PERFORMANCE AUDIT REPORT

Department on Aging: Evaluating The Effect of Increasing Minimum Nursing Hours on Resident Care and State Costs

A Report to the Legislative Post Audit Committee
By the Legislative Division of Post Audit
State of Kansas
April 2012

R-12-004

Legislative Post Audit Committee
Legislative Division of Post Audit

THE LEGISLATIVE POST Audit Committee and its audit agency, the Legislative Division of Post Audit, are the audit arm of Kansas government. The programs and activities of State government now cost about $14 billion a year. As legislators and administrators try increasingly to allocate tax dollars effectively and make government work more efficiently, they need information to evaluate the work of governmental agencies. The audit work performed by Legislative Post Audit helps provide that information.

We conduct our audit work in accordance with applicable government auditing standards set forth by the U.S. Government Accountability Office. These standards pertain to the auditor's professional qualifications, the quality of the audit work, and the characteristics of professional and meaningful reports. The standards also have been endorsed by the American Institute of Certified Public Accountants and adopted by the Legislative Post Audit Committee.

The Legislative Post Audit Committee is a bipartisan committee comprising five senators and five representatives. Of the Senate members, three are appointed by the President of the Senate and two are appointed by the Senate Minority Leader. Of the Representatives, three are appointed by the Speaker of the House and two are appointed by the Minority Leader.

Audits are performed at the direction of the Legislative Post Audit Committee. Legislators or committees should make their requests for performance audits through the Chairman or any other member of the Committee. Copies of all completed performance audits are available from the Division's office.

LEGISLATIVE DIVISION OF POST AUDIT

800 SW Jackson
Suite 1200
Topeka, Kansas 66612-2212
Telephone (785) 296-3792
FAX (785) 296-4482
Website: **http://www.kslpa.org**
Scott Frank, Legislative Post Auditor

HOW DO I GET AN AUDIT APPROVED?

By law, individual legislators, legislative committees, or the Governor may request an audit, but any audit work conducted by the Division must be directed by the Legislative Post Audit Committee, the 10-member joint committee that oversees the Division's work. Any legislator who would like to request an audit should contact the Division directly at (785) 296-3792.

LEGISLATURE OF KANSAS

LEGISLATIVE DIVISION OF POST AUDIT

800 SOUTHWEST JACKSON STREET, SUITE 1200
TOPEKA, KANSAS 66612-2212
TELEPHONE (785) 296-3792
FAX (785) 296-4482
WWW.KSLPA.ORG

April 25, 2012

To: Members, Legislative Post Audit Committee

Senator Mary Pilcher-Cook, Chair	Representative Peggy Mast, Vice-Chair
Senator Terry Bruce	Representative Tom Burroughs
Senator Anthony Hensley	Representative John Grange
Senator Laura Kelly	Representative Ann Mah
Senator Dwayne Umbarger	Representative Virgil Peck Jr.

This report contains the findings, conclusions, and recommendations from our completed performance audit, *Department on Aging: Evaluating the Effect of Increasing Minimum Nursing Hours on Resident Care and State Costs.* The audit was requested by Senator Umbarger. We would be happy to discuss the findings or any other items presented in this report with any legislative committees, individual legislators, or other State officials.

Sincerely,

Scott Frank
Legislative Post Auditor

This audit was conducted by Heidi Zimmerman, Katrin Osterhaus, and Matt Etzel. Chris Clarke was the audit manager. If you need any additional information about the audit's findings, please contact Heidi Zimmerman at the Division's offices.

Legislative Division of Post Audit
800 SW Jackson Street, Suite 1200
Topeka, Kansas 66612

(785) 296-3792
Website: http://www.kslpa.org

Table of Contents

List of Figures

List of Appendices

Department on Aging: Evaluating the Effect of Increasing Minimum Nursing Hours on Resident Care and State Costs

Kansas' Medicaid program provides significant funding for nursing home services for residents who meet established eligibility criteria. As of January 2012, Kansas' 290 nursing facilities served almost 17,000 residents, many of whom are Medicaid clients. These facilities provide a range of services to residents including rehabilitation, social, nutrition, and housing services.

In 2001, a Centers for Medicare and Medicaid Services (CMS) study found benefits associated with increased staffing at nursing facilities up to certain thresholds. The study found that facilities were more likely to have quality of care problems if they provided less than 4.1 hours of nursing care per resident each day. However, CMS did not require states to adopt these standards.

Since the CMS guidelines were established, at least two reports have evaluated the effect of state nursing hour minimums on resident care. A 2003 report by the Institute of Medicine concluded that sufficient evidence existed to call for increases in the direct care staffing levels for long-term care facilities. A 2009 report from the University of South Florida found evidence that the quality of care in Florida nursing homes improved substantially after that state increased nursing staff levels and implemented other quality standards in 2001.

Senate Bill 184, proposed during the 2011 session, would have increased the minimum number of nursing hours per resident day from the current level of 2.0 hours a day to 2.83 hours a day by July 2011, and eventually to 4.44 hours a day by July 2013. The fiscal note for Senate Bill 184 estimated that raising the minimum number of nursing hours would require an increase in staffing, and cost an additional $36.7 million ($15.6 million from the State General Fund) for fiscal year 2012.

Legislators have expressed concern that Kansas' current nursing staff levels are inadequate to provide a high quality of care, and that the fiscal note for Senate Bill 184 might not capture potential offsetting savings that could result from reducing the likelihood of more serious health issues for residents.

This performance audit answers the following questions:

1. **Do empirical studies and reports clearly identify a relationship between increased minimum nursing hours and quality of care outcomes or reduced health costs for residents in nursing facilities?**

2. **What would it cost to implement the minimum nursing staff hours standards recommended by Senate Bill 184, and what potential offsetting savings might result?**

A copy of the scope statement for this audit approved by the Legislative Post Audit Committee is included in ***Appendix A***.

To answer the first question, we reviewed studies to determine whether a relationship exists between increased nursing hours and quality of care outcomes within nursing facilities. We also searched for reports on the relationship between increased staff and reduced health care costs for nursing facility residents. Lastly, we collected and analyzed Kansas nursing facility data to examine the relationship between staffing levels and health outcomes.

To answer the second question, we interviewed Department on Aging staff and reviewed the fiscal note for Senate Bill 184 to understand how nursing costs are calculated, and how the fiscal note was created. Based on data gathered from the Department, we estimated the staffing costs required to bring Kansas' nursing facilities in line with Senate Bill 184's staffing requirements. Lastly, we searched for reports on offsetting costs related to increasing nursing hours, and interviewed officials and stakeholders on potential state savings.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Our findings begin on page 7, following a brief overview.

