Malpractice paid losses and financial performance of nursing homes

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Background: Florida’s nursing home industry has experienced significant financial pressure over the past decade. One of the primary reasons is the dramatic increase in litigation activity against nursing home providers claiming negligent care and abuse. Although anecdotal reports indicate a higher cost because of malpractice in nursing facilities, few studies have examined the extent of malpractice paid losses and their effect on the financial performance of nursing homes.

Purpose: The purpose of this study was to examine the impact of malpractice paid losses on the financial performance of nursing homes.

Methodology/Approach: Medicare Cost Report data and Online Survey, Certification, and Reporting data for Florida skilled nursing facilities over the 6-year period from 2001 to 2006 were used to calculate the malpractice paid losses and the financial performance indicators as well as the nursing home organizational and market factors. Descriptive analysis and multivariate regression analysis were used to examine the effect of paid loss on financial performance.

Findings: The paid loss for malpractice claims was strongly associated with financial performance. Nursing facilities with malpractice paid losses had consistently lower total margins over the study period. The threat of nursing home litigation may create an incentive for nursing homes to improve quality of care; however, large paid claims can also force nursing homes into a financial situation where the organization no longer has the resources to improve quality.

Practice Implications: Nursing home managers must assess their malpractice litigation risk and identify tactics to mitigate these risks to better provide a safe and secure environment for the older persons. In addition, this research offers support for local, state, and federal policymakers to revisit the issue of malpractice litigation and the nursing home industry through its insight on the relationship of nursing home margins and litigation.

Florida’s nursing home industry has experienced significant financial pressure over the past decade. One of the primary reasons is the dramatic increase in litigation activity against nursing home providers claiming negligent care and abuse (Burwell, Stevenson, Tell, & Thomson, 2006). In 2002, Florida’s nursing homes confronted $1 billion in lawsuits from claims totaling four times the number of claims nationwide (Day, 2009). The

Key words: financial performance, malpractice paid losses, nursing homes

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This research was supported in part by a grant from the University of North Florida Foundation/Brooks Health Foundation Dean’s Professorship.

Health Care Manage Rev, 2010, 35(4), 1-8
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price of liability insurance for nursing homes increased radically, whereas the terms and conditions of coverage became more constricted. As a result, an increasing number of nursing homes self-insure because insurance carriers have abandoned the Florida market because of operating losses related to liability claims (AM Best Company, 2002; Florida Policy Exchange Center on Aging, 2001; Groeller, 2000). This has substantially increased the pressures on an industry that was already experiencing significant financial difficulty (Burwell et al., 2006).

Although the state initiated some tort reforms intended to limit liability claims and losses to some degree (Studdert & Stevenson, 2004), many Florida nursing homes continue to operate without liability insurance coverage even as the threat of litigation increases. For example, from 1996 to 2004, liability losses increased by over 180% for Florida’s nursing homes (Aon Risk Consultants, 2005). In addition, only 17% of claims nationally generated losses in excess of $50,000 compared with 56% in Florida (Insurance Services Office, 2002). Estimated average losses in Florida were $10,480 per occupied bed in 2002, which was over four times the national average (Schafer & Burwell, 2006).

The study of linkages between malpractice litigation and nursing home financial performance is of particular importance because a common belief is that the threat and cost of litigation and liability jeopardizes the financial viability of nursing home facilities and diverts scarce resources from the delivery of high quality care. Consumer groups, on the other hand, argue that litigation is an important vehicle for compensating victims for substandard care and encourages facilities to provide better care. Although it is evident that the costs related to malpractice are quite staggering, what is not known is the extent to which malpractice paid loss impacts nursing home financial performance. Florida has the most nursing home lawsuits in the country and the highest proportion of elderly residents. Therefore, it is important to understand the impact of malpractice paid losses on nursing home performance in Florida and its possible impact on long-term care services for this vulnerable population.

