



Metropolitan Government of Nashville and Davidson County

Benchmarking Analysis

Intermediate Care and Skilled Nursing Facilities
Long-Term Acute Care Hospital

April, 2001



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Objective

This benchmarking analysis report presents the results of KPMG LLP's (KPMG) assistance to the Metropolitan Government of Nashville and Davidson County Internal Audit Section (Internal Audit). The objective of our assistance was to benchmark the income statement of Metro Bordeaux Hospital (Bordeaux), including nursing facility services, against selected peer groups and to identify significant variances.

Worksteps

KPMG and Internal Audit selected the fiscal year ended 1999 as the benchmark period which represented the most recent audited financial period for Bordeaux when the work began. Collectively, KPMG, Internal Audit and the former Bordeaux Director selected the peer groups and the items to be benchmarked. Initially, the peers were selected based on preliminary information such as types of services, ownership, location, payor mix, etc. It was also collectively decided to benchmark the nursing services and the long-term acute care (LTAC) hospital services separately. This decision was based on the wide variation in services and cost structures for the two unique services.

For nursing services, seven facilities were initially chosen. After obtaining financial information, it was decided that two of the facilities were not comparable. Therefore, the peer group for nursing services consisted of five facilities (Facilities "A – E"). All facilities were in Tennessee, were government owned during the study period and provided both intermediate and skilled nursing care.

| | | |
|--|---|-------------|
| | Shelby County Health Care Center | West, TN |
| | Oakville Health Care Center | West, TN |
| | Hamilton County Nursing Home | Central, TN |
| | Cheatham County Health Service Center | Central, TN |
| | Bedford County Skilled Nursing Facility | Central, TN |

For long-term acute care hospital services, five facilities were selected for the peer group (LTACs "a – e"). It was necessary to look outside of the state of Tennessee for peers since chronic disease licensure is not common. Three hospitals were government owned, one was a not-for-profit and one was a for-profit facility.



| | | |
|--|------------------------------------|---------------|
| | Select Specialty Hospital | Tennessee |
| | Massachusetts Respiratory Hospital | Massachusetts |
| | Ascension Hospital | Louisiana |
| | Western Maryland Center | Maryland |
| | Drake Center, Inc. | Ohio |

Once the peer groups were selected, the following worksteps were performed in order to achieve the objective:

- Obtained Bordeaux financial data from governmental reports and internal documentation.
- Obtained most recent (1999 and 1998) publicly available information on the peer group (i.e., unaudited Medicare and/or Medicaid cost reports and certain audited financial statements).
 - For those facilities where 1998 year end data was the most recently available information (two peers), a market basket index published in the Federal Register was applied to the 1998 information to estimate 1999 revenues and expenses.
 - Prepared income statements for Bordeaux (based on audited financial statements) and the peer groups.
- Adjusted the income statements for salary wage indices and hospital and skilled nursing case-mix indices.
- Prepared “per patient day” Bordeaux and peer income statements to analyze each income statement on a comparable basis.
- Compared the peer group per patient day income statements to Bordeaux’s per patient day income statements.
- Identified all significant variances in per patient day revenues and expenses to further analyze the efficiency of operations.

Caveats and Limitations

Inconsistencies in the methods used to report financial information likely exist among the peer group. KPMG noted that inconsistencies did exist in the information reported between the Medicare and Medicaid cost reports with respect to nursing facility services. KPMG,



Internal Audit and hospital management attempted to reconcile these inconsistencies and obtain additional information by contacting the peer group facilities. Where applicable, adjustments were made; however, some inconsistencies likely still exist but are considered insignificant in relation to the scope of the engagement.

Additionally, the most recent cost reports available had not yet been audited by the intermediaries. KPMG did not audit or verify any information for the peers or Bordeaux.

General Findings

An analysis of Bordeaux's income statement broken out between the LTAC and nursing services indicated that Bordeaux's net operating loss of \$13,398,753, as reported on the Medicare and Medicaid cost reports, is broken out as follows:

- LTAC: \$96,707
- Nursing Facility: \$13,302,046
- The LTAC is reimbursed cost up to a limit for Medicare patients. For the benchmarking period, Medicare cost was below the limit and, thus, fully paid.
- Based on the two above points, the variance analysis between Bordeaux and the peers focused on nursing facility services (Appendix I).
- The nursing facility's net revenue was comparable with the peers.
- There were material cost variances between Bordeaux and peer nursing facility services when analyzed on a per patient day basis (Appendix II).
- The nursing facility's cost per patient day exceeds the Medicaid payment per diem by approximately \$63 for the Intermediate Care Facility (ICF) and \$203 for the Skilled Nursing Facility (SNF) (Appendix III).
 - The nursing facility's Medicaid patients comprise approximately 96% (approximately 167,000 patient days) of all nursing service patients. Therefore, a substantial loss is incurred for each Medicaid nursing service patient day.
 - The payment per patient day for Medicaid patients is fixed; therefore, to minimize the related losses, a reduction of cost is necessary.