The Department on Aging Oversees Nearly 300 Nursing Facilities with Almost 17,000 Residents

Kansas law requires the Department on Aging to license and regulate adult care homes, such as nursing facilities, assisted living facilities, and adult day care facilities. Nursing facilities are the largest category, accounting for 290 of the nearly 750 licensed facilities the Department oversees. Nursing facilities are generally free-standing facilities that provide 24-hour care by nurses and other medical staff to help residents with basic living or medical needs.

To ensure nursing facilities meet federal and state regulations, the Centers for Medicare and Medicaid Services (CMS) requires the Department on Aging to inspect them at least once every 15 months. These inspections focus on a number of areas such as resident rights, quality of care, and nursing services. This audit focuses on quality of care indicators such as incidences of pressure sores or urinary tract infections. Facilities report these and other indicators to CMS.

Nursing Facilities in Kansas Receive Funding Through Medicaid, Medicare, and Private Insurance

Most nursing facilities receive payments from Medicare or Medicaid programs. To participate in these programs, nursing facilities must be appropriately certified by the Department on Aging.

Generally, Medicare pays the cost of caring for elderly and disabled individuals who need short-term nursing care after hospitalizations. Conversely, Medicaid pays the cost of long-term nursing care for individuals who meet certain financial and functional criteria.

- Financial eligibility is based on a persons' income and assets, and is determined by the Department of Social and Rehabilitation Services (SRS).

- Functional eligibility is based on a person's physical and health condition and is determined using a standardized assessment instrument.

Individuals who do not qualify for Medicare or Medicaid must rely on private insurance or other payment methods.

As ***Figure OV-1*** on the next page shows, the vast majority of nursing facilities are certified to accept both Medicaid and Medicare clients. Although most facilities also have some private-pay residents, very few accept only private pay-residents.

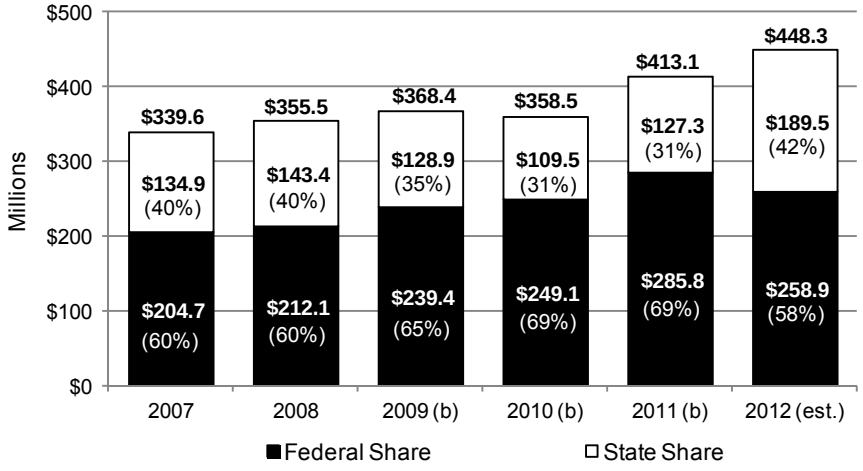
Figure OV-1 Kansas Nursing Facility Certifications as of January 2012		
Certification Category	**# of Facilities**	**# of Residents**
Dually certified	252	15,492
Medicaid-only certified	29	1,117
Medicare-only certified	7	337
Private Nursing Facilities (a)	2	n/a
Total	**290**	**16,946**

(a) The Department on Aging inspects and licenses these facilities, but doesn't certify them for either of the two federal programs.
Source: Unaudited "Nursing Home Compare" data from Medicare.gov and Department on Aging website information.

Total Medicaid expenditures for long-term care facilities have increased in recent years, from $340 million in 2007 to $413 million in 2011. Medicaid is funded with both federal and state moneys, with the state paying approximately 40% of the total costs. As ***Figure OV-2*** shows:

- Medicaid expenditures for long-term care facilities were relatively stable from 2007 to 2010, but rose significantly from 2010 to 2011. Expenditures are expected to rise further in 2012.
- The state's share of Medicaid expenditures decreased between 2009 and 2011 because additional federal funds were available through the American Recovery and Reinvestment Act of 2009. In 2012, Kansas will resume paying its more common 40% share.

Figure OV-2
Medicaid Expenditures for Long-Term Care Facilities from FY 2007 to FY 2012 in Millions (not adjusted for inflation) (a) (c)



(a) Long-term care facilities include 290 nursing facilities, 11 nursing facilities for mental health, and 43 long-term care units. Medicaid expenditures aren't readily available for the nursing facility category by itself.
(b) During these years, Kansas received supplemental federal funding through ARRA.
(c) Expenditures may not add up correctly due to rounding.
Source: Unaudited Medicaid Assistance Reports FY07-FY12, published by KDHE, Division of Health Care

Nursing facilities receive Medicaid funding on a resident per diem basis. The per diem rate is unique to each facility and is generally based on the severity of the residents' illnesses and the facility's costs. Some parts of this rate are adjusted every quarter while other parts are adjusted every year. The average Medicaid per diem rate in fiscal year 2011 for nursing facilities was about $145 per resident, per day.

As mentioned earlier, nursing facilities may also receive funding through Medicare and private funds. However, information about those funding streams is not tracked at the state level and therefore was not included in our analysis.

Question 1: Do Empirical Studies and Reports Clearly Identify a Relationship Between Increased Minimum Nursing Hours and Quality of Care Outcomes or Reduced Health Costs for Residents in Nursing Facilities?

Answer in Brief:

Although the results are mixed, the most thorough research generally shows a positive relationship between staffing levels and quality of care outcomes in nursing facilities. Researchers also have identified a number of staff-related factors other than staffing levels that are important in improving quality of care, such as proper allocation of staff and adequate training. Finally, we were unable to detect a clear relationship between nursing hours and quality of care outcomes for Kansas' nursing facilities, though this may be due to limitations in the data we were able to use. These and other findings are presented in the sections that follow.

Although the Research Results Are Mixed, the Most Thorough Research Generally Shows a Positive Relationship Between Staffing Levels and Quality of Care Outcomes

We reviewed a total of nine studies that examined the relationship between staffing levels and quality of care outcomes. One study summarized 59 separate studies on this topic, and not only reviewed but also evaluated the strength of each of those studies based on the data and methods used.