### Theoretical Framework

Nursing home litigation is one of the fastest-growing areas of health care litigation (Stevenson & Studdert, 2003). In fact, 9 of 10 nursing home claims result in compensation to plaintiffs, at an astounding average of $400,000 each (Studdert & Stevenson, 2004). However, there is a paucity of research investigating the impact of litigation or the litigation paid losses on the financial performance of nursing homes. Most previous studies pertaining to nursing home industry litigation have focused on factors that best predict litigation against nursing homes (Huycke & Huycke, 1994; Johnson, Dobalian, & Burkhard, 2003; Johnson, Dobalian, Burkhard, Hedgecock, & Harman, 2004; Johnson, Hedgecock, et al., 2004; Polivka, Salmon, Hyer, Johnson, & Hedgecock, 2003). For example, nursing homes in resident rights states such as Florida were found to experience a disproportionately higher number of lawsuits (Johnson et al., 2003). Nursing home size was found to be the only predictor of lawsuit activity in one study (Polivka et al., 2003). Other studies found that factors such as nursing homes that meet long-stay staffing standards and minimum quality measures as well as those that are not for profit are negatively related to lawsuits (Johnson, Dobalian, et al., 2004). Finally, several other studies have explored the prevalence, causes, and costs of lawsuits against nursing homes and the impact of tort reform on nursing homes (Bennett, O'Sullivan, DeVito, & Remsburg, 2000; Berlowitz, Bezerra, Brandeis, Kader, & Anderson, 2000; Bourdon & Dubin, 2002; Hyer & Harrington, 2007; Kilduff, 2001; Palmisano, 2004; Stevenson & Studdert, 2003; Studdert & Stevenson, 2004; Williamson, 1999).

The costs of nursing home litigation are high especially in states where the litigation is most prevalent, such as Florida (Stevenson & Studdert, 2003). Malpractice may affect financial performance in several ways. First, higher malpractice paid losses will impact financial performance negatively because it increases the operating cost. On the other hand, higher malpractice paid losses may imply poor quality of care. At a time of rising health care costs and lower reimbursements, nursing homes may be concerned that high standards of quality could sacrifice financial performance. Thus, lower standards of quality might help to improve their financial performance. However, a recent study found that nursing homes with better processes and outcomes of care also achieved better financial performance (Weech-Maldonado, Laberge, Johnson, Yang, & Hyer, 2007). These results show that quality and positive financial performance are not mutually exclusive because nursing homes with a higher quality of care might have lower resident costs because of more preventive practices and fewer errors. Although anecdotal reports indicate a higher cost because of malpractice in nursing facilities, few studies have examined the extent of malpractice paid losses on the financial performance of nursing homes. This study will address this gap in the literature by examining the effect of nursing homes lawsuits paid-out losses.

### Methods

This study examines the effect of malpractice paid losses on financial performance of Florida nursing homes for the 6-year period from 2001 to 2006, the most recent years for which data were available. There are several reasons why the study was limited to Florida. First, Florida has been affected to a greater extent than other states with respect to malpractice litigation. Second, not all states have initiated tort reforms for nursing homes. Florida is one of several
states that tried to restrict access to the courts, to regulate liability conditions and processes, and to limit compensation payments to plaintiffs and their attorneys. Therefore, choosing such a unique state to examine the effect of malpractice paid loss on financial performance would be appropriate.

The primary data sources for this study are financial and operating data drawn from the Medicare cost report data files. Nursing home financial data reported to the Center for Medicare and Medicaid have well-recognized problems. Most notably, these data may not come from audited facility financial statements and thus may have missing or inaccurate elements. However, these data are consistently available for all Medicare participating skilled nursing facilities, and their annual availability allowed us to compare data across years and deal with certain reporting errors. Data on all the other nursing home internal and organizational factors as well as data on market (i.e., competition) factors were obtained from the Online Survey, Certification, and Reporting data (OSCAR). The OSCAR is collected by state licensure and certification agencies as part of the Medicare or Medicaid certification process and includes most of nursing homes in the United States. Regardless of some reliability issues related to the data (Harrington, Zimmerman, Karon, Robinson, & Beutel, 2000), OSCAR is widely used by researchers to study nursing homes (Castle, Engberg, Lave, & Fisher, 2009; Zhao, Oetjen, Nolin, & Carretta, 2010).


