

CEO Compensation at Nonprofit Hospitals: Associations with Performance Measures

January 2016

David Koepke, PhD, Lead Scientist, Truven Health Analytics

David Foster, PhD, MPH, Lead Scientist, Truven Health Analytics

Deborah Bilak, Partner, Mercer

Stephen S. Pollack, Partner, Mercer

Jean Chenoweth, Senior Vice President, Truven Health Analytics

Thomas P. Flannery, PhD, Partner, Mercer

Anne Seaman, Consulting Analyst, Truven Health Analytics

Table of Contents

Executive Summary	1
Introduction.	2
Methodology	3
Data Sources.	4
IRS Form 990 Data	5
Hospital Executive Reference Data	6
Linking IRS Form 990 Executives to Specific Hospitals in NBS Performance Data.	6
Descriptive Procedures.	8
Analytical Procedures.	9
Results.	10
Summary	13
Discussion.	14
Conclusions.	15
Opportunities for Future Research	15
References	16

Executive Summary

Hospital board compensation committees across the United States are being challenged to demonstrate an objective basis for chief executive officer (CEO) compensation levels. Tax exempt status of hospitals is under fire at all levels of government — federal, state and local. The Affordable Care Act requires that hospitals provide a balance between quality and cost to assure value to communities served. Hospital boards are responsible for assuring performance of the whole organization, not single silos of performance such as finance or quality. This study examines the association between tax-exempt hospital CEO compensation and a vetted national balanced scorecard composite score representing hospital-wide key performance indicators. The study further examines the association between CEO compensation and the individual key performance indicators comprising the national balanced scorecard.

- **A significant, positive association was found between higher CEO compensation and hospitals with national balanced scorecard composite scores in the top 10 percent of all study hospitals.** CEO compensation at national benchmark facilities (hospitals setting national benchmarks for highest balanced performance on a vetted national balanced scorecard for hospitals) was higher overall and within class at all teaching and medium to large community hospitals with 100 or more beds.
- **Median CEO compensation increased with hospital class** (bed size and teaching status). Major teaching hospitals provided the highest median CEO compensation and small community hospitals had the lowest. The study also observed wide variability in executive compensation within each class.
- **CEO compensation had a significant positive association (compensation increased as performance improved) with several component measures of hospital performance on the balanced scorecard:** inpatient mortality, 30-day mortality for AMI, heart failure, and pneumonia, HCAHPS, and Core Measures. Each of these measures, except inpatient mortality, is part of the CMS Value-Based Purchasing Program.
- **CEO compensation had a significant negative association (compensation increased as performance declined) with two component measures of hospital performance on the balanced scorecard:** inpatient complications of care and adjusted expense per inpatient discharge.

Additional lag analyses, in which hospital performance and CEO compensation were evaluated for correlations over different periods of time and different temporal sequences, did not reveal any discernible patterns of association beyond the findings listed above.

Introduction

Compensation committees of nonprofit hospital and health system boards are finding themselves in the spotlight as hospital CEO compensation comes under scrutiny. In New York (Executive Order 38) and California (through proposed ballot initiatives), government officials and others have called for limits on executive pay. National and trade media, as well as federal and state lawmakers, are criticizing compensation levels, calling for restraints on pay and arguing that trustee compensation committees are failing to set compensation based on objective performance.

Legislation introduced in 2014 (H. R. 1 – 113th Congress, December 10, 2014), called for the imposition of a penalty for any compensation paid to a “covered employee” in a tax-exempt organization in excess of \$1 million. The organization would be liable for a penalty of 25 percent of the “remuneration paid.” A covered employee included “...one of the five highest compensated employees of the organization for the taxable year.” While H. R. 1 was not enacted, it represents the gradual move to address what some consider excessive compensation in the tax-exempt sector. These efforts parallel concerns in the for-profit sector for companies subject to Securities and Exchange Commission (SEC) oversight. The IRS Tax Code (§162(m)) limits tax deductibility on executive compensation over \$1 million for the five proxy Named Executive Officers. Dodd-Frank (Pub. L. 111-203) introduced “Say-on-Pay,” giving shareholders of public companies a non-binding vote of approval on executive pay programs. These actions demonstrate an effort by legislators and regulators to influence downward executive compensation in companies that are publicly traded.

The question is, when will we reach the tipping point leading to legislation placing limitations on executive compensation in the nonprofit sector?

Even though hospital executive compensation is under scrutiny as never before, the relationship between compensation and performance is rarely laid out for examination. Within the broader context of “healthcare reform” and concerns about the escalating cost of care, CEO compensation becomes a proxy for a broader and more complex issue. Explanations about “...needing to hire the best...” and “...this is what the market pays...” have proven to be weak arguments. Concurrently, performance, productivity, quality of care, patient satisfaction and safety are concepts that are resonating with the public. What is not understood is that healthcare CEOs are not only the conductor of the orchestra, but the champion of change for what have become very large and complex organizations, many employing tens of thousands and providing care for millions. What is missing is an explanation of the multi-faceted capabilities and outcomes the hospital is getting for its investment in its top executives in improving value provided to the community served.

Criticism of trustee compensation committees increased following a frequently cited 2013 Harvard University study¹ that found nonprofit CEO compensation to be significantly associated with hospital teaching status, facility size, technology, and patient perception of care, but not associated with quality, financial performance, or community value.

To assess the relationship between CEO performance and compensation, the Harvard researchers used 2009 Hospital Compare individual measures of performance and 2009 Internal Revenue Service Form 990 financial statements. The resulting article questioned whether trustees are basing CEO compensation on meaningful measures of goal achievement, especially given the magnitude of public funding hospitals receive from Medicare and Medicaid.

An additional study^{2,3,4} showed hospital and system CEO compensation increased as a function of performance on a national balanced scorecard, but the compensation data was limited to a relatively small proprietary survey. Thus, it remained unclear whether hospital CEO compensation is associated with hospital performance.