To measure nursing staff levels, the studies we reviewed generally used the number of hours nursing staff work in the facility each day. This measure is known as "hours per resident day." Facilities report these hours to the Centers for Medicare and Medicaid Services (CMS) for three types of staff: registered nurses, licensed practical nurses, and nurse aides. This reporting is part of the federally required inspection process.

However, studies often measured quality of care in a variety of ways. Some studies used facility indicators, such as the number of deficiencies, while others used resident indicators, such as incidences of pressure sores or urinary tract infections as a measure of quality of care. Additionally, some of the studies evaluated the relationship between staffing and outcomes over time, while other studies compared nursing facilities' data within or across states at a single point in time.

Appendix B contains a bibliography and a summary of important findings from all nine studies we reviewed.

The most rigorous studies showed that having more nursing staff appears to be associated with improved quality of care outcomes. A 2008 literature review by Dr. Nicholas Castle of the University of Pittsburgh summarized the findings from 59 studies on the relationship between staffing levels and quality of care outcomes. He found the studies that were methodologically

sound generally found some type of positive relationship between increased staffing and quality of care. Conversely, he noted that studies with small sample size or other limitations may not have found a relationship because of those methodological issues. Overall, he reported that out of a total of 302 quality indicators across the 59 studies, 120 had a positive association with staffing levels, while only 15 indicators had a negative association.

Additionally, some of the other studies we reviewed found that registered nursing staff levels may have a greater impact on certain resident outcomes than other types of nurses. For example, two studies found that higher registered nursing levels were associated with improved outcomes. Another report found that studies that examined the nurse staffing-quality relationship found more significant findings than with other types of nursing staff.

A number of studies that found a positive relationship between staffing levels and some aspect of quality of care <u>also</u> found negative or no relationships in other aspects of quality of care. All of the studies we reviewed found at least some positive relationships between staffing levels and some quality of care outcomes. However, many of those same studies found no (or even a negative) relationship for other types of quality of care outcomes. For example, one study found a positive relationship between the number of registered nurses and the overall quality of the facility, but also found a negative relationship between the number of licensed practical nurses and facility quality. Although these results seem contradictory, they may be the result of the complexity and variety of factors that contribute to outcomes.

Although the studies sometimes reported mixed results, it is important to note that none of the eight studies—as well as the 59 studies reviewed as part of the summary report— found <u>only</u> negative associations between nursing staff levels and patient outcomes.

According to the federal Centers for Medicare and Medicaid Services (CMS), increasing staffing levels improves health outcomes, but only up to a certain point. In December 2001, CMS published a report examining what the appropriate level of nursing staff in nursing facilities should be. This report replaced a preliminary report which established minimum, preferred, and optimum nursing staff levels.

The 2001 report identified two important findings about staffing levels:

- **Adding more nursing staff up to 4.1 hours per resident day improves quality of care.** Below this threshold facilities were more likely to have quality of care problems such as increases in urinary tract infections or pressure sores.

- **Adding more staff beyond 4.1 hours per resident day did not necessarily produce additional improvements.** Although CMS identified staffing levels associated with improved health outcomes up to this staffing level, it does not require that facilities meet these staffing levels.

We did not find any studies addressing the relationship between increased nursing staff and reduced resident health costs. While the relationship between nursing staff levels and quality of care at nursing facilities appears to be studied frequently, we did not find any studies addressing the relationship between increased nursing staff and reduced resident health costs.

In Addition to Staffing Levels, Researchers Have Identified Other Staff-Related Factors that Are Important in Improving Quality of Care

As part of its 2001 report examining what the appropriate level of nursing staff in nursing facilities should be, CMS identified eight factors important to improving quality of care outcomes, once a facility has the appropriate number of nursing staff. These eight factors are summarized in ***Figure 1-1***. As the figure shows, the other staff-related factors include:

- restructuring current staff levels to increase efficiency
- improving staff supervision and management of staff
- increasing staff expertise and knowledge

Figure 1-1
Other Staffing-Related Factors That Can Improve Quality of Care Outcomes

Staffing Factor	Description
RESTRUCTURE EXISTING STAFF LEVELS OR HOURS	
Allocate staff across shifts adequately	Allocate staff adequately across shifts to ensure enough staff are present at times when residents are likely to need more assistance (e.g. meal times).
Allocate staff across units adequately	Allocate staff adequately across units to ensure units with special care populations (Alzheimer's) have an appropriate number of nurses available.
Limit overtime	Create or enforce policies that strictly limit the number of hours per pay period nurses can work.
INCREASE SUPERVISON AND MANAGEMENT OF STAFF	
Reduce absenteeism	Create or enforce policies to reduce incidences of staff calling in absent on short notice.
Promote management skills	Promote strong management and supervisory skills through training and mentoring.
INCREASE STAFF EXPERTISE AND KNOWLEDGE	
Train contract staff	Create training or orientation programs for contract staff to ensure they are familiar with patients and can provide a high level of care.
Provide appropriate training opportunities	Provide training to improve nurses' ability to observe, assess, and intervene appropriately when problems occur.
	Provide training that addresses the particular needs of the facility, for example, infection control or evacuation plans.

Source: LPA summary of a Centers for Medicare and Medicaid report titled "Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes," published in 2001.

Enhancing or optimizing these factors could help nursing facilities that already have adequate staffing levels further improve quality. Ultimately, the report concluded that staffing levels are only one part of the relationship between nursing staff and quality of care.

We Were Unable To Detect A Clear Relationship Between Nursing Hours and Quality of Care Outcomes for Kansas' Nursing Facilities

We evaluated the relationship between nursing staff levels and a number of different quality of care indicators for nursing facilities in Kansas. To do this, we assembled Kansas nursing facility data including demographics, resident health information, quality of care indicators, and nursing staff levels. We collected these data from the Kansas Department on Aging and a federal database maintained by CMS.

We evaluated the relationship between staffing levels and outcomes with three, progressively complex, statistical analyses that included correlations, means testing, and regression models. Of the three tests, regression modeling offers the best opportunity for detecting and predicting complex relationships between variables.

Based on our regression model, we were unable to detect a clear relationship between nursing hours and quality of care outcomes for Kansas facilities. We may not have been able to detect an association for two reasons, as noted below.