### Variables and Measures

The Center for Medicare and Medicaid skilled nursing facility cost report data were used to construct facility financial performance measures. Facilities participating in the Medicare program are required to file these reports annually. In addition to providing a full accounting of skilled nursing facility costs, the reports contain detailed facility income statements and balance sheets as well as the paid losses for malpractice claims. We constructed two measures of hospital financial performance: operating margin and total margin.

Operating margin equals the difference between net patient revenues and operating expenses divided by net patient revenues. Total margin is the net income from health care and non–health care operations divided by total health care revenue. We chose operating margin and total margin because they gauge two important aspects of a facility’s financial health, namely, the generation of a profit or loss from the facility’s primary line of business and the return on revenue from both operating and non-operating sources. One problem with focusing purely on providers’ total margins is that one-time events, such as a loss on the sale of marketable securities, can have a significant deleterious impact on total margins. Although non-operating losses affect total margins, they have little or no impact on the profitability of providing resident care. Both operating margin and total margin have been used in prior research examining nursing home financial condition (Weech-Maldonado, Neff, & Mor, 2003; O’Neill, Harrington, Kitchener, & Saliba, 2003). In addition, to measure the real loss of malpractice paid loss, we computed the median value of malpractice paid loss per resident day for each facility. Finally, a binary variable was created for the malpractice paid loss, with the nursing homes that had paid losses having a value of 1.

Nursing home internal and organizational factors as well as market factors calculated using OSCAR served as the control variables in the multivariate models. Specifically, we included bed size, for-profit ownership, chain membership, full-time equivalents (FTEs) per inpatient days, nursing home’s resident acuity index (Cowles, 2003), occupancy rate, percentage of Medicaid patients, and total inspection deficiencies (quality of care) in the models. Additional market factors in the models is market competition. Competition is examined with a Herfindahl index of nursing home beds. Consistent with previous studies, we used county as the market (Banaszak-Holl, Zinn, & Mor, 1996). Counties are ranked for competitiveness using quartiles. A binary variable is created where nursing homes located in the counties with the highest competition are assigned a value of 1.

### Analysis

Two types of analyses were used in this study. First, descriptive statistics related to median total margins and operating margins, percentage of negative total margins and operating margins, and median malpractice paid loss per resident day were conducted. We tested for statistically significant differences in median total margins and operating margins (t test) and in percentage of negative total margins and operating margins (χ² test). Second, multivariate regression analyses were conducted to assess the effect of paid loss on financial performance by controlling for other factors that may influence financial performance over time.

### Findings

#### Bivariate and Trend Analyses

Figure 1 shows the trend of median total margins between nursing homes with malpractice paid losses and the ones
without paid losses. Both groups had improved their total margins during the year 2001 to 2006. However, the facilities without malpractice paid losses had higher median total margins than the ones with paid losses (with the exception of 2004). In addition, the median total margins were negative for the paid-loss group over the year 2001 to 2003, whereas the without paid-loss group had no negative total margins (with the exception of 2002).

Figure 2 shows the trend of median operating margins between nursing facilities with malpractice paid losses and ones without paid losses. Like total margins, both groups experienced improvement in their total margins during the study period. However, facilities without malpractice paid losses had higher median operating margins compared with those with paid losses from 2001 to 2003. The only exception occurred in 2004, the operating margin was higher in the paid-loss group than the no-paid-loss group (see Figure 2).

