

RIVER COMMUNITY HOSPITAL (A)

ASSESSING HOSPITAL PERFORMANCE

RIVER COMMUNITY HOSPITAL is a 210-bed, not-for-profit, acute care hospital with a long-standing reputation for providing quality healthcare services to a growing service area. River competes with three other hospitals in its metropolitan statistical area (MSA)—two not-for-profit and one for-profit. It is the smallest of the four but has traditionally been ranked highest in patient satisfaction polls.

Hospitals are accredited by The Joint Commission, an independent, not-for-profit organization whose mission is to improve the safety and quality of healthcare provided to the public through accreditation and related services. (For more information on The Joint Commission, visit its website at www.jointcommission.org.) Although accreditation is optional for hospitals, it is generally required to qualify for governmental (Medicare and Medicaid) reimbursement, and hence the vast majority of hospitals apply for accreditation. River passed its latest Joint Commission survey with “flying colors,” receiving the Gold Seal of Approval from that accrediting body.

In recent years, competition among the four hospitals in River’s service area has been keen but friendly. However, a large for-profit chain recently purchased the for-profit hospital, which has resulted in some anxiety among the managers of the other three hospitals because of the chain’s reputation for aggressively increasing market share in the markets they serve.

Relevant financial and operating data for River are contained in Exhibits 1.1 through 1.5, and selected industry data are contained in

Exhibits 1.6 and 1.7. (Note that the industry data given in the case are for illustrative purposes only and do not represent actual data for the years specified. For a better idea of the type of comparative data actually available for hospitals, see the Optum™ website at www.hospitalbenchmarks.com.)

In addition to the data in the exhibits, the following information was extracted from the notes section of River's 2013 Annual Report.

1. A significant portion of the hospital's net patient service revenue was generated by patients who are covered either by Medicare, Medicaid, or other government programs or by various private plans, including managed care plans, that have contracts with the hospital that specify discounts from charges. In general, the proportional amount of deductions is similar between inpatients and outpatients. The gross and net patient service revenue and operating expenses breakdown for both inpatient and outpatient services is given in Exhibit 1.4.
2. River has a contributory money accumulation (defined contribution) pension plan that covers substantially all of its employees. Participants can contribute up to 20 percent of earnings to the pension plan. The hospital matches, on a dollar-for-dollar basis, employee contributions of up to 2 percent of wages and pays 50 cents on the dollar for contributions over 2 percent and up to 4 percent. Because the plan is a defined contribution plan (as opposed to a defined benefit plan), River has no unfunded pension liabilities. Pension expense was approximately \$0.543 million in 2012 and \$0.588 million in 2013.
3. The hospital is a member of the State Hospital Trust Fund, under which it purchases professional liability insurance coverage for individual claims up to \$1 million (subject to a deductible of \$100,000 per claim). River is self-insured for amounts above \$1 million but less than \$5 million. Any liability award in excess of \$5 million is covered by a commercial liability policy; for example, the policy pays \$2 million on a \$7 million award. The hospital is currently involved

in eight suits involving claims of various amounts that could ultimately be tried before juries. Although it is impossible to determine the exact potential liability in these claims, management does not believe that the settlement of these cases would have a material effect on the hospital's financial position.

Assume that you have just joined the staff of River Community Hospital as a special assistant to the CEO. On your first day on the job, the CEO, Melissa Randolph, stated that the best way to get to know the financial and operating condition of the hospital is to conduct a thorough financial statement and operating indicator analysis; thus, she assigned you the task. Although you also believe that this is a good way to get started, you wonder whether Melissa has any ulterior motives. Perhaps the hospital is having problems and she thinks that you can spot them, or perhaps she wants to test your analytical skills. Melissa is from the "old school" of hospital management and has been looking for someone to bring modern management methods to the hospital.

As you prepare for the presentation, several relevant factors come to light. First, in reviewing the policy decisions made by River's board of trustees over the past decade, you note that in 2008 the board made the decision to significantly expand the hospital's outpatient services. The rationale was that many procedures that historically were done on an inpatient basis were now being done in an outpatient setting, and if River did not offer such services it would lose the patients to other providers.

Second, the board chair has great concern about the decline in profitability between 2011 and 2012 and has not been assuaged by the recent modest upturn. Perhaps because she is CEO of a local company, the chair focuses on return on equity (ROE) as the key measure of profitability. She has requested that management develop some strategies to improve profitability and estimate the impact of the strategies on the hospital's ROE.

Third, you discover that board members were complaining that too much time is being spent at quarterly board meetings discussing the hospital's financial condition. "There is so much to accomplish," said one member, "that we just don't have the time to consider a large number of ratios at each meeting."