It is important to note that across other industries, there is a relationship between pay and size, scope, and complexity of the organization, so similar findings in hospitals are not unexpected. Logically, the CEO of a large, complex health system with 80 hospitals will make more than the CEO of a small community hospital with 50 inpatient beds. Size, however, should not be the single driving factor that regulates compensation. Performance should be a key element, especially in hospitals. Pay for performance is the standard structure of a compensation program — pay is the “input,” and performance is the “output.” Therefore, demonstrating a significant relationship between pay and performance would provide a powerful rationale for a hospital CEO’s compensation package.

The goal of this study is to build upon the findings from earlier studies to examine the relationship between CEO compensation and objective measures of CEO ability to drive improved performance across the organization^{2, 3, 4, 5, 6, 7, 8}. The hypothesis is this: When adjusted for size, teaching status, and other demographic factors, higher-performing CEOs will be paid more than CEOs performing at a lower level. We define performance using the standards developed over the past 20-plus years and accepted within the health care industry and articulated through the well-established Truven Health 100 Top Hospitals® national balanced scorecard. The study examines whether there is a correlation between CEO compensation and the balanced scorecard composite score of equally weighted metrics as well as the individual component measures.

Methodology

This study analyzes the relation of hospital chief executive compensation to hospital performance for nonprofit general acute care hospitals (excluding critical access hospitals) for the years 2011-2013. Data preparation and analysis employed three distinct types of data:

- A balanced scorecard of clinical, financial, operational, and patient performance indicators for all general acute care hospitals included in the Truven Health Analytics 100 Top Hospitals® National Balanced Scorecard Study for the years 2010-2015.
- Executive compensation data submitted by nonprofit hospitals and health systems to the Internal Revenue Service on IRS Form 990 “Return of Organization Exempt from Income Tax” for 2011-2013. These data were obtained from the nonprofit organization GuideStar.®
- Supplementary data to identify CEOs/presidents/administrators of individual hospitals on IRS Form 990.

This study links a balanced scorecard of hospital clinical, financial, operational, and patient perception performance indicators for individual hospitals to the compensation of hospital chief executives identified in the IRS Form 990 data. Subsequent analyses use these combined data to determine to what extent hospital performance is related to CEO compensation.

Data Sources

Truven Health Analytics 100 Top Hospitals®
National Balanced Scorecard (NBS) Study Database

The NBS study database for the years 2010-2015 provides a balanced scorecard of hospital performance indicators for all short-term general acute care hospitals. Several of the NBS measures are calculated from Medicare inpatient hospital administrative data: Risk-Adjusted Mortality Index (RAMI), Expected Complication Risk Index (ECRI), and Patient Safety Indicators (PSI). Two indicators, adjusted inpatient expense per discharge and hospital profitability, are calculated from Medicare Hospital Cost Report data. These component measures, shown in Table 1, are aggregated to provide an overall composite performance metric representing a balanced scorecard. The NBS study relies on the accuracy of Medicare administrative and claims data for these indicators and does not attempt to infer or correct values found therein. While it is common practice in the industry to use administrative data, the authors acknowledge that such data does not contain the kind of clinically detailed information that would be ideal for risk adjustment.

Table 1: National Balanced Scorecard Database

Inpatient Clinical Quality Measures

- Risk-Adjusted Mortality Index (RAMI)
- Expected Complication Risk Index (ECRI)
- Patient Safety Indicators (PSI)

CMS Value Based Purchasing Measures

- Core Measures
- HCAHPS
- AMI 30-Day Mortality
- Heart Failure 30-Day Mortality
- Pneumonia 30-Day Mortality
- AMI 30-Day Readmission
- Heart Failure 30-Day Readmission
- Pneumonia 30-Day Readmission
- Hip/Knee 30-Day Readmission

Financial and Operational Measures

- Average Length of Stay (ALOS)
- Expense per Inpatient Discharge
- Profitability (Operating Margin %)
- Medicare Spending per Beneficiary (MSPB)

The NBS calculates percentiles for each performance measure within each of five hospital classes. In addition to deriving performance percentiles for all hospitals, the study awards honors to 100 national benchmark hospitals, selected from within each class. The five hospital classes are defined below (Table 2).

Table 2: Hospital Class Definitions

Hospital Class Name	Beds	Intern-Resident to Bed Ratio	Graduate Medical Education Programs
Major Teaching Major Teaching alt def 1 Major Teaching alt def 2	GE 400, plus * *	GE 0.25, plus * GE 0.6	10 sponsored or 20 overall At least 30 overall
Teaching	GE 200, plus	0.03 or	3 overall
Large Community	GE 250	-	-
Medium Community	100-249	-	-
Small Community	25-99	-	-

GE - Greater than or equal to

The NBS study excludes non-acute care hospitals and hospitals without sufficient data to calculate performance, specifically:

- Specialty hospitals
- Hospitals with Medicare average lengths of stay longer than 25 days in the year of study
- Federally owned hospitals
- Non-U.S. hospitals
- Hospitals with fewer than 25 acute-care beds
- Hospitals with fewer than 100 Medicare patient discharges in the year of study
- Hospitals with no reported Medicare patient deaths in the year of study
- Hospitals for which a current Medicare Cost Report was not available
- Hospitals with a current Medicare Cost Report based on a reporting period less than 12 months

Note that CEO compensation data are available only for nonprofit hospitals. Among the NBS database hospitals, only nonprofit institutions are included in the analyses that follow (Table 3).