In general, the percentage of nursing homes with negative total margins have decreased over the study period for both groups. For example, 70% of facilities in the paid-loss group had negative total margins in 2001 versus only 32% in 2006. For the no-paid-loss group, the highest percentage of facilities with negative total margins occurred in 2002, with 53% of nursing homes experiencing negative financial performance. This number decreased to 24% in 2005; however, it increased again to 30% in 2006. Although the percentage of facilities with negative total margins were always higher in the no-paid-loss group, it was only statistically significant in 2001 (see Figure 3).

The percentage of facilities with negative operating margins were very close for both groups (except in 2001). In addition, contrary to total margins, the percentage of nursing homes with negative operating margins have been increasing over the study period for the paid-loss group (from 77% to 92%), whereas this percentage for the no-paid-loss group has been relatively stable (from 86% to 91%) (see Figure 4).

Figure 5 illustrates the trend of malpractice paid-loss during the last 6 years. In 2001, the median paid-loss paid was $11.68 per resident day for the 85 facilities. This number increased to $14.87 per patient day in 2003 for 51 facilities, a 27% increase. However, it decreased to $12.23 per patient day in 2004 for 51 facilities and increased again to $13.79 in 2005. Finally, it declined to $11.35 in 2006 for 44 facilities.
Multivariate Analysis

Descriptive statistics for the study variables are shown in Table 1. Results from the multivariate regression analysis are shown in Table 2. Using total margins and operating margins as the dependent variables, we examined if malpractice paid loss had a significant effect on nursing home financial performance after controlling for other factors that may influence financial performance. Consistent with the bivariate analysis, malpractice paid loss had a significant negative effect on total margin. Nursing homes with malpractice paid loss had significantly lower total margins. However, this effect is not significant in the operating margin model. The control variables (for-profit ownership, chain member, FTEs per inpatient days, and Medicaid percentage) had a significant negative effect on total margins, whereas occupancy rate had a significant positive effect. Consistent with the total margin model, higher operating margin was significantly related to lower FTEs per inpatient days and higher occupancy rate in the operating margin model. However, contrary to the total margin model, for-profit nursing homes had a significantly higher operating margin compared with their nonprofit counterparts. A higher percentage of Medicaid patients contributed to a higher operating margin. In addition, higher quality of care was significantly associated with higher operating margin. Finally, higher competition was found to have a significant positive effect on operating margin.

Discussions and Limitations

Paid loss for malpractice claims was strongly associated with financial performance for Florida nursing homes. Facilities with malpractice paid losses had consistently lower total margins over the study period. A pattern of increasing operating margins during the study period was seen in both groups. However, the margins were only significantly lower for the paid-loss group in 2001 to 2003. In addition, there is no significant difference in the percentage of nursing homes with negative total margins and operating margins between the two groups (with the exception of year 2001). Finally, the size of malpractice paid loss from 2001 to 2006 experienced some fluctuation in Florida nursing homes.

The threat of nursing home litigation may create an incentive for nursing homes to improve quality of care for residents to avoid potential lawsuits in much the same way as physicians practice “defensive medicine” to avoid claims of malpractice (Palmisano, 2004). However, nursing homes are typically constrained by relatively low fixed daily payments for the services they provide. Quality improvements have to be made within the budget imposed by those payments, whereas physicians ordering additional tests may actually increase their revenue.