- **One possibility is that no relationship exists between nurse staffing and quality of care outcomes in Kansas.** Given that much of the literature discussed above did find positive associations between staffing and outcomes, we think it's likely that at least some sort of relationship also exists in Kansas.
- **It is more likely that our data were insufficient to find a relationship between nurse staffing and quality of care outcomes.** The relationship between nursing staff and resident outcomes is very complex and we may not have had the necessary data to detect an association.

The conclusion is presented at the end of Question 2.

Recommendations

None

Question 2: What Would it Cost To Implement the Minimum Nursing Staff Hours Standards Recommended by Senate Bill 184, And What Potential Offsetting Savings Might Result?

Answer in Brief:

Senate Bill 184, which was introduced during the 2011 legislative session but was not passed, would have increased minimum nursing staff requirements in Kansas nursing facilities over a three-year period. We estimated it would cost the state up to $43 million annually to fully implement Senate Bill 184's requirements, including about $1.6 million in unintended indirect costs associated with the bill. Although increasing staffing levels may improve health outcomes, better outcomes are unlikely to result in meaningful savings for the state. This is because the most significant costs associated with negative health outcomes are paid for with federal funds. As a result, most savings achieved through better outcomes will benefit the federal government, but not the state. These and other findings are described more fully in the sections that follow.

Senate Bill 184 Would Have Increased Minimum Nursing Staff Requirements Over a Three-Year Period

As noted in the Overview, the Department on Aging is responsible for overseeing nursing facilities. As part of those responsibilities, Department on Aging officials examine whether nursing staff in those facilities are providing sufficient care to residents and whether the facility is meeting staffing requirements.

One way to measure whether a facility is meeting staffing requirements is to calculate the facility's nursing hours per resident day. This measure is calculated by dividing the total number of hours worked by nursing staff by the facility's bed days (number of residents multiplied by days spent in the facility). During each inspection, Department officials check to make sure the facility is meeting various staffing requirements, and submit the nursing staff hours per resident day number to the Centers for Medicare and Medicaid Services (CMS).

Senate Bill 184 would increase the minimum nursing staff hours per resident day over a three-year period—from the current 2.0 hours per day to 4.44 hours per day. Kansas regulations currently require a weekly average of 2.0 hours per resident day, with a minimum of 1.85 hours of nursing care each day. Senate Bill 184 would have increased these hours over a three-year period. The bill was introduced during the 2011 legislative session, but was not passed.

Most facilities have nursing staff levels well above the current state minimums (the current average is 3.89 hours per resident day). Department officials told us this is because CMS requires

"sufficient" staffing, but does not set a specific number. As a result, many facilities have staffing well above the state minimums in order to achieve the "sufficient" threshold required by CMS. (As noted earlier, the 4.1 hours per resident day identified by CMS was the staffing level up to which quality of care improved. However, CMS does not require this level of staffing.)

Figure 2-1 compares Senate Bill 184's yearly requirements to current state requirements, and to the state's current average hours per resident day. As the figure shows, Senate Bill 184's requirements are significantly greater than the current state requirements. Additionally, the average nurse staffing levels at Kansas nursing facilities exceed the current state requirements and the first year levels in Senate Bill 184.

The box on page 13 shows that Kansas' average hours per resident day for all long-term care facilities is similar to the averages in surrounding states.

Senate Bill 184 also would require specific staffing requirements for different staff types. Currently, Kansas regulations do not prescribe hours per resident day by staff type, only by total staff time. Senate Bill 184 mandated specific requirements by nurse type (registered nurses, licensed practical nurses, and nurse aides). For example, it would establish a requirement of 0.67 hours per resident day for registered nurses in the first year, which then increases to 1.03 in the third year. ***Figure 2-1*** shows the requirements for each type of nursing staff.

Figure 2-1
Senate Bill 184 Staffing Requirements and 2011 Staffing Levels for Nursing Facilities (in hours per resident day)

Year	Registered Nurses	Licensed Practical Nurses	Nurse Aides	Total
Current Requirements	---	---	---	**2.00** (a)
Senate Bill 184 - Year 1	0.67	0.45	1.72	**2.83** (b)
Senate Bill 184 - Year 2	0.85	0.58	2.22	**3.65**
Senate Bill 184 - Year 3	1.03	0.7	2.7	**4.44** (b)
Current Average Staffing for Nursing Facilities	0.67	0.65	2.57	**3.89**

(a) This number reflects the weekly average which most closely reflects how the hours per resident day required in Senate Bill 184 would be calculated. The state also has a daily requirement of no less than 1.85.
(b) This is the Senate Bill 184 requirement, but the actual total for the three components is 2.84 for year one and 4.43 for year three.
Source: LPA analysis of "Nursing Home Compare" data from Medicare.gov as of December 13, 2011 and Senate Bill 184.

Senate Bill 184's third year staffing levels are beyond the level identified by CMS as leading to improved quality of care. As mentioned in Question 1, a 2001 CMS report to Congress found that staffing above 4.1 hours per resident day results in a diminishing return in quality of care outcomes. Because Senate Bill 184's third year requires 4.44 hours per resident day, the magnitude of quality of care improvements the state could expect may be small.

Figure 2-2
Senate Bill 184 and CMS Staffing Thresholds

Requirement	Registered Nurses	Licensed Practical Nurses	Nurse Aides	Total
Year 2 (Senate Bill 184)	0.85	0.58	2.22	**3.65**
CMS Threshold	0.75	0.55	2.8	**4.1**
Year 3 (Senate Bill 184)	1.03	0.7	2.7	**4.44 (a)**

(a) This is the Senate Bill 184 requirement, but the actual total for the three components is 4.43.
Source: Senate Bill 184, and the "CMS Report to Congress: Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes, Phase II."

As ***Figure 2-2*** shows, the 4.1 hours per resident day identified by CMS is between Senate Bill 184's second and third year requirements.

Kansas' Average Hours Per Resident Day Are Similar to Surrounding States

Hours per resident day is a national standard used to determine if long-term care facilities meet the federal or state government's minimum requirements. Kansas' average hours per resident day for long-term care facilities are generally in line with four surrounding states and Iowa.