Operational Findings and Recommendations

The following findings and recommendations have the potential to have immediate cost savings.

A. Medical and Nursing Full Time Equivalents (FTEs)

Finding: The nursing facility's medical and nursing FTEs per average daily census is approximately 30 greater than the peer group average. Additionally, the nursing facility's use of medical and nursing contract labor is also in excess of the peer group average.

The following two tables show the FTEs per average daily census for staff and contract labor. The tables multiply each peer's FTE per average daily census by Bordeaux's average daily census to determine the FTE variance. Note that Facility E is excluded from the contract labor calculation because the information was not available.

| | Intermediate Care Facility | | | | | |
|---------------------------------|----------------------------|---------------------------|--------------|--------------|--------------|---------------|
| | Bordeaux | Facility "A" | Facility "B" | Facility "C" | Facility "D" | Facility "E" |
| Medical and Nursing FTE per ADC | 0.61 | 0.57 | 0.63 | 0.53 | 0.45 | 0.57 |
| X Bordeaux's ADC | 317.11 | 317.11 | 317.11 | 317.11 | 317.11 | 317.11 |
| Staffing at Bordeaux's ADC | 194 | 181 | 200 | 168 | 143 | 181 |
| Peer Average | 175 | -----Average----- | | | | |
| FTE Variance | 19 | | | | | |
| Contract Labor FTE per ADC | 0.11 | 0.024 | 0.064 | 0.013 | 0.113 | not available |
| X Bordeaux's ADC | 317.11 | 317.11 | 317.11 | 317.11 | 317.11 | |
| Staffing at Bordeaux's ADC | 35 | 8 | 20 | 4 | 36 | |
| Peer Average | 17 | -----Average "A - D"----- | | | | |
| FTE Variance | 18 | | | | | |



Skilled Nursing Facility

| | Bordeaux | Facility "A" | Facility "B" | Facility "C" | Facility "D" | Facility "E" |
|---------------------------------|----------|---------------------------|--------------|--------------|--------------|---------------|
| Medical and Nursing FTE per ADC | 0.72 | 0.67 | 0.74 | 0.63 | 0.53 | 0.67 |
| X Bordeaux's ADC | 162.81 | 162.81 | 162.81 | 162.81 | 162.81 | 162.81 |
| Staffing at Bordeaux's ADC | 117 | 109 | 120 | 103 | 86 | 109 |
| Peer Average | 106 | -----Average----- | | | | |
| FTE Variance | 11 | | | | | |
| Contract Labor FTE per ADC | 0.13 | 0.029 | 0.075 | 0.016 | 0.133 | not available |
| X Bordeaux's ADC | 162.81 | 162.81 | 162.81 | 162.81 | 162.81 | |
| Staffing at Bordeaux's ADC | 21 | 5 | 12 | 3 | 22 | |
| Peer Average | 11 | -----Average "A - D"----- | | | | |
| FTE Variance | 10 | | | | | |

Recommendation: Bordeaux management should determine reasons for the significant variances in FTEs to justify those variances, or assess the FTE complement and mix and take steps to reduce the related costs. The cost associated with the FTE variances is summarized as follows:

| | FTE Variance | Avg. Salary per FTE | Total Salary Costs | Total Benefit Costs | Total Costs |
|--------------------------------------|--------------|---------------------|--------------------|-----------------------|-------------|
| ICF Medical & Nursing FTEs | 19 | \$27,439 | \$521,341 | \$172,043 | \$693,384 |
| ICF Medical & Nursing Contract Labor | 18 | \$41,382 | \$744,876 | <i>Not applicable</i> | \$744,876 |
| SNF Medical & Nursing FTEs | 11 | \$28,507 | \$313,577 | \$103,480 | \$417,057 |
| SNF Medical & Nursing Contract Labor | 10 | \$41,382 | \$413,820 | <i>Not applicable</i> | \$413,820 |
| Subtotal | | | \$1,993,614 | \$275,523 | \$2,269,137 |

B. Physician Services

Finding: Bordeaux employs physicians to provide various services and bills and retains collections for their professional services. The collections do not cover the full cost of employment. Peer facilities do not employ physicians or incur related costs. The net cost incurred by Bordeaux's nursing services is presented below, excluding expenses related to housing of \$234,044 which is no longer provided:



| | |
|---|------------------|
| Physician Salary Expenses (approximately 6.95 FTEs x average salary of \$60,117) | \$ 417,813 |
| Salary Related Benefits (33%) | 137,878 |
| Other Expenses (insurance, bonding, etc.) | 71,205 |
| LESS: Net Physician Revenue | <u>(103,520)</u> |
| Net Physician Cost | \$ 523,376 |

Recommendation: Bordeaux management should consider contracting physician services. If this recommendation is implemented, the LTAC, which incurs a net physician cost of \$200,516, would also benefit. The LTAC's net physician cost consists of \$228,056 for salaries, plus \$68,417 for benefits, plus \$38,866 for other expenses, less \$134,823 in net revenue. This excludes physician housing expense of \$104,299, which is no longer provided. Thus, the potential is to reduce Bordeaux's physician expenses by a total of \$723,892.