Large paid claims can also force nursing homes in a financial situation where the organization no longer has the resources to improve quality. A history of malpractice claims for the facility or in the market may make it difficult to obtain liability insurance coverage, which further increases the facility’s exposure to the negative impact of malpractice claims. This study provides further evidence that paid claims for malpractice litigation are associated with poorer financial performance or perhaps impose a sizeable negative impact on profitability for nursing facilities. Florida, like many other state legislatures, enacted tort reform in 2001 to respond to the rise in litigation against nursing homes and the resulting decrease in the availability of insurance. These laws were intended to limit liability claims and/or losses to some degree (Studdert & Stevenson, 2004) and have been strongly supported by the nursing home industry.
The data in this study provide insights about the impact of paid losses on the financial performance of nursing homes; however, because the study is limited to the state of Florida, it limits our ability to generalize these findings to other states. In addition, because many nursing homes did not have complete data, the elimination of those facilities may cause bias because those facilities may have had a disproportionate share of litigation and financial loss. We did compare the bed size and ownership of those hospitals in our sample with those facilities that were excluded though. No significant difference was found between these two groups regarding bed size. However, our sample included a higher proportion of private, nonprofit nursing facilities and a lower proportion of government-owned facilities compared with the facilities that were excluded. Considering most of nursing homes in Florida are for profit, the difference between these two groups should not cause bias for our results. In addition, the causal relationship between management expertise, quality of care, threat of litigation, paid-out losses, tort reform, and financial performance was not determined. Nursing home facilities with paid-out losses did have lower total margins compared with those without. It is not clear whether this was solely due to large paid malpractice claims or because those facilities had lower quality of care and less management expertise. Finally, although this study used 6 years of data, we did a cross-sectional analysis. A longitudinal study would really help to better understand if the facilities with better quality of care will lead to fewer lawsuits and better financial performance. Nevertheless, our findings are important to nursing home managers who work to improve the quality and to reduce the cost of care within their facilities because it provides information to assist management in their assessment of malpractice litigation risk and to motivate process of care improvements to mitigate these risks. The findings also offer support for policymakers to revisit the issue of nursing home malpractice litigation through its insight on the relationship of nursing home margins and paid losses. This study will lead to further investigation of the factors that influence nursing home litigation and financial performance.

**Table 1**

Description and summary statistics for study variables, 2001–2005

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean or %</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total margin (%)</td>
<td>−1.03</td>
<td>12.95</td>
</tr>
<tr>
<td>Operating margin (%)</td>
<td>−4.49</td>
<td>19.49</td>
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<tr>
<td><strong>Key independent variable</strong></td>
<td></td>
<td></td>
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<tr>
<td>Paid loss (%)</td>
<td>13.57</td>
<td>34.25</td>
</tr>
<tr>
<td><strong>Organizational factor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed size</td>
<td>108.30</td>
<td>51.72</td>
</tr>
<tr>
<td>For profit (%)</td>
<td>79.21</td>
<td>40.59</td>
</tr>
<tr>
<td>Chain member (%)</td>
<td>62.14</td>
<td>48.51</td>
</tr>
<tr>
<td><strong>Other internal factor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTEs/100 inpatient days (%)</td>
<td>29.56</td>
<td>8.96</td>
</tr>
<tr>
<td>Resident acuity</td>
<td>10.66</td>
<td>1.10</td>
</tr>
<tr>
<td>Occupancy rate (%)</td>
<td>88.24</td>
<td>11.20</td>
</tr>
<tr>
<td>Percent Medicaid (%)</td>
<td>60.42</td>
<td>19.24</td>
</tr>
<tr>
<td>Quality of care</td>
<td>7.61</td>
<td>5.23</td>
</tr>
<tr>
<td><strong>Market factor</strong></td>
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<td></td>
</tr>
<tr>
<td>High competition (%)</td>
<td>26.77</td>
<td>44.28</td>
</tr>
<tr>
<td><strong>Nursing home-year observations</strong></td>
<td>2141</td>
<td></td>
</tr>
</tbody>
</table>

Note. FTE = full-time equivalent; ADL = Activities of Daily Living.

*aBecause OSCAR data were not available for year 2006 when we did the analysis, we used only data from years 2001–2005 in the multivariable models.

*bSee Cowles (2003).
As nursing home managers work to improve the quality of care within their facilities, it is imperative that they identify all costs associated with the delivery of care. The additive cost of malpractice litigation as well as the threat of such litigation has been difficult to quantify and therefore difficult to mitigate. Nursing home managers must assess their malpractice litigation risk and identify tactics to mitigate these risks to ensure a safe and secure environment for a disabled and an aging population. The threat of litigation is also exacerbated by an increasingly morbid population as well as an aging clinical workforce. These challenges will continue to increase the price of nursing home care and further burden a vulnerable safety net for those most in need of skilled nursing home care.