Average Long-Term Care Facility Staff Ratios for Kansas and Neighboring States (a)

State	Avg # of Residents per Facility	2011 Hours Per Resident Day by Staff Type			
		Registered Nurses	Licensed Practical Nurses	Nurse Aides	Total
Nebraska	58	0.74	0.76	2.51	**4.01**
Colorado	79	0.92	0.75	2.32	**4.00**
Kansas	**56**	**0.72**	**0.65**	**2.59**	**3.96 (a)**
Missouri	74	0.54	0.74	2.56	**3.85**
Oklahoma	63	0.45	0.81	2.51	**3.77**
Iowa	58	0.69	0.59	2.29	**3.58**

(a) These hours differ from those in Figure 2-1 because this number represents the average for all long-term care facilities rather than just nursing facilities.
Source: LPA analysis of "Nursing Home Compare" data from Medicare.gov as of December 13, 2011.

It Would Cost the State Up to $43 Million Annually To Fully Implement Senate Bill 184 Staffing Requirements

To fully implement Senate Bill 184, all Kansas nursing facilities would have to hire additional nursing staff. These staff increases would result in increased costs to the state because part of the Medicaid per diem reimbursement rate is based on facility staffing expenditures. We estimated what the cost to the state might be through two steps:

- **First, we estimated how many new nursing staff facilities would need to meet Senate Bill 184 requirements.** To do this, we analyzed 2010 staffing data for each facility to determine how many additional staff each facility would need in each year.

- **Then we estimated how much the new nurses would cost in salary and benefits, and how that would affect Medicaid per diem rates.** We used 2010 cost data to project the cost of new staff and calculated how those increases would affect the Medicaid per diem rate for each facility. We calculated a statewide cost based on those rates. ***Appendix C*** has more details on how we calculated the cost of Senate Bill 184.

Although all Kansas nursing facilities meet or exceed the current state staffing requirements, very few facilities currently meet the Senate Bill 184 requirements. ***Figure 2-3*** summarizes the number of nursing facilities that meet the current minimum standards, as well as the proposed standards in Senate Bill 184. As the figure shows, all nursing facilities meet current total staff requirements (2.0 hours per day). However, only 17% would meet the overall staff requirement (4.44) for the third year of Senate Bill 184. Furthermore, only 2% would meet the specific requirements for each type of staff. This means some facilities that meet the overall requirement would not meet the specific nursing staff proportions specified by Senate Bill 184.

Figure 2-3
Number and Percentage of Nursing Facilities That Currently Meet Staff Requirements Proposed in Senate Bill 184 (a)

Requirement Type	Overall Hours Per Resident Day Requirements	Meeting Overall Hours Per Resident Day Requirements		Meeting Specific Hours Per Resident Day Requirements	
		#	%	#	%
Current Requirements	2.00	283	100%	-	-
Senate Bill 184 - Year 1	2.83	273	96%	90	32%
Senate Bill 184 - Year 2	3.65	174	61%	22	8%
Senate Bill 184 - Year 3	4.44	49	17%	6	2%

(a) Based on 283 of 288 Medicaid/Medicare certified nursing facilities for which staffing ratios were available.
Source: LPA analysis of "Nursing Home Compare" data from Medicare.gov as of December 13, 2011 and Senate Bill 184.

To implement the requirements for the third year, facilities could need up to 3,600 additional staff for total state costs up to $43 million annually ($98 million all funds). As mentioned above, we calculated the additional staffing and costs associated with Senate Bill 184 using 2010 staffing and cost data.

Figure 2-4 shows our estimate of how many additional nursing staff would be needed to meet Senate Bill 184 requirements for each year, and the resulting costs. It's important to note that the cost for the second and third years are already included in the cost for the previous year, so each year should not be added together.

Figure 2-4
Maximum Estimated Staffing and Annual Medicaid Cost
To Implement Senate Bill 184 Compared to 2010 Costs (in millions)

	Year 1	Year 2	Year 3
Estimated New Staffing FTE	800	1,900	**3,600**
Nursing Facility Costs	$11.9	$23.9	**$41.1**
Indirect Costs (a)	$1.0	$1.3	**$1.6**
Total State Portion (Medicaid)	***$12.9***	***$25.2 (b)***	***$42.7 (b)***
Total Cost	$29.8	$58.1	**$98.4**

(a) Indirect costs include the costs to long-term care units and mental health nursing facilities that are a result of Senate Bill 184.
(b) The cost for the second and third year already include the cost for the previous year, so the years should not be added together.
Source: LPA analysis of the 2010 Department on Aging cost report.

The costs presented in the figure above represent the likely maximum cost of Senate Bill 184. Because some facilities may re-allocate their staff to meet the specific requirements the cost could be less. For example, a facility that has more nurse aides than is required, but not enough registered nurses, might reduce some nurse aides to hire more registered nurses. The more facilities re-allocate their staff, the less expensive the bill likely will be. However, our analysis in this area showed the costs of the third year likely would not be below about $39 million.

Further, it's important to note that the costs listed above are the state's Medicaid costs only. It potentially could cost nursing facilities about $245 million annually to implement the third year of Senate Bill 184. Of that $245 million, about $98 million will be reimbursed through Medicaid (this includes both the state and federal portion). The remainder likely would be paid by the facility, by Medicare, or by private-pay residents.

Because our analysis found the state could need as many as 3,600 additional nurses to fulfill the bill's requirements, it's important to mention that a 2011 Post Audit examining health care-related services noted a current nursing shortage in Kansas. As a result, some facilities, particularly in rural areas, may find it difficult to hire enough additional nurses to meet increased requirements.

Senate Bill 184 would have the unintended consequence of increasing reimbursement rates for certain long-term care facilities that are not covered by the bill. Although nursing facilities account for most of the long-term care facilities the Department on Aging oversees, there are other facilities including long-term care units and mental health nursing facilities. When Department officials calculate the Medicaid per diem reimbursement rates, they use the combined median costs for all three types of facilities. While Senate Bill 184 only directly affects nursing facilities, it would cause the median cost for the entire group of facilities to rise, which would increase the per diem rate calculation. As a result, some long term care units and mental health nursing facilities would see increases in their reimbursement rates if Senate Bill 184 went into effect, even though the bill does not directly affect the staffing levels for those facilities.

As shown in ***Figure 2-4***, we estimated this indirect impact on reimbursement rates for long-term care units and mental health nursing facilities would cost the state about $1.6 million annually if Senate Bill 184 was fully implemented.