You know that many healthcare providers are now using dashboards to focus on key performance indicators (KPIs). A dashboard is nothing

more than a way to summarize an organization's financial and operating performance. Of course, the name stems from an automobile's dashboard, which contains gauges that give drivers essential information about the car's performance and operating condition. Thus, you plan to develop two dashboards, each containing no more than five KPIs. One dashboard will use financial ratios to focus on financial performance, while the other will use operating indicator ratios to focus on operating performance. You plan to present your recommendations for the contents of these dashboards, along with the rationale for the ratios chosen, at the board meeting. Your ultimate goal is to replace the full financial and operating performance discussion at future board meetings with a limited discussion of the KPIs.

EXHIBIT 1.1
River Community
Hospital: Statements
of Operations
(millions of dollars)

| | 2011 | 2012 | 2013 |
|-----------------------------|-----------------|-----------------|-----------------|
| <i>Revenues</i> | | | |
| Net patient service revenue | \$28.796 | \$30.576 | \$34.582 |
| Other revenue | <u>1.237</u> | <u>1.853</u> | <u>1.834</u> |
| Total revenues | <u>\$30.033</u> | <u>\$32.429</u> | <u>\$36.416</u> |
| <i>Expenses</i> | | | |
| Salaries and wages | \$12.245 | \$12.468 | \$13.994 |
| Fringe benefits | 1.830 | 2.408 | 2.568 |
| Interest expense | 1.181 | 1.598 | 1.776 |
| Depreciation | 2.350 | 2.658 | 2.778 |
| Medical supplies and drugs | 0.622 | 0.655 | 0.776 |
| Professional liability | 0.140 | 0.201 | 0.218 |
| Other | <u>9.036</u> | <u>10.339</u> | <u>11.848</u> |
| Total expenses | <u>\$27.404</u> | <u>\$30.327</u> | <u>\$33.958</u> |
| <i>Net Income</i> | <u>\$ 2.629</u> | <u>\$ 2.102</u> | <u>\$ 2.458</u> |

Case 1: Riverview Community Hospital (A)

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EXHIBIT 1.2
River Community
Hospital: Balance Sheets
(millions of dollars)

| | 2011 | 2012 | 2013 |
|-----------------------------------|------------------------|------------------------|------------------------|
| Assets | | | |
| Cash and investments | \$ 4.673 | \$ 5.069 | \$ 2.795 |
| Accounts receivable (net) | 4.359 | 5.674 | 7.413 |
| Inventories | 0.432 | 0.523 | 0.601 |
| Other current assets | <u>0.308</u> | <u>0.703</u> | <u>0.923</u> |
| Total current assets | <u>\$ 9.772</u> | <u>\$11.969</u> | <u>\$11.732</u> |
| Gross plant and equipment | \$47.786 | \$55.333 | \$59.552 |
| Accumulated depreciation | <u>11.820</u> | <u>14.338</u> | <u>17.009</u> |
| Net plant and equipment | <u>\$35.966</u> | <u>\$40.995</u> | <u>\$42.543</u> |
| Total assets | <u><u>\$45.738</u></u> | <u><u>\$52.964</u></u> | <u><u>\$54.275</u></u> |
| Liabilities and Net Assets | | | |
| Accounts payable | \$ 0.928 | \$ 1.253 | \$ 1.760 |
| Accrued expenses | 1.460 | 1.503 | 1.176 |
| Current portion of LT debt | <u>0.110</u> | <u>1.341</u> | <u>1.465</u> |
| Total current liabilities | <u>\$ 2.498</u> | <u>\$ 4.097</u> | <u>\$ 4.401</u> |
| Long-term debt | 15.673 | 19.222 | 17.795 |
| Net assets | <u>27.567</u> | <u>29.645</u> | <u>32.079</u> |
| Total liabilities and net assets | <u><u>\$45.738</u></u> | <u><u>\$52.964</u></u> | <u><u>\$54.275</u></u> |
| LT long term | | | |