The findings from this study also offer support for local, state, and federal policymakers to revisit the issue of malpractice litigation and nursing home industry through its insight on the relationship of nursing home margins and litigation. The results of this study are especially important because of the growth of Florida’s elderly population and the increasing prevalence of disabilities that are inherent with an aging society.

As the United State’s population continues to age, policymakers will be further challenged to identify care and financing solutions for a more chronically morbid and disabled population. These challenges will have its largest impact on those states with a disproportionate share of older persons, such as Florida. By 2030, more than one in every four residents will be age 65 years or older, and by 2025, approximately 22 of Florida’s 67 counties are expected to have senior populations larger than 30 percent (Colburn & deHaven-Smith, 2002).

Although this study offers support for policymakers to consider laws that address and mitigate nursing home malpractice litigation, it also raises the question of how the quality of care will be assured in an environment of diminished or reduced malpractice litigation. In 1987, Congress enacted the Nursing Home Reform Act that requires nursing homes participating in the Medicare and Medicaid programs to comply with certain requirements for quality of care. A better understanding is needed to identify if the regulations from this law are sufficient to ensure the quality of care within nursing home facilities. It may be that increased regulatory efforts by state government may be needed to offset the potential incentive of nursing homes to lower investments in quality as a response to the reduced risk of litigation.

This research is important because it does provide some support for the financial benefits of reducing malpractice litigation for Florida’s nursing home industry. However, this study does not address the potential decrease in quality that may occur if the threat of litigation is either diminished or eliminated. At least one study found that there was not a substantial drop in the quality of care delivered in skilled nursing facilities when malpractice litigation was reduced (Stevenson & Grabowski, 2008). Florida should also develop services and support systems that encourage retirees to live independently for as long as possible and mitigate the cost of resources for those who cannot live independently. Therefore, resources must be available to care for this

#### Table 2

<table>
<thead>
<tr>
<th>Explanatory variable</th>
<th>Total margin</th>
<th>Operating margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid loss (%)</td>
<td>-.033***</td>
<td>-.04</td>
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<tr>
<td>Organizational factor</td>
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<td></td>
</tr>
<tr>
<td>Bed size</td>
<td>.003</td>
<td>.111</td>
</tr>
<tr>
<td>For profit (%)</td>
<td>-.021**</td>
<td>.059***</td>
</tr>
<tr>
<td>Chain member (%)</td>
<td>-.014*</td>
<td>-.016</td>
</tr>
<tr>
<td>Other internal factor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTEs/100 inpatient day(%)</td>
<td>-.101**</td>
<td>-.300***</td>
</tr>
<tr>
<td>Resident acuity</td>
<td>.001</td>
<td>.006</td>
</tr>
<tr>
<td>Occupancy rate (%)</td>
<td>.203***</td>
<td>.185***</td>
</tr>
<tr>
<td>Percent Medicaid (%)</td>
<td>-.056**</td>
<td>.122***</td>
</tr>
<tr>
<td>Quality of care (total inspection deficiencies)</td>
<td>-.001</td>
<td>-.002**</td>
</tr>
<tr>
<td>Market factor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High competition (%)</td>
<td>.003</td>
<td>.027**</td>
</tr>
<tr>
<td>Nursing home-year observations</td>
<td>2141</td>
<td>2141</td>
</tr>
</tbody>
</table>

*p<.05. **p<.01. ***p<.001.
burgeoning, vulnerable, and increasingly dependent population, and we must lessen those factors that may negatively impact an important societal safety net.

As the baby boomer population ages, the United States will be challenged to provide the resources needed to care and finance a far more senior population. Research-identifying factors that increase the cost of care to this population can guide local, state, and federal policymakers to identify and implement specific and targeted policies that better position it to care for an aging, a morbid, and a more vulnerable population.

References