These cost estimates are comparable to the Department on Aging's original estimates in the fiscal note for Senate Bill 184. To estimate the costs of Senate Bill 184, we began with the Department on Aging's original methodology but addressed several issues the Department was not able to consider, given the limited time available to prepare a fiscal note. Those issues included such things as:

- calculating costs in terms of state reimbursement rates
- including the cost of benefits, as well as salaries for additional staff
- excluding mental health nursing facilities and long-term care units

Although we used a slightly different methodology than Department officials did, the estimates were similar. The Department's fiscal note found that the first year requirements would cost the state an estimated $15.6 million annually, and the third year requirements would cost the state $46.9 million annually. Our analysis found the first year requirements could cost the state up to $12.9 million annually, and the third year requirements could cost the state up to $42.7 million annually.

Although Increasing Staffing Levels May Improve Health Outcomes, Better Outcomes Are Unlikely To Result in Meaningful Savings for The State

Some reports have suggested savings could be achieved by increasing nursing staff, which results in better health outcomes for residents. However, many of those reports focused on the potential savings to the entire medical system. For our work, we examined the potential for the state to save money.

We were not able to find literature quantifying potential state savings resulting from better health outcomes. We spoke with several professionals with significant nursing facility experience to determine if savings from reduced negative health outcomes were possible.

Most of the significant costs of poor health outcomes occur when residents are hospitalized to treat these health conditions. In general, the most significant costs associated with treating negative health outcomes such as falls, pneumonia, or other serious infections are related to the hospitalization of the resident suffering from the condition. Nursing facilities also incur other costs, such as medicine, supplies, or equipment, but they tend to be relatively small in comparison.

Because hospital stays for nursing facility residents are generally paid for with federal funds, reducing hospitalizations would result in minimal savings to the state. Because most individuals in nursing facilities are elderly, they are covered by Medicare. This means when they are hospitalized, Medicare (which is 100% federally funded) pays these costs. Additionally, many individuals are also covered by Medicare Part D, which pays for prescription medicines. As a result, when nursing facility residents have fewer hospital stays or prescription costs, the federal government benefits from the reduced health costs, not the state.

In some situations, improving health outcomes may actually increase the state's costs. This may occur for residents covered by Medicare for two reasons:

- **Medicaid doesn't pay the per diem rate when nursing facility residents are in the hospital.** Those costs are covered by Medicare.

- **When a resident stays in the hospital for three or more days, Medicare temporarily pays for nursing facility care after the hospitalization, not Medicaid.** This is because Medicare pays for a short-term rehabilitation period following hospital stays, while Medicaid pays for long-term care services.

Because of this payment structure, the state's costs (via the Medicaid per diem rate) increase when resident's health outcomes improve. This is because fewer resident hospitalizations means Medicaid will pay for more resident nursing facility days. This is not to suggest that the state and nursing facilities should not try to reduce resident hospitalizations, but that the state may pay more if hospitalizations are reduced.

CMS recognizes that states don't benefit financially from better health outcomes, and is attempting to create new incentives for better care. Recently, the federal government created the Dual Eligible Alignment Grant. The goal of the grant is to more effectively integrate Medicare and Medicaid programs, while improving quality and reducing costs. Department officials told us that CMS is encouraging states to develop programs that improve nursing facility outcomes by allowing states to receive a portion of any savings the federal government achieves through improved outcomes.

At the time of this report, the federal government had selected 15 states to be part of the initial program. Although Kansas is not one of those states, Department officials told us CMS is willing to work with additional states. Officials currently are working with CMS to create a plan that would allow Kansas to participate in the Dual Eligible Alignment Grant.

Conclusion

Although a number of studies found that staffing levels are positively related to quality of care within nursing facilities, the Centers for Medicare and Medicaid noted that is true only up to a certain point. Senate Bill 184's required nursing staff levels in the third year generally exceed that threshold. Staffing Kansas' nursing facilities at those levels would increase the State's cost dramatically, while likely not improving resident quality of care proportionally.

Many good reasons exist to improve quality of care in the state's nursing facilities, but potential state savings are unlikely to be one of them. That's because the federal Medicare program would realize most of the savings resulting from improvements in resident outcomes through staff increases, while the state would carry much of the costs of increased staffing.

Recommendations

None

APPENDIX A

Scope Statement

This appendix contains the scope statement approved by the Legislative Post Audit Committee for this audit on September 27, 2011. The audit was requested by Senator Dwayne Umbarger.

Department on Aging: Evaluating the Effect of Increasing Minimum Nursing Hours on Resident Care and State Costs

Kansas' Medicaid program provides significant funding for nursing home services for residents that meet established income and asset eligibility criteria. As of June 2010, more than 300 Medicaid certified nursing homes in the State served almost 10,500 Medicaid nursing home residents. These facilities provide a range of services to residents including rehabilitation, social, nutrition, and housing services.

In 2000, the Center for Medicare and Medicaid Services (CMS) established guidelines nursing hours in state nursing facilities. Those guidelines suggest that residents receive a minimum of 2.75 hours of nursing care each day, and optimally 3.9 hours each day. Kansas has not adopted these standards for its nursing facilities.

Since the CMS guidelines were established, at least two reports have evaluated the effect of state nursing hour minimums on resident care. A 2003 report by the Institute of Medicine concluded that sufficient evidence existed to call for increases in the direct care staffing levels for long-term care facilities, even beyond the CMS guidelines. A 2009 report from the University of South Florida found evidence that the quality of care in Florida nursing homes improved substantially after that state increased nurse staffing levels and other implemented other quality standards in 2001.

2011 Senate Bill 184 would have increased the minimum number of hours nursing staff spend in Kansas nursing facilities from the current level of 2.0 hours a day to 2.83 hours a day by July 2011, and eventually to 4.44 hours a day by July 2013. The fiscal note for Senate Bill 184 estimated that raising the State's nursing hour minimum would cost an additional $36.7 million ($15.6 million from the State General Fund) for fiscal year 2012.

Legislators have expressed concern that Kansas' current nurse staffing levels are inadequate to provide a high quality of care, and that the fiscal note for Senate Bill 184 might not capture potential offsetting savings that could result from reducing the likelihood of more serious health issues for residents.

A performance audit in this area would address the following questions:

1. **Do empirical studies and reports clearly identify a relationship between increased minimum nursing hours and quality of care outcomes or reduced health costs?** To answer this question, we would review reports from the U.S. Department of Health and Human Services and non-profit health care organizations such as the Kaiser Family Foundation related to nursing hours at state nursing facilities. Specifically, we would determine what relationship those reports have found between increased nursing hours and

the quality of patient care and patient outcomes. Additionally, we would determine whether any of those reports quantify cost savings related to reductions in hospitalizations, bed sores, and other related medical conditions and their associated costs. Finally, we would collect Kansas nursing home quality ratings, care outcomes, cost reports and average nursing hours by certification and license categories from the Department on Aging. We would evaluate that data to determine whether a clear relationship exists between nursing hours spent each day and Kansas nursing home ratings and outcomes. We would perform additional work in this area as needed.