IRS Form 990 Data

This study obtained hospital executive compensation data from the IRS Form 990 “Return of Organization Exempt from Income Tax.” The IRS requires all nonprofit hospitals and health systems to file annually. Filings for each hospital and year are collected and disseminated by GuideStar.[®]

For each hospital and year (hospital-year) the authors sought to identify a regular, full-year executive with administrative control and responsibility for the facility. Persons who serve only part of a reporting year, or in an interim capacity, might not be expected to have the same compensation as a regular appointee who serves a full year. They also may not be expected to have the same impact on hospital performance as a regular full-year executive. We therefore excluded any executive designated as interim, acting, or temporary. The study also excluded data for any hospital year in which more than one person acted as chief executive.

Part VII of the Form (Compensation of Officers, Directors, Trustees, Key Employees, Highest Compensated Employees, and Independent Contractors) reports compensation for each listed individual by “Name and Title”. It does not explicitly identify any one person as the hospital chief executive. Titles for the chief executive of an individual hospital varies widely between organizations and may be “CEO,” “President,” “Executive Director,” “Administrator,” or one of many more. In some years, more than one person may have been hospital chief executive for some portion of the year.

The IRS Form 990 data identifies the health care organization by Employer Identification Number (EIN). While independent hospitals and some system hospitals file their own individual IRS Form 990 return, most large health care organizations file a group return that consolidates information across all or some of the hospitals in their system. Some organizations file several group returns, one for each of their internal hospital subsystems. Group returns make it more difficult to identify the chief executives of specific hospitals. Group returns list compensation for the system CEO in addition to multiple hospital CEOs. Some group returns list region, market area, or hospital division CEOs in addition to, or instead of, individual hospital executives. In other cases, a title explicitly identifies one individual as CEO of more than one facility. To maintain the integrity of association between the annual performance metric and CEO compensation data, the study team selected only those listed executives who acted in the capacity of regular CEO for one hospital for a tenure spanning the entire IRS reporting year.

For IRS Form 990 year 2013, 2,640 filings indicated that the nonprofit organization operated a hospital (Item 20a, Part IV). Eliminating multiple returns by the same organization left 2,488 distinct organization EINs. Many organizations, such as universities or health networks, did not directly operate a hospital. The hospitals associated with these larger, nonprofit parent-institutions filed their own returns separately. Other organizations were identified as children's hospitals or otherwise out of scope, leaving 2,018 EINs. GuideStar® was able to provide selected IRS Form 990 data for 2,011 of these EINs for at least one of the years between 2011 and 2013.

Hospital Executive Reference Data

Two other data sources helped to identify and validate the chief executives listed for specific hospitals on the IRS Form 990. The first was the American Hospital Association's AHA Hospital Database™ for the years 2011-2013. The AHA compiles this database from the AHA Annual Survey of Hospitals and other data. It reports hospital administrator names and titles and also the hospital's CMS Certification Number (CCN). The second source was the authors' internal proprietary database of provider contact information. This database provides names and titles of current and former hospital CEOs, presidents and administrators along with the hospital CCN.

Linking IRS Form 990 Executives to Specific Hospitals in NBS Performance Data

The NBS performance database identifies hospitals by CCN, but the compensation data uses EIN. The authors developed a crosswalk from EIN to CCN so that one EIN corresponds to the CCNs of all the hospitals that could be included in the IRS Form 990 return. Since the same IRS Form 990 can list CEOs for multiple hospitals (one-to-many), together with regional and system CEOs, the study team developed a series of crosswalks and matching criteria to identify the chief executive for each individual hospital.

Individuals were identified as a hospital chief executive if they were validated by one or more of these criteria:

- Cited in the 990 form as chief executive by title (CEO, Exec Director, Administrator), especially if citation included the hospital name
- Listed as chief executive of the hospital in the author's proprietary hospital personnel database
- Identified as administrator of the hospital in AHA data
- Named the "principal officer" (but could be CEO of system, not hospital) on the IRS Form 990

Ambiguous cases were clarified by information presented on the hospital/health system website including descriptions of leadership team and press releases regarding personnel appointments and changes.

The final edited and cross-matched study database included only chief executives for a single hospital in a regular position for full-year tenure. The compensation study excluded hospital-year records if more than one person was identified as CEO of the hospital in that year. Hundreds of hospitals had multiple persons identified as CEO for the same year. Others were identified by their title as Interim or Acting executives during the year. This indicates a high turnover in hospital CEOs. These findings are consistent with those reported by the American College of Healthcare Executives (ACHE), which observed a record high 20 percent turnover of hospital chief executives in 2013.⁸

The study also excluded hospital-year records where the same individual acted as chief executive for multiple facilities. Some small systems reported a hospital division CEO or president who acted as executive of all the hospitals. Larger systems often employed regional or area CEOs or presidents for the two to five hospitals in each region. Some titles explicitly identified an individual as executive of two or more specific hospitals within a system. Others were identified as executives of multiple hospitals in a system from the internal and AHA data.

The Final Data Set

Once hospital CEOs were identified, the study combined compensation data with hospital class and performance indicators. The compensation dataset contained 2,807 hospital-year IRS Form 990 database records representing 1,145 distinct nonprofit hospital facilities. Hospital class and performance indicators for these records were pulled from the NBS database, which included 2,787 hospital-year records representing 1,735 nonprofit facilities. The study was able to match 1,145 nonprofit hospitals (66 percent) overall from the NBS database, including 84 percent of the major teaching hospitals (Table 3).

