted Discharge	$6,467	$6,282	$5,909	$373	55–60
Cost per CMI (All Pat.) Adj. Discharge	$6,328	$6,041	$5,837	$204	50–55
Cost per CMI (All Pat.) Adjusted Patient Day	$1,667	$1,546	$1,408	$139	60–65
Supply Cost per Adjusted Discharge	$1,046	$968	$867	$101	60–65
Supply Cost per CMI (All Pat.) Adj. Discharge	$1,024	$931	$829	$102	60–65
Gross Charges per Adjusted Discharge	$12,987	$14,155	$12,536	$1,620	60–65
Deductions Percentage	0.40%	58.46%	51.04%	7.42%	60–65
Net Charges per Adjusted Discharge	$6,112	$5,880	$5,929	($49)	45–50
Net Charges per Adjusted Patient Day	$1,610	$1,505	$1,424	$82	60–65
Utilization					
Average Daily Census	43.15	46.36	37.69	8.67	65–70
Occupancy Percent	41.09%	46.36%	57.66%	–11.30%	10–15
Outpatient Charges Percent	53.15%	54.02%	50.14%	3.88%	55–60
Beds in Use	100	100	66	34	90–95
Adjusted Occupied Beds	92.2	100.82	72.05	28.76	75–80
Total Patient Days Excluding Newborns	3,936	4,172	3,392	780	65–70
Total Discharges Excluding Newborns	1,036	1,068	751	317	80–85
Newborn Days as a % of Total Patient Days	6.95%	5.40%	4.61%	0.79%	60–65

Exhibit 25–A–1 Hospital Statistical Data *(continued)*

	Annual Average Year 1	*Q 1 Year 2*	*Current Quarter Benchmark* 50%ile	*Variance*	*%ile Range*
Financial Performance—Profitability Ratios					
Operating Margin	–2.26	–3.18	1.95	–5.13	15–20
Profit Margin	–2.26	–3.18	2.06	–5.24	20–25
Return on Total Assets (Annualized) (%)	–2.37%	–3.58%	1.22%	–4.80%	20–25
Return on Equity (Annualized) (%)	–6.56%	–11.19%	4.61%	–15.80%	15–20
Financial Performance—Liquidity Ratios					
Current Ratio	1.28	1.19	1.9	–0.71	15–20
Quick Ratio	0.54	0.56	1.56	–0.99	15–20
Net Days in Patient AR (Days)	50.73	49	51.86	–2.86	40–45
Financial Performance—Leverage and Solvency Ratios					
Total Asset Turnover—Annualized	1.07	1.13	0.99	0.14	65–70
Current Asset Turnover—Annualized	3.21	3.65	3.57	0.08	50–55
Equity Financing	0.38	0.32	0.47	–0.15	25–30
Long-Term Debt to Equity	0.77	0.85	0.56	0.28	70–75

For example, review the average length of stay information for hospitals less than 100 beds in Exhibit 25-A-1. For the Q1 Year 2, Sample Hospital has a length of stay of 3.91 versus a benchmark comparison number of 4.06, a favorable performance against the 50th percentile by 0.15 (the −0.15 indicates an amount under the 50th percentile that, in the case of average length of stay, would be favorable). This performance places the hospital's score in the 35th to 40th percentile of all respondents.

As the CFO already knows, Sample Hospital is in trouble. In most cases, the facility is either at or below (worse than) the 50th percentile information. Most of the labor productivity measures are in the 60th to 65th percentile range, with the cost information in the same relative range. This indicates that Sample is spending more than the peer group for labor and supplies. The utilization statistics also present a dismal picture.

Each statistic has to be evaluated against what it means to the institution before a conclusion can be drawn. For example, the occupancy percentage for Sample is 46.36% versus the 50th percentile of 57.66. This places Sample in the 10th to 15th percentile range for the comparison group of hospitals less than 100 beds. In terms of utilization, the CFO knows that a facility should be in the 80th to 85th percentile range to use all of its assets effectively.

What other statistics should the CFO review to assure that a higher occupancy percentage is beneficial to the hospital? The answer is average length of stay. Sample Hospital has a length of stay of 3.91 (as discussed earlier), which is favorable compared with the peer