2. **What would it cost to implement the minimum nursing staff hours standards recommended by Senate Bill 184, and what potential offsetting savings might result?** To answer this question, we would review the fiscal note for Senate Bill 184 to understand how nursing staff costs were calculated, and whether any cost savings related to improved patient care was included. We would also compare nursing home data collected in Question 1 to the recommended number of hours specified in Senate Bill 184 and to CMS recommendations. Based on the results of that comparison, we would calculate how much it would cost to bring Kansas nursing homes in line with the requirements of both the Bill and with CMS recommendations. Finally, based on our findings in Question 1, we would try to estimate a range of potential offsetting costs related to increasing minimum nursing hours. We would perform additional work in this area as needed.

   Estimated resources: 3 staff for 12-14 weeks (plus review)

APPENDIX B

Summary and Bibliography of Studies

This appendix contains a bibliography and summary of the nine studies we reviewed for Question 1. It's important to note that this bibliography reflects only the studies we reviewed and is not exhaustive of all the studies available on the relationship between nursing staffing levels and quality of care outcomes in nursing facilities.

1. Bowblis, John R. "Staffing Ratios and Quality: An Analysis of Minimum Direct Care Staffing Requirements for Nursing Homes." HSR: Health Services Research 46:5, October 2011.

2. Castle, Nicholas G. "Nursing Home Caregiver Staffing Levels and Quality of Care: A Literature Review." Journal of Applied Gerontology 28:375, August 2008.

3. Castle, Nicholas G. and John Engberg. "The Influence of Staffing Characteristics on Quality of Care in Nursing Homes." HSR: Health Services Research 42.5, October 2007.

4. Centers for Medicare and Medicaid. "Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes." Phase II Final Report, CMS, December 2001.

5. Hyer, Kathryn, Kali Thomas, Shabnan Mehra, Christopher Johnson, and Jeffrey S. Harman. "Analyses on Outcomes of Increased Nurse Staffing Policies in Florida Nursing Homes: Staffing Levels, Quality, and Cost (2002-2007)." University of South Florida, September 2009.

6. Konetzka, R. Tamara, Sally C. Stearns, and Jeongyoung Park. "The Staffing—Outcomes Relationship in Nursing Homes." HSR: Health Services Research 43:3, June 2008.

7. Park, Jeongyoung and Sally C. Stearns. "Effects of State Minimum Staffing Standards on Nursing Home Staffing and Quality of Care." HSR: Health Services Research 44:1, February 2009.

8. United States General Accounting Office. "Nursing Homes: Quality of Care More Related to Staffing than Spending." GAO-02-431R, June 2002.

9. Schnelle, John F., Sandra F. Simmons, Charlene Harrington, Mary Cadogan, Emily Garcia, and Barbara M. Bates-Jensen. "Relationship of Nursing Home Staffing to Quality of Care." HSR: Health Services Research 39:2, April 2004.

Appendix B Summary of Literature Review on Nursing Facility Staffing Levels and Quality of Care			
Study Name & Author	**POSITIVE EFFECTS**	**NEGATIVE EFFECTS**	**NO EFFECTS**
Summary of Studies			
Nursing Home Caregiver Staffing Levels and Quality of Care: A Literature Review Nicholas G. Castle (August 2008) This literature review examined 59 studies related to nursing hours and quality indicators.	● The report found that out of a total 302 quality indicators across the 59 studies, 120 (40%) had a significant positive association with staffing levels. ● Of the 59 studies, 16 (27%) found significant positive associations with staffing levels with all of the quality indicators they examined.	● Of the 302 quality indicators examined across 59 studies, 15 (5%) had a significant negative association with staff levels.	● Of the 59 studies examined, 7 (12%) found non-significant associations.
Other Individual Studies			
Staffing Ratios and Quality: An Analysis of Minimum Direct Care Staffing Requirement for Nursing Homes John R. Bowblis (October 2011) National study from 17,500 facilities.	● Higher minimum direct care staff (MDCS) requirements resulted in fewer facility-acquired pressure ulcers and rashes (two of the six outcome quality measures studied). ● For four of the six measures, facilities that rely more heavily on Medicaid show better improvements with higher MDCS requirements than facilities that rely less on Medicaid. ● Higher MDCS requirements were associated with fewer total deficiencies and lower probability of receiving a specific deficiency in areas including adequate supervision to prevent accidents, or residents being free of physical restraints.	● Higher MDCS requirements were associated with worse health outcomes in terms of bowel incontinence and significant weight change.	none
Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes Centers for Medicare and Medicaid (December 2001) 5,000 facilities across 10 states using data from the late nineties.	● Below certain staffing thresholds for short-term and long-term residents, facilities were more likely to have quality problems (the study evaluated measures such as urinary tract infections, sepsis, functional improvement, pressure sores, and weight loss).	none	● Above the determined staffing thresholds, quality problems didn't incrementally improve.
The Influence of Staffing Characteristics on Quality of Care in Nursing Homes Nicholas G. Castle, et al (October 2007) 1,100 nursing facilities across six states.	● High registered nurse staffing levels were associated with a higher overall quality index, computed from 14 individual outcome measures. ● High registered nurse staffing levels were positively associated with 6 of 11 long-stay quality measures.	● High LPN levels were associated with lower overall quality.	● Nurse aide staffing levels were found to have no significant association with overall quality.