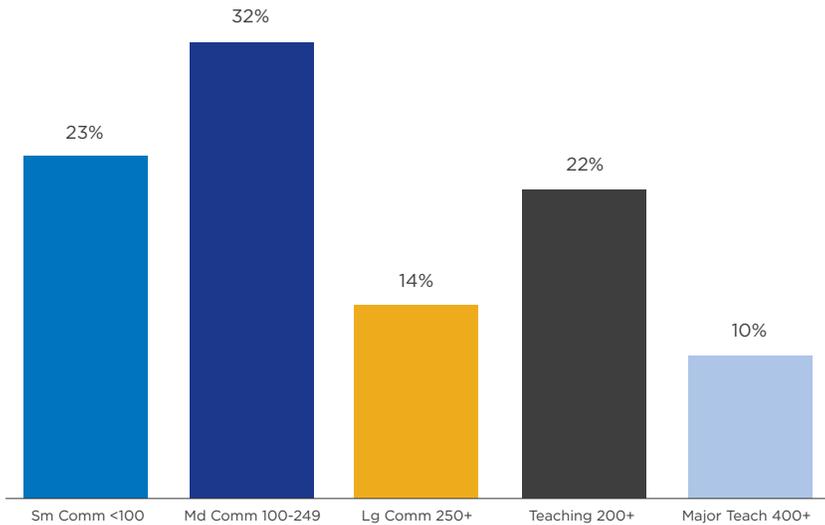
Table 3: Number of Hospitals by Class: 2015 NBS Database Compared to CEO Compensation Study

Hospital Class	National Balanced Scorecard (NBS) Database			CEO Compensation – IRS Form 990 Database		
	Total Number of Hospitals	Nonprofit Hospitals	National Benchmark Hospitals	Distinct Count of Nonprofit Hospitals	Percent Match with Nonprofits in NBS	Total Hospital-Year Records
Major Teaching Hospitals	201	133	15	112	84%	277
Teaching Hospitals	429	330	25	246	75%	615
Large Community Hospitals	314	194	20	152	78%	379
Medium Community Hospitals	959	592	20	363	61%	887
Small Community Hospitals	884	486	20	272	56%	649
Total	2,787	1,735	100	1,145	66%	2,807

Descriptive Procedures

Descriptive and analytical procedures were used to characterize and investigate the combined IRS Form 990 and NBS data. These analyses focused on issues such as the representativeness of the study sample relative to the known, national sampling frame of nonprofit hospitals, and differences in unadjusted compensation by hospital class (Figure 1).

Figure 1: Study Hospitals: Percent of Hospitals by Class



Because of the large number of community hospitals across the U.S., medium and small community hospitals comprise 55% of the facilities in the study (Figure 1). The composition of hospitals does not affect the results because the models include an adjustment for class.

Two-thirds of facilities are located in the South and Midwest. Only Wyoming and Alaska are not represented in the study population (Figure 2) because very few nonprofit, general acute care hospitals operate in these states. Most are critical access or public hospitals.

Figure 2: Study Hospitals: Percent of Hospitals by Region

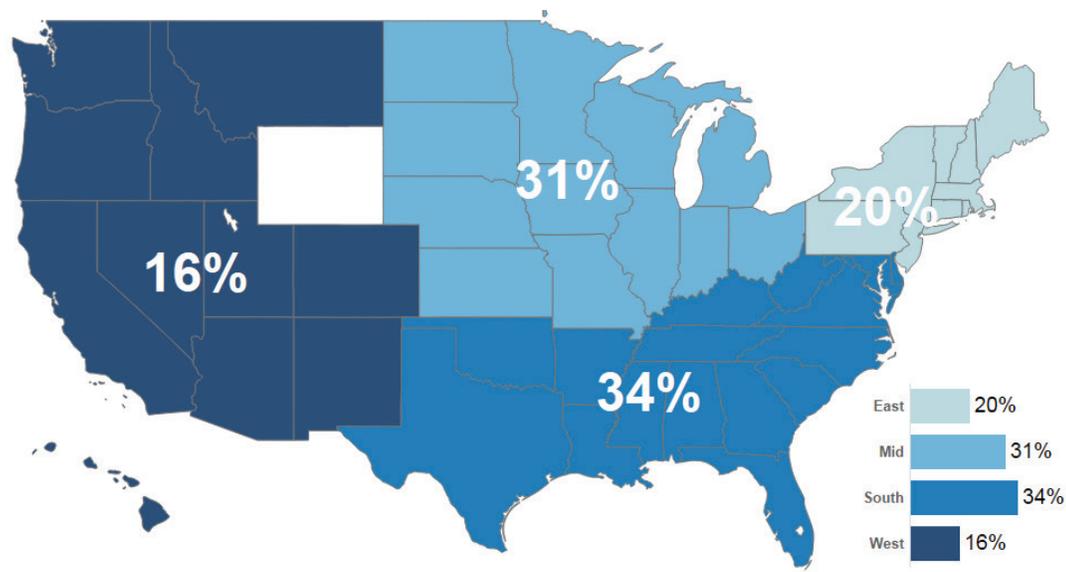
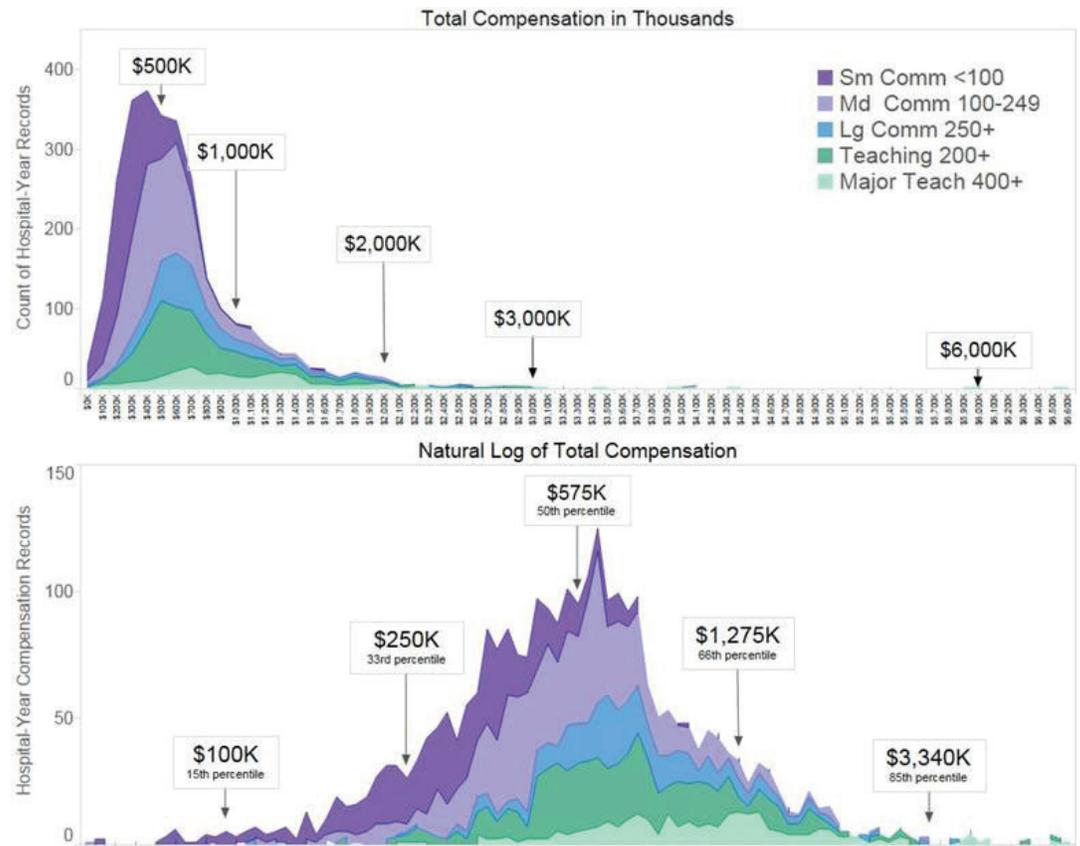