C. Pharmacy Services

Finding: Bordeaux maintains an on-site pharmacy, employs its staffing needs, and bills and retains collections. The net pharmacy cost incurred related to the nursing facility is as follows:

| | |
|---|-----------------|
| Pharmacy Salary Expenses (approximately 7 FTEs x average salary of \$46,793) | \$ 327,551 |
| Salary Related Benefits (33%) | 108,092 |
| Other Pharmacy Expenses (Drugs & Supplies) | 564,787 |
| LESS: Net Pharmacy Revenue | <u>(84,330)</u> |
| Net Pharmacy Cost | \$ 916,100 |

The majority of the peer facilities outsource pharmacy services, shifting the risk of billing and collections. Only one other facility reported pharmacy salary expense. Those facilities that outsource pharmacy services reported a minimal amount of related expenses; however, those expenses were offset with revenue.

Recommendation: Bordeaux management should consider outsourcing pharmacy services. If this recommendation is implemented, it would have a minimal impact on the LTAC because 100% of Medicare related expenses are reimbursed.



Other Findings and Recommendations

The following findings and recommendations require additional analysis by Bordeaux management in order to determine the potential for additional revenue or cost savings opportunities.

D. Revenue Enhancement Opportunities

One of the peers initially selected for the nursing services peer group but later removed from our study (Lake Taylor Hospital) is structured similar to Bordeaux (i.e. intermediate and skilled nursing services with an LTAC). Because it is located in Virginia, it was not possible to obtain reliable detailed comparable information. At the former Bordeaux Director's request, a comparison with Lake Taylor Hospital was made based on the combined nursing and hospital services.

Finding: The unadjusted expense per patient day was comparable. Significant variances related to net revenue and government appropriations were identified as follows:

| | Income Statement | | Per Patient Day | |
|---------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|
| | Bordeaux FYE: 6/30/99 | Lake Taylor FYE: 6/30/99 | Bordeaux FYE: 6/30/99 | Lake Taylor FYE: 6/30/99 |
| Total Net Revenue | \$ 21,236,763 | \$ 14,819,252 | \$ 118.91 | \$ 178.91 |
| Total Salaries Expenses | 17,366,782 | 7,971,174 | 97.24 | 96.23 |
| Total Non-Salary Expenses | <u>17,268,735</u> | <u>7,789,872</u> | <u>96.69</u> | <u>94.05</u> |
| Total Expenses | 34,635,517 | 15,761,046 | 193.93 | 190.28 |
| Net Income (Loss) | \$ (13,398,754) | \$ (941,794) | \$ (75.02) | \$ (11.37) |
| Government Appropriations | \$ 14,413,559 | -0- | \$ 80.70 | -0- |

Upon further inquiry, it was discovered that the comparison facility improved its net revenue with strategic initiatives targeting increases in the number of Medicare patients and total patients, while stabilizing its costs. This revenue enhancement supports the facility's cost structure while receiving no government appropriations.

Recommendation: Bordeaux management should evaluate payor and patient mix, capacity issues, and seek alternative revenue sources that will reduce or eliminate the need for a General Fund subsidy.



E. Non-Medical/Nursing FTEs

Non-medical/nursing FTEs represent the following areas:

- Human Resources;
- Dietary;
- Housekeeping;
- Laundry & Linens;
- Plant Operation;
- Laboratory;
- X-ray;
- Recreation Services;
- Social Services;
- Medical Records;
- Central Supply; and
- Adjunctive Therapy

Finding: The nursing facility’s non-medical/nursing FTEs per average daily census, excluding plant operation which is discussed below, is similar to the peer group average. However, it is noted that FTEs in certain departments are below the peer average, while others are over the peer average. The combined results are that Bordeaux’s non-medical/nursing FTEs are at the peer average.

Due to a significant variance within plant operation, however, we isolated this department from the others. The nursing facility’s plant operation department utilizes approximately 17 more FTEs per average daily census, at an average salary of \$28,474, as compared to the peer group average of FTEs and contract labor.

| | Bordeaux | Peer Average | Variance | Salary | Total Costs |
|-----------------|----------|-----------------|----------|----------|----------------|
| Plant Operation | 27 | 10 | 17 | \$28,474 | \$484,058 |

Recommendation: Bordeaux management should research the plant operation variance taking into consideration such issues as the age, size and layout of the plant. Any achievable cost savings should be pursued.