← or see balance sheet

EXHIBIT 1.3
River Community
Hospital: Statements of
Cash Flows
(millions of dollars)

| | 2012 | 2013 |
|--|-----------|-------------|
| <i>Cash Flows from Operating Activities</i> | | |
| Net income | \$2.102 | \$2.458 |
| Depreciation and noncash expenses | 2.633 | 2.756 |
| Change in accounts receivable | (1.315) | (1.739) |
| Change in inventories | (0.091) | (0.078) |
| Change in other current assets | (0.395) | (0.220) |
| Change in accounts payable | 0.325 | 0.507 |
| Change in accrued expenses | 0.043 | (0.327) |
| Net cash flow from operations | \$3.302 | \$3.357 |
| <i>Cash Flows from Investing Activities</i> | | |
| Investment in plant and equipment | (\$7.686) | (\$4.328) |
| <i>Cash Flows from Financing Activities</i> | | |
| Change in long-term debt | \$3.549 | (\$1.427) |
| Change in current portion of long-term debt | 1.231 | \$0.124 |
| Net cash flow from financing | \$4.780 | → (\$1.303) |
| Net increase (decrease) in cash | \$0.396 | (\$2.274) |
| Beginning cash | \$4.673 | \$5.069 |
| Ending cash | \$5.069 | \$2.795 |

Note. "Depreciation and noncash expenses" and "Investment in plant and equipment" data in the statements of cash flows are somewhat different than they would be if calculated directly from the other financial statements because of asset revaluations.

| | 2011 | 2012 | 2013 |
|-------------------------------|-----------------|-----------------|-----------------|
| <i>Operating Revenue</i> | | | |
| Gross inpatient service | \$26.117 | \$29.148 | \$33.216 |
| Gross outpatient service | <u>6.535</u> | <u>9.130</u> | <u>11.912</u> |
| Gross patient service revenue | <u>\$32.652</u> | <u>\$38.278</u> | <u>\$45.128</u> |
| Contractual allowances | \$ 1.729 | \$ 5.196 | \$ 7.516 |
| Bad debt and charity care | <u>2.127</u> | <u>2.506</u> | <u>3.030</u> |
| Total revenue deductions | <u>\$ 3.856</u> | <u>\$7.702</u> | <u>\$10.546</u> |
| Net patient service revenue | <u>\$28.796</u> | <u>\$30.576</u> | <u>\$34.582</u> |
| <i>Operating Expenses</i> | | | |
| Inpatient service | \$20.573 | \$22.229 | \$24.771 |
| Outpatient service | <u>6.831</u> | <u>8.098</u> | <u>9.187</u> |
| Total operating expenses | <u>\$27.404</u> | <u>\$30.327</u> | <u>\$33.958</u> |

EXHIBIT 1.4
River Community
Hospital: Revenue and
Expense Allocation
 (millions of dollars)

| | 2011 | 2012 | 2013 |
|--------------------------|--------|--------|--------|
| Medicare discharges | 2,721 | 2,860 | 2,741 |
| Total discharges | 8,784 | 8,318 | 8,576 |
| Outpatient visits | 32,285 | 32,878 | 36,796 |
| Licensed beds | 210 | 210 | 210 |
| Staffed beds | 193 | 197 | 178 |
| Patient days | 44,085 | 42,434 | 40,062 |
| All-payer case mix index | 1.2869 | 1.2993 | 1.3161 |
| Full-time equivalents | 610.8 | 625.8 | 619.3 |

EXHIBIT 1.5
River Community
Hospital: Selected
Operating Data

10 *Cases in Healthcare Finance*

EXHIBIT 1.6
2013 Selected Industry
Financial Ratios
(200–299 beds)

| | <i>+Quartile</i> | <i>Median</i> | <i>–Quartile</i> |
|--|------------------|---------------|------------------|
| <i>Profitability Ratios</i> | | | |
| Total margin | 5.58% | 3.48% | 0.53% |
| Return on assets | 5.80% | 3.10% | 0.40% |
| Return on equity | 15.66% | 6.01% | 0.62% |
| Deductible ratio ^a | 0.34 | 0.26 | 0.18 |
| <i>Liquidity Ratios</i> | | | |
| Current ratio | 2.53 | 1.99 | 1.48 |
| Days cash on hand | 32.35 | 15.89 | 6.24 |
| <i>Debt Management Ratios</i> | | | |
| Debt ratio | 62.90% | 48.40% | 35.20% |
| Debt to equity ratio | 127.00% | 64.70% | 26.90% |
| Times interest earned | 4.29 | 2.23 | 1.14 |
| Cash flow coverage | 5.32 | 3.22 | 1.76 |
| <i>Asset Management Ratios</i> | | | |
| Fixed asset turnover | 2.20 | 1.76 | 1.49 |
| Total asset turnover | 1.04 | 0.89 | 0.75 |
| Days in patient accounts receivable | 87.53 | 75.67 | 63.33 |
| Current asset turnover ^b | 3.94 | 3.38 | 2.88 |
| Average payment period (days) ^c | 71.24 | 56.52 | 45.84 |
| <i>Other Ratios</i> | | | |
| Average age of plant (years) | 8.86 | 7.39 | 6.14 |

^aDeductions/Gross patient service revenue

^bTotal revenues/Current assets

^cCurrent liabilities/[(Total expenses – Depreciation expense)/365]

Notes: 1. The industry data shown here are for illustrative purposes only and hence should not be used outside this case.