Figure 3 shows total compensation for a given hospital-year plotted into bins set at \$100K increments ranging from \$50K to \$6,500K (top) to show the extreme skew and range of values. The log-distributions of compensation were examined to ascertain whether the outcome measure of interest, total CEO compensation in a given hospital and year (hospital-year), was distributed log-normally (bottom Figure 3). Two-thirds of CEOs were earning between \$250K and \$1,275K in a single hospital-year. Both plots show that as hospital size increases, so does compensation with the teaching hospitals having the widest variation.

Figure 3: Distribution of Log Compensation by Class and Region



Analytical Procedures

Given normal distributions of log-compensation, a series of general linear models (SAS) were run. Each performance measure was evaluated separately in order to avoid possible problems with multi-collinearity. All of these model-based analyses used hospital class as a categorical variable to adjust for bed size category and teaching status.

The statistical analyses used here did not take into account the “nesting” or lack of independence within results for a given hospital involving multiple ascertainment of the same hospital over time. In other words, when a hospital contributes multiple hospital years of information based on multiple years of the study, each of those years is in fact representative of a different sample of patients. Technically, the hospital results for multiple years of ascertainment would be more highly correlated across those multiple years than they would be for the results across multiple hospitals. Even so, this limitation would tend to impact estimates of the variance rather than estimates of the relation between performance and levels of compensation.

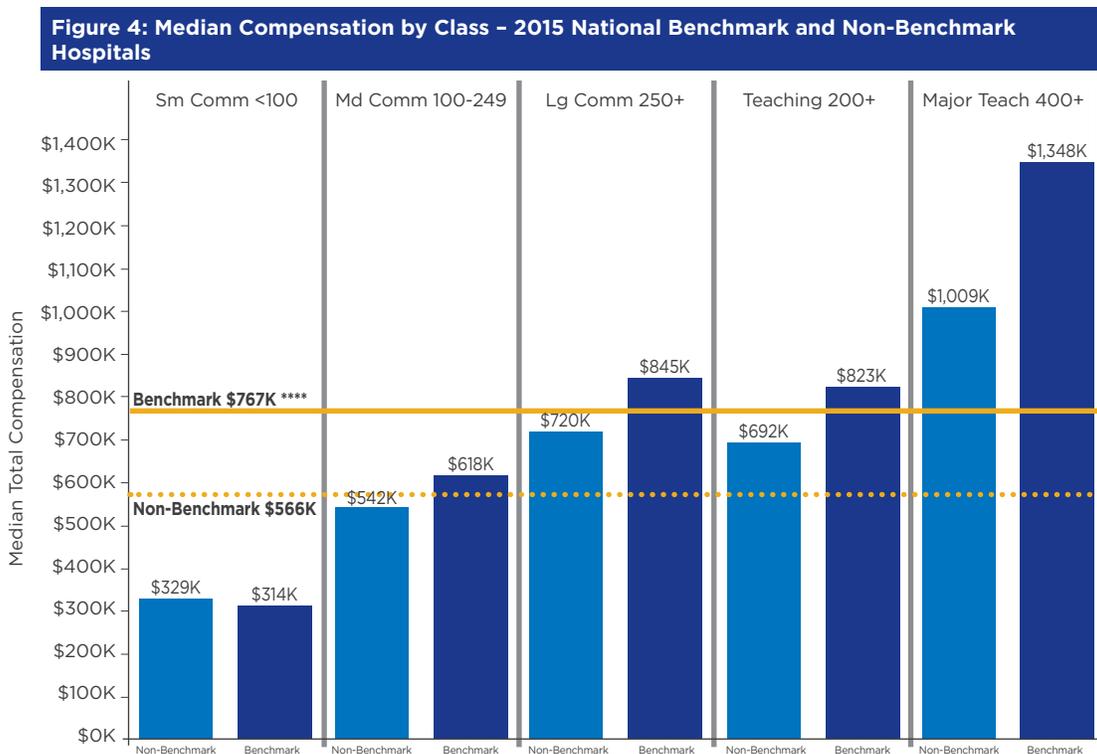
The study evaluated the intersecting cells of the compensation years 2011-2013 and performance in the 2011-2015 NBS database to identify associations between CEO compensation and achieving benchmark status over different time periods. The results of this analysis did not reveal any discernible pattern of associations between CEO compensation and benchmark status across different years. National benchmark hospitals represented the top 3 percent of all hospitals evaluated on the balanced scorecard. These results do not suggest that there is any kind of leading or following affect or association between compensation and performance.