F. Salary Expenses

Finding: The nursing facility incurs a higher average salary per FTE as compared to the peer group average. This could be due to higher wages per FTE, skill mix of the FTEs, or a combination of both.

| | Bordeaux | Peer Range | Peer Average | Salary Variance |
|--------------------------|-----------|----------------------|--------------|-----------------|
| Medical & Nursing | \$ 31,277 | \$24,249 to \$42,191 | \$ 29,387 | \$ 1,890 |
| Administrative & General | \$ 72,402 | \$34,191 to \$52,319 | \$ 41,065 | \$ 31,337 |
| Other Departments | \$ 32,458 | \$17,194 to \$32,015 | \$ 27,796 | \$ 4,662 |

The cost related to the higher salary expense is estimated as follows:

| | Salary Variance | FTEs | Total Costs |
|--------------------------|-----------------|------|--------------|
| Medical & Nursing | \$ 1,890 | 281 | \$ 531,090 |
| Administrative & General | \$ 31,337 | 25 | \$ 783,425 |
| Other Departments | \$ 4,662 | 175 | \$ 815,850 |
| | | 481 | \$ 2,130,365 |

During the fiscal year 1999 study period, Bordeaux utilized a total of 542 FTEs for nursing services. The 481 FTEs used above exclude the FTEs related to the variances discussed earlier in this report (30 medical and nursing FTEs, 7 physician FTEs, 7 pharmacy FTEs, and 17 plant operation FTEs) in order to prevent overstating the cost related to the salary variances.

Recommendation: Bordeaux management should further investigate the variances to justify them, or take steps to save cost where possible.

G. Benefit/HR Expenses

Finding: The nursing facility's benefit expense as a percentage of total salaries is approximately 10% greater than the peer average.

| Bordeaux | Facility "A" | Facility "B" | Facility "C" | Facility "D" | Facility "E" |
|----------|--------------|-------------------------------|--------------|--------------|--------------|
| 33% | 19% | 20% | 31% | 22% | 25% |
| 23% | | Average of Facilities "A – E" | | | |

Excluding the benefits related to the FTE variances discussed above, the cost related to the higher benefit expenses is estimated at \$1,414,029 (10% variance multiplied by projected salary expense of \$14,140,292).



Recommendation: None. The benefit/human resource expenses are established by the Metropolitan Government of Nashville and Davidson County and not Bordeaux management.

H. Plant Operation Non-Salary Expense

Finding: The nursing facility's non-salary plant operation cost of \$6.40 per patient day exceeds the peer group average by approximately \$1.36 per patient day. The peer group ranged from \$2.50 to \$6.27 per patient day, with an average cost of \$5.04 per patient day.

Recommendation: Bordeaux management should further research the variances, taking into consideration such issues as the age, size and layout of the plant. Any achievable cost savings should be pursued.

I. Laundry and Linen Cost

Finding: The nursing facility's non-salary laundry and linen costs of \$4.91 per patient day are approximately \$3.94 per patient day greater than the peer average. The peer group ranged from \$0.69 per patient day to \$1.43, with an average of \$0.97 per patient day. This excludes Facility "E" with a cost of \$0.13 per patient day, which appears to be an outlier.

Recommendation: The laundry and linen non-salary expense requires further investigation. It should be noted, however, that some of the variance is due to the fact that two peer facilities utilized prison labor for laundry services; an alternative that Bordeaux is not considering. Opportunities to reduce laundry and linen costs should be identified.

J. LTAC Hospital Utilization

Finding: The LTAC has a very low occupancy rate of 15.6% (approximately 9 patients per day for the 60 beds).

Recommendation: Bordeaux management should seek opportunities to increase utilization or consider alternative uses for the facility.

Conclusions

Bordeaux management should first address those areas where an immediate operational cost savings opportunity exists. This includes improved utilization of medical and nursing FTEs and contract labor, and outsourcing physician and pharmacy services. Next, management



should consider evaluating the other variances identified at a more detail level to determine whether additional cost savings or revenues are achievable. This would include determining any cost savings opportunities available by outsourcing other services, such as therapies and other ancillaries. Bordeaux should also consider benchmarking the nursing facility against best practices of private and other government owned facilities to identify further opportunities to increase effectiveness and efficiency.



APPENDIX I

Nursing Service Unadjusted Income Statements



APPENDIX II

Nursing Services Wage and SNF Case-Mix Adjusted Per Patient Day Expenses



APPENDIX III

ICF Medicaid Reimbursement Per Diems
SNF Medicaid Reimbursement Per Diems