Exhibit 25–A–2 Hospital Statistical Data

Benchmark Data Report
Sample General Hospital
Compared to All Hospitals

			Current Quarter Benchmark		
	Annual Average Year 1	*Q 1 Year 2*	*50%ile*	*Variance*	*%ile Range*
Severity/Length of Stay					
Average Length of Stay	3.80	3.91	4.81	–0.91	10–15
Case Mix Index (All Patients)	1.02	1.04	1.14	–0.103	25–30
Case Mix Index (Medicare)	1.24	1.26	1.38	–0.118	30–35
Productivity/Labor Utilization					
FTE per Adjusted Occupied Bed	5.11	4.68	4.87	–0.19	40–45
Paid Hours per Adjusted Patient Day	29.12	26.67	27.77	–1.1	40–45
Paid Hours per Adjusted Discharge	110.53	104.19	134.6	–30.41	10–15
Salary Cost per Adjusted Discharge	$2,638	$2,510	$2,927	($417)	25–30
Costs & Charges					
Cost per Adjusted Patient Day	$1,704	$1,608	$1,530	$78	60–65
Cost per Adjusted Discharge	$6,467	$6,282	$7,284	($1,001)	30–35
Cost per CMI (All Pat.) Adj. Discharge	$6,328	$6,041	$6,115	($74)	45–50
Cost per CMI (All Pat.) Adjusted Patient Day	$1,667	$1,546	$1,268	$278	80–85
Supply Cost per Adjusted Discharge	$1,046	$968	$1,250	($282)	25–30
Supply Cost per CMI (All Pat.) Adj. Discharge	$1,024	$931	$1,069	($138)	30–35
Gross Charges per Adjusted Discharge	$12,987	$14,155	$17,196	($3,041)	35–40
Deductions Percentage	0.40%	58.46%	56.31%	2.15%	55–60
Net Charges per Adjusted Discharge	$6,112	$5,880	$7,419	($1,539)	20–25
Net Charges per Adjusted Patient Day	$1,610	$1,505	$1,529	($24)	45–50
Utilization					
Average Daily Census	43.15	46.36	142.98	–96.62	15–20
Occupancy Percent	41.09%	46.36%	69.38%	–23.02%	< 5
Outpatient Charges Percent	53.15%	54.02%	39.64%	14.38%	85–90
Beds in Use	100	100	206	–106	20–25
Adjusted Occupied Beds	92.2	100.82	225.9	–125.09	15–20
Total Patient Days Excluding Newborns	3,936	4,172	12,868	–8,696	15–20
Total Discharges Excluding Newborns	1,036	1,068	2,506	–1,438	20–25
Newborn Days as a % of Total Patient Days	6.95%	5.40%	4.52%	0.87%	60–65

Exhibit 25–A–2 Hospital Statistical Data *(continued)*

	Annual Average Year 1	*Q 1 Year 2*	*Current Quarter Benchmark* 50%ile	*Variance*	*%ile Range*
Financial Performance—Profitability Ratios					
Operating Margin	–2.26	–3.18	4.45	–7.63	10–15
Profit Margin	–2.26	–3.18	4.66	–7.84	10–15
Return on Total Assets (Annualized) (%)	–2.37%	–3.58%	4.04%	–7.62%	10–15
Return on Equity (Annualized) (%)	–6.56%	–11.19%	8.46%	–19.65%	5–10
Financial Performance—Liquidity Ratios					
Current Ratio	1.28	1.19	2.2	–1	10–15
Quick Ratio	0.54	0.56	1.74	–1.18	5–10
Net Days in Patient AR (Days)	50.73	49	55.76	–6.77	25–30
Financial Performance—Leverage and Solvency Ratios					
Total Asset Turnover—Annualized	1.07	1.13	0.93	0.2	70–75
Current Asset Turnover—Annualized	3.21	3.65	3.48	0.18	50–55
Equity Financing	0.38	0.32	0.5	–0.18	20–25
Long-Term Debt to Equity	0.77	0.85	0.59	0.26	65–70

group, but an occupancy rate that is 11.30% below the 50th percentile for the peer group of hospitals less than 100 beds. If these two statistics are observed in combination, one could say that Sample efficiently manages its patients, but just does not have enough of them.

Other statistics bear the same message. The hospital is not profitable, and much of the problem is because the cost of running the institution exceeds the availability of patients to pay the bills. In other words, all institutions have core staffing requirements, and within a certain range of volume, most costs are fixed. Sample has 100 beds in use while the 50th percentile for its peer group shows 66 beds in use. Sample's plant is too big for its patient volume. These circumstances can mean the hospital is heading for disaster.

So what happened to Sample Hospital? As you can surmise from the data, the previous year (labeled "Year 1" on Exhibits 25-A-1 and 25-A-2) was not favorable. Three years previous, the institution was losing money at a rate of over $1 million per month. The next two years showed improvement (even though the data still show concern), and the improvement trend continued through the year labeled "Year 2" on Exhibits 25-A-1 and 25-A-2. By using benchmarking data (and a lot of other analysis), management was able to determine and address many issues that forced this facility to perform below market averages. By improving quality, managing costs, and controlling productivity, the hospital was able to

stabilize its financial position. In addition, with creative management and attention to both clinical quality and customer service, the occupancy percentage rose to above the 50th percentile. Finally, the operating margin improved dramatically. In the first quarter of year 2 the margin was minus 3.18. By the end of year 3, results showed a positive margin of greater than 2.5%, a dramatic turnaround. Benchmarking assisted in this turnaround by showing management where the need for improvement was greatest.

PART

XI

Mini-Case Studies