Results

Only the very highest levels of balanced, high organization-wide performance were associated with higher compensation. CEO compensation at national benchmark hospitals was 17.46 percent higher than at other institutions after adjusting for hospital class. CEO compensation with hospital performance above the 90th percentile on the NBS composite was 9.86 percent higher than at hospitals at or below the 90th percentile of performance. However, hospital performance above the 80th percentile in the NBS composite was associated with only an insignificant 1.12 percent increase in CEO compensation.

After incorporating an adjustment for hospital class into the model, CEOs in independent hospitals receive 19.12 percent higher compensation compared to system facilities. This finding is statistically significant ($p < 0.0001$).

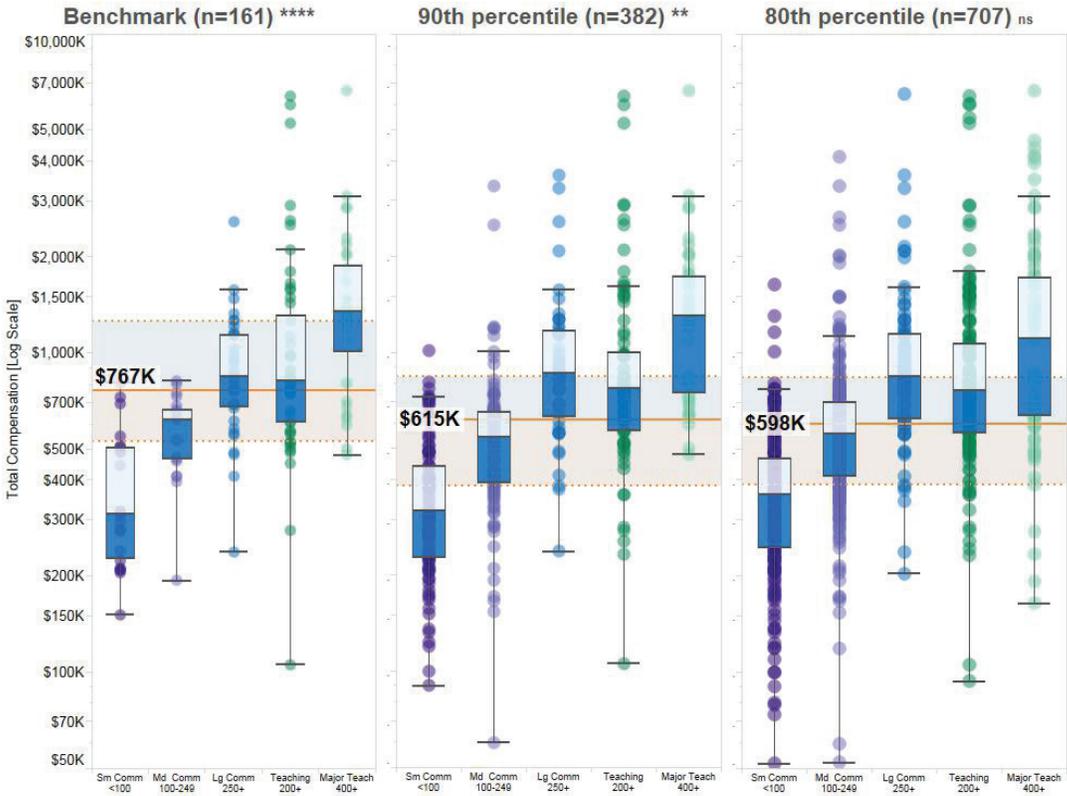
The median levels of CEO compensation are shown by hospital class, for both national benchmark and non-benchmark hospitals in Figure 4. Overall median compensation among the 2015 national benchmark hospitals in the study is \$200k higher than non-benchmark (\$767k vs. \$566k). Only the small community hospital class has essentially equal median compensation for national benchmark and non-benchmark hospitals.



****Statistically significant difference $p < .0001$

Figure 5 shows box and whiskers distributions of CEO compensation within class for the group of national benchmark and top performers at the 90th and 80th percentile on the overall NBS composite. Each mark is a hospital-year record of CEO compensation. The box defines the middle 50 percent of all hospital-years within each class. The whiskers extend to 1.5 times the inter-quartile range. Overall within-group quartile values are shown as bands that span each chart respectively. Both national benchmark and hospitals performing in the top 10 percent of all hospitals nationwide on the NBS composite score (90th percentile or higher) are significantly positively associated with higher compensation. Achievement of national benchmark performance was associated with a 17.46 percent increase in compensation ($p=0.0002$). Being in the top 10 percent was associated with a 9.86 percent increase ($p=0.0073$). The association for hospitals in the top 20 percent was not statistically significant.

Figure 5: Distribution of CEO Compensation by Class – 2015 National Benchmark and Top Performers