2. The upper quartile is based on the higher numerical value for the ratio and the lower quartile on the lower numerical value, regardless of whether a high value is good or bad. The interpretation is left to the analyst.

EXHIBIT 1.7
2013 Selected Industry
Operating Ratios
(200–299 beds)

| | +Quartile | Median | –Quartile |
|---|-----------|-----------|------------|
| <i>Profit Indicators</i> | | | |
| Profit per discharge ^a | \$89.04 | (\$21.30) | (\$120.08) |
| Profit per visit ^b | \$ 6.22 | \$ 0.66 | (\$ 7.01) |
| <i>Net Revenue Indicators</i> | | | |
| Net revenue per discharge ^c | \$4,091 | \$3,411 | \$2,815 |
| Net revenue per visit ^c | \$ 201 | \$ 139 | \$ 98 |
| Medicare revenue percentage ^e | 43.47% | 36.60% | 31.25% |
| Bad debt/charity care percentage ^f | 7.89% | 4.76% | 2.97% |
| Contractual allowance percentage ^g | 25.27% | 20.02% | 12.12% |
| Outpatient revenue percentage ^h | 25.26% | 21.03% | 17.44% |
| <i>Volume Indicators</i> | | | |
| Occupancy rate ⁱ | 67.12% | 58.10% | 47.84% |
| Average daily census ⁱ | 173.23 | 144.73 | 114.39 |
| <i>Length-of-Stay Indicators</i> | | | |
| Average length of stay (days) ^k | 6.80 | 6.07 | 5.41 |
| Adjusted length of stay ^j | 6.48 | 5.36 | 4.52 |
| <i>Intensity-of-Service Indicators</i> | | | |
| Expense per discharge ^m | \$ 3,937 | \$ 3,392 | \$ 2,972 |
| Adjusted expense per discharge ⁿ | \$ 3,417 | \$ 2,924 | \$ 2,572 |
| Expense per visit ^o | \$202.23 | \$141.97 | \$111.53 |
| All-payer case mix index ^p | 1.2795 | 1.1756 | 1.0259 |
| <i>Efficiency Indicators</i> | | | |
| FTEs per occupied bed ^q | 4.59 | 4.15 | 3.77 |
| Labor-hours per visit ^r | 4.68 | 5.84 | 8.66 |
| <i>Unit Cost Indicators</i> | | | |
| Salary per FTE ^s | \$24,447 | \$22,517 | \$20,347 |
| Employee benefits percentage ^t | 19.58% | 17.04% | 15.18% |
| Liability expense per discharge ^u | \$ 80.94 | \$ 42.05 | \$ 18.31 |

^a(Net inpatient revenue – Inpatient expenses)/Total discharges

^b(Net outpatient revenue – Outpatient expenses)/Total visits

^cNet inpatient revenue/Total discharges

**EXHIBIT 1.7
(continued)
2013 Selected Industry
Operating Ratios
(200–299 beds)**

-
- ^dNet outpatient revenue/Total visits
 - ^eMedicare net patient revenue/Total net patient revenue
 - ^f(Bad debt + Charity care)/Gross patient revenue
 - ^gContractual allowances/Gross patient revenue
 - ^hNet outpatient revenue/Total net patient revenue
 - ⁱPatient days/(Staffed beds × 365)
 - ^jPatient days/365
 - ^kPatient days/Total discharges
 - ^lAverage length of stay/Case mix index
 - ^mInpatient expenses/Total discharges
 - ⁿExpense per discharge/Case mix index
 - ^oOutpatient expenses/Total visits
 - ^pSum of DRG weights/Total discharges
 - ^qInpatient FTEs/Average daily census
 - ^r(Outpatient FTEs × 2,080)/Total visits
 - ^sTotal salaries/Total FTEs
 - ^tFringe benefit expense/Total salaries
 - ^uInpatient professional liability expense/Total discharges

DRG: diagnosis-related group; FTE: full-time equivalent

Notes: 1 The industry data shown here are for illustrative purposes only and hence should not be used outside this case

2 The upper quartile is based on the higher numerical value for the ratio and the lower quartile on the lower numerical value, regardless of whether a high value is good or bad. The interpretation is left to the analyst.