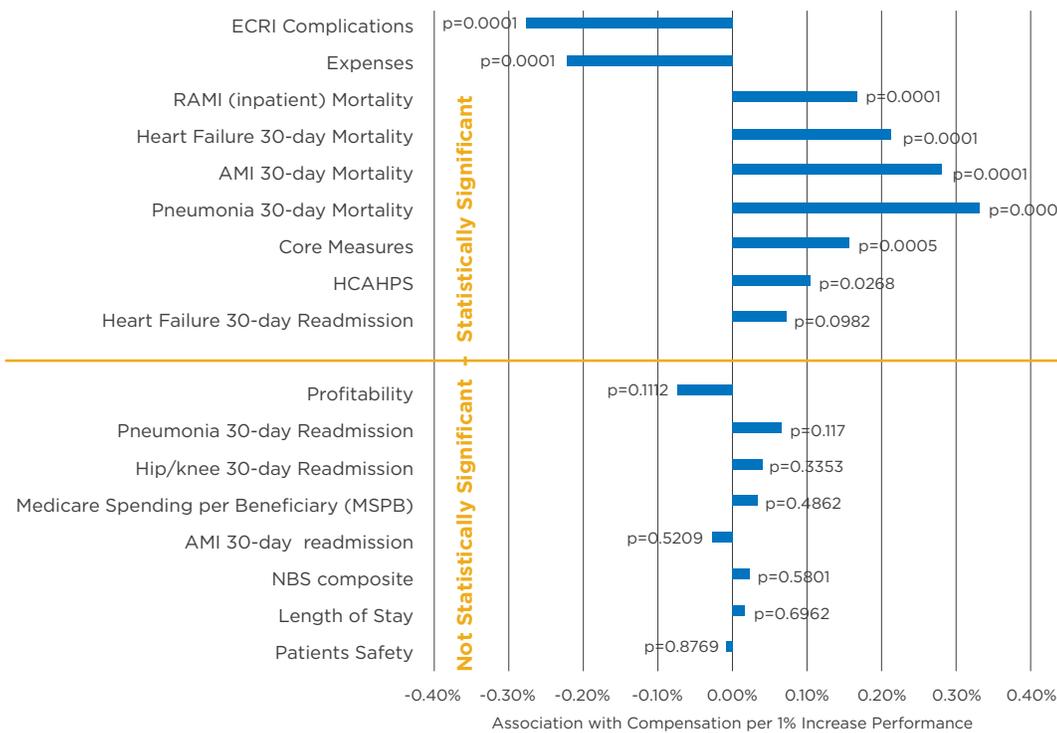
Statistical Significance indicated as follows: **** $p < .0001$, *** $p < .001$, ** $p < .01$, ns = not significant

Figure 6 shows the association between CEO compensation and performance measures in units of performance percentile (where higher percentiles represent better, or more desirable, performance).

Several measures of performance were significantly correlated with increased hospital CEO compensation. These included all mortality measures, HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems), and Core Measures.

Higher compensation was significantly associated with a decline in performance for two measures: inpatient complications of care, and adjusted inpatient expenses.

Figure 6: Association between Compensation (Percent Increase or Decrease) and Each Unit Increase in Hospital Percentile for Performance Measures



Summary

Overall, the study shows a significant association between CEO compensation and a subset of individual metrics comprising the national balanced scorecard (NBS), most of which are related to the CMS Value-Based Purchasing program.

The results also show a significant association between higher CEO compensation and balanced high performance in an important subset of hospitals. A significant positive association was identified between higher CEO compensation and high scores on the NBS composite score. Higher compensation was also observed in the top performing 10 percent of hospitals on the national NBS composite score, but not in the top performing 20 percent. These results demonstrate that in 10 percent of hospitals, board awards of higher compensation are significantly associated with high achievement on a measure of organization-wide performance rather than an eclectic selection of individual metrics. Further investigation is required to establish whether the board in the top 10 percent used short- or long-term incentives for the CEO to achieve this very high level of balanced high performance across the organization. It should be noted that this finding is not causal.

After incorporating an adjustment for class into the model, the study found statistically higher compensation at independent hospitals compared to system facilities.

Three measures that are part of a federal performance improvement program, the CMS Value-Based Purchasing (VBP) program, are significantly associated with compensation. These results suggest that the CMS VBP program may influence board compensation committees to focus on individual clinical metrics for CEO compensation.

Positive performance on both inpatient and 30-day mortality are significantly associated with higher CEO compensation. Mortality rates have long been a standard measure of quality in hospitals. While inpatient mortality is not a part of the VBP program, mortality would be a logical clinical metric for boards to use for CEO compensation.

An additional finding that poor performance on complications is significantly associated with higher compensation is seemingly contradictory in terms of board intent to incentivize improved quality. At least to some extent, higher complications may be related to industry-wide efforts to improve documentation and coding which can impact both metrics in opposite directions. Another possibility would be inconsistent reporting by hospitals of conditions that are “present on admission.”

Further study of the contradictory association between higher compensation and higher expense is required to identify the cause. Heavy investment in computerized patient record systems, physical plant renovation, purchase of physician practices, and investments to address the requirements of the Affordable Care Act between the years 2011 and 2013 have had an impact on hospital expense and may be driving these results.

Discussion

What is becoming clear is that traditional approaches to CEO compensation need to evolve. The area of greatest opportunity is using contemporary approaches, including the use of a balanced scorecard, external benchmarking relative to peers of similar organizations, and a more focused incentive design that recognizes the achievement of both short- and long-term objectives. Outcomes measures, as identified in Table 1, represent the outcomes expected by patients, employers, and payers. These are the outcomes that we expect from physicians, clinicians, and support staff as they provide care to patients.

A central goal of the Affordable Care Act is to transform the hospital industry to provide higher value (defined as higher quality at lower costs) to the communities they serve. Board responsibility however, is not limited to two areas of performance. Rather, the board is responsible to the community to assure high value from a strong, well-managed organization that will continue to provide healthcare services and be a major employer and economic engine in the community.

Unlike prior studies on the association between CEO compensation and hospital performance, the results of this study clearly demonstrate a strong association between CEO compensation and both clinical performance and patient perception of care. This suggests that boards are likely acting on quality oversight responsibilities and are likely to be setting CEO compensation incentives to assure achievement of quality goals.

Further, this study demonstrated that higher CEO compensation is significantly associated with hospitals with national balanced scorecard composite scores in the top 10 percent of all study hospitals.

In the total study population, positive performance on HCAHPS and all but one of the clinical metrics associated with higher CEO compensation are government pay for performance metrics. Only the top 10 percent, which includes the national benchmark hospitals, demonstrated a significant association between balanced high performance and higher CEO compensation.

These results suggest a rapidly evolving practice in setting CEO compensation. The Harvard study, based on practices in 2009, showed no association between CEO compensation and quality, financial performance or community value. The results offer a caution to boards as they set incentives for CEO compensation. Focus on CMS pay for performance metrics is good, but boards must assure that the organization's performance is balanced to assure continued achievement of mission. Boards may need to consider establishment of incentives that target balanced performance through both short and, particularly, long-term incentives to align both improvement and performance within and across performance domains in hospitals.

The finding that CEOs of independent hospitals are paid significantly better than hospital CEOs in systems is not unexpected. The scope of the role and responsibility of a CEO in an independent hospital, particularly in terms of financial success, is often broader than the role of a CEO of a hospital in a health system.

Many IRS Form 990 compensation reports were excluded either because more than one individual was identified as hospital executive during the year or the individual was an interim or acting executive. According to the American College of Healthcare Executives (ACHE), hospital CEO turnover reached a record high of 20 percent in 2013. This was up from 17 percent in 2012 and 16 percent in 2011.⁸

Conclusions

This study used a balanced scorecard approach to investigate the kinds of metrics that drive CEO compensation. We conclude that CEOs are heavily driven to perform on government pay for performance metrics, but less so to metrics that currently fail to correspond to a reimbursement requirement. However, we saw that hospitals in the top 10 percent NBS composite scores, indicating the highest attainment across the range for clinical, financial, operational, and patient performance indicators, were led by CEOs with the highest compensation. While we cannot establish causality, nevertheless we believe that boards should design CEO compensation incentives for balanced performance to ensure that the hospital can achieve the objectives of delivering higher value to their communities and maintaining a margin that will enable them to continue to deliver those services for years to come.

Opportunities for Future Research

This study addresses CEO compensation only in nonprofit hospitals. For-profit and local government operated facilities may use different criteria than nonprofits to determine compensation.

This study only examined hospitals with their own chief executives. However, it is very common for one individual to be the CEO or president of multiple individual hospitals or the CEO or president of a hospital division or region. Factors may not affect compensation of these CEOs in the same way. Future research could address the compensation of executives of multiple facilities by combining performance indicators for facilities with a common CEO.

It is possible that the trend in performance is more important than the level of performance in determining compensation. Perhaps improvement is rewarded more than maintaining a high level of performance. A dynamic analysis of changes in both compensation and performance is an opportunity for future research.

References

- 1 Joynt KE, Le ST, Orav E & Jha AK. Compensation of chief executive officers at nonprofit US hospitals. *JAMA Intern Med* 174, 61-67 (2014).
- 2 Foster, D. A., Chenoweth, J. Comparison of Baldrige Award Applicants and Recipients With Peer Hospitals on a National Balanced Scorecard. *Ann Arbor, MI: Center for Healthcare Improvement, Truven Health Analytics* (2011). at <http://www.glb.nist.gov/baldrige/upload/baldrige-hospital-research-paper.pdf>
- 3 Chenoweth, J., Foster, D. & Shook, J. Linking CEO Compensation to Organization-Wide Performance. (2014). at http://100tophospitals.com/Portals/2/assets/TOP_15082_1114_ExecutiveComp_RB_WEB.pdf
- 4 Chenoweth, J., Talbot, K. & Foster, D. The right rewards for CEOs: new research suggests CEOs are compensated based on organization-wide performance. *Trustee* 67, 33+ (2014).
- 5 McPherson, B. Executive Compensation in Nonprofit Health Care Organizations. *Inquiry - Excellus Health Plan* 42, 110-117 (2005).
- 6 Reiter, K. L., Sandoval, G. A., Brown, A. D. & Pink, G. H. CEO Compensation and Hospital Financial Performance. *Med Care Res Rev* 66, 725-738 (2009).
- 7 Clark, C. Hospital CEO pay out of alignment with quality of care. *Health Governance Report* 24, 1-4 (2014).
- 8 Hospital CEO Turnover 1981-2015, American College of Healthcare Executives, Chicago, IL March 5, 2015



Get Connected

Send us an email at info@truvenhealth.com, info@mercer.com or visit truvenhealth.com and mercer.com



ABOUT TRUVEN HEALTH ANALYTICS

Truven Health Analytics delivers the answers that clients need to improve healthcare quality and access while reducing costs. We provide market-leading performance improvement built on data integrity and empirical truth. For more than 30 years, our insights and solutions have been providing hospitals and clinicians, employers and health plans, state and federal government agencies, life sciences companies, and policymakers the facts they need to make confident decisions that directly affect the health and well-being of people and organizations in the U.S. and around the world.

Truven Health Analytics owns some of the most trusted brands in healthcare, such as MarketScan, 100 Top Hospitals, Advantage Suite, Micromedex, Simpler, and ActionOL. Truven Health has its principal offices in Ann Arbor, Mich.; Chicago; and Denver. For more information, please visit truvenhealth.com.

ABOUT Mercer

Mercer is a global consulting leader in talent, health, retirement and investments. Mercer helps clients around the world advance the health, wealth and performance of their most vital asset - their people. Mercer's more than 20,000 employees are based in more than 40 countries and the firm operates in over 130 countries. Mercer is a wholly owned subsidiary of Marsh & McLennan Companies (NYSE: MMC), a global professional services firm offering clients advice and solutions in the areas of risk, strategy and people. With 57,000 employees worldwide and annual revenue exceeding \$13 billion, Marsh & McLennan Companies is also the parent company of Marsh, a leader in insurance broking and risk management; Guy Carpenter, a leader in providing risk and reinsurance intermediary services; and Oliver Wyman, a leader in management consulting. For more information, visit www.mercer.com. Follow Mercer on Twitter @Mercer.

truvenhealth.com | 1.734.913.3000

©2015 Truven Health Analytics Inc. All rights reserved. All other product names used herein are trademarks of their respective owners. TRU 16281 1215