Appendix B (cont.)			
Study Name & Author	**POSITIVE EFFECTS**	**NEGATIVE EFFECTS**	**NO EFFECTS**
Other Individual Studies (continued)			
GAO: Nursing Home Expenditures and Quality Government Accountability Office (June 2002) Study using three states' cost and survey data.	• The more nursing contact hours a facility provided (especially nurse aide hours), the less likely the facility was to be cited for quality of care deficiencies. • Nursing facilities in Washington and Ohio that provided more nursing contact hours were less likely to be cited for repeated deficiencies involving actual harm or immediate jeopardy to residents.	• Nursing facilities in Mississippi that provided more nursing contact hours were more likely to be cited for deficiencies.	none
Analyses on Outcomes of Increased Nurse Staffing Policies in Florida Nursing Homes Katherine Hyer, et al (September 2009) Study using Florida nursing facility data.	• Increased nursing minimums were associated with a statistically significant decrease in restraint use. • After minimum staffing levels were increased, citations for pressure sore deficiencies and for severe or pervasive deficiencies temporarily declined.	• Increased nursing minimums were associated with a statistically significant increase in bladder incontinence.	• Increased nursing minimums were not significantly associated with improvements in daily living activities, bowel incontinence, or pressure ulcers.
The Staffing-Outcomes Relationship in Nursing Homes Tamara R. Konetzka, et al (June 2008) Study using assessment & survey data from five states.	• Increased registered nurse staffing levels improved resident outcomes for pressure sores and urinary tract infections. • A more highly skilled staffing mix resulted in better outcomes for urinary tract infections.	none	none
Effects of State Minimum Staffing Standards on Nursing Home Staffing and Quality of Care Jeongyoung Park, et al (February 2009) National study using survey and other data for 15,000 facilities.	• The report found the rate of restraint use had significantly declined with increased nurse staffing (largest decline found in high staffed nonprofits). • Total deficiency citations declined significantly with increased nurse staffing for all subgroups studied, except within for-profit facilities with high staffing levels. • Non-profit facilities with high staffing levels showed the greatest reductions in deficiencies.	none	• None of the resident outcomes (e.g. pressure sores or incontinence) were significantly associated with an increase in minimum standards. • For the processes of care analysis, catheter use was not significantly associated with increases in minimum nursing standards.
Relationship of Nursing Home Staffing to Quality of Care John F. Schnelle, et al (April 2004) Study of 21 California nursing facilities using direct observation, and interviews.	• Six facilities with the highest total staffing levels had the highest quality improvement compared to 6 facilities with medium staffing levels and 9 facilities with low total staff. • Facilities classified in the highest contact hour category performed better in 13 of 16 nurse aide care processes across four domains (social engagement, feeding assistance, incontinence care, exercise and repositioning).	• Facilities classified in the highest contact hour category were worse for 2 of 11 licensed nurse care processes involving pressure ulcer indicators.	• For 3 nurse aide care processes (repositioning frequency at night, walking assistance during the day, or social interaction during meals), high or low staffed facilities performed similarly. • For 9 of 11 licensed nurse care processes (e.g. pressure ulcer documentation or UTI assessments), high or low staffed facilities performed similarly.
Source: LPA literature review of nine studies			

APPENDIX C

Methodology for Estimating the Cost to the State to Implement Senate Bill 184

This appendix provides the detailed methodology, assumptions, and limitations of our analysis to estimate the cost to the state to implement Senate Bill 184.

GENERAL METHODOLOGY

To estimate the potential nursing staff costs to the state to implement Senate Bill 184 we analyzed 2010 data (the most recent available) for all Kansas nursing facilities. To estimate Senate Bill 184 costs, we:

- Calculated the 2010 direct health care costs associated with salary and benefits for registered nurses, licensed practical nurses, and nurse aides.
- Determined the additional staff necessary for the current (as of January 2012) nursing facilities to meet all three years of the Senate Bill 184 requirements.
- Determined the salary and benefit costs associated with those staffing increases.
- Determined the per diem reimbursement cap for each year by finding the new median cost (after factoring in additional staff and benefits) and adding 30% (this replicates the Department's methodology for calculating direct healthcare cost per diem rates). We applied this cap when determining how much Medicaid would reimburse facility costs each year.
- Subtracted the 2010 cost from the cost estimate for each year to isolate the additional costs of Senate Bill 184.
- Adjusted the cost for the number of Medicaid bed days.
- Adjusted for the state's share of Medicaid.
- Assumed facilities would only add staff where needed to meet the requirements, and keep all existing staff even if they exceed the requirements.

ASSUMPTIONS

We made a number of assumptions in our calculation that affect our final cost estimate. If any of these things change in the future, that likely would affect our cost estimate. We assumed:

- 16% benefit rate for nursing staff because that was the average for all nursing facilities in the state.
- 56.1% of all nursing bed days were paid for by Medicaid because that was the actual rate in 2010.
- The state would pay for 43.39% of all Medicaid costs because Department on Aging officials told us that was the likely cost-share percentage for fiscal year 2013.

OTHER FACTORS

Other factors might also affect our analysis and our estimates. We couldn't account for the following:

- Department on Aging officials calculate per diem reimbursement rates on a three-year rolling average. Our estimate is based on only one year of data (2010). If 2010 costs were particularly high or low our estimate could be affected.
- Due to the increased number of nurses the state would need to implement Senate Bill 184, nurse wages likely would increase. We did not attempt to calculate how much wages would need to increase or the impact of that increase on the estimate.

- Because Senate Bill 184 is implemented over three years it's possible that inflation would increase the costs of the later years. We did not attempt to inflate the costs to adjust for that possibility.
- Our estimate is driven by the number of bed days in 2010. Any increase or decrease in bed days in the future would alter the cost.
- We held all other facility costs constant. Any changes in these costs could affect the cost impact of Senate Bill 184.
- The state currently has about 10 facilities that are private pay or accept Medicare only. These facilities will be required to increase their staffing under Senate Bill 184, but the costs of those staffing increases will not be paid for by the state. As a result, the costs associated with hiring additional staff for those facilities are not included in our estimate.
- Our estimate reflects the Medicaid-related costs of Senate Bill 184. The bill would also have additional costs that would be paid by the facility, by Medicare, or by private-pay residents.
- If changes were made to the staffing levels proposed by Senate Bill 184, or to the facilities Senate Bill 184 applied to, a different cost analysis would be needed.

APPENDIX D

Agency Response

On April 2, 2012, we provided a copy of the draft audit report to Department on Aging officials. Their response is included in this appendix.

The Department concurred with our findings and conclusion.

New England Building
503 South Kansas Avenue
Topeka, KS 66603-3404

phone: 785-296-4986
fax: 785-296-0256
wwwmail@aging.ks.gov
www.agingkansas.org

Shawn Sullivan, Secretary

Department on Aging

Sam Brownback, Governor

April 16, 2012

Mr. Scott Frank
Legislative Post Audit
800 SW Jackson Street, Suite 1200
Topeka, KS 66612

Dear Mr. Frank;

Thank you for the opportunity to respond to the recent Legislative Post Audit "Department on Aging: Evaluation the Effect of Increasing Minimum Nursing Hours on Resident Care and State Costs." As the agency charged with responsibility for licensing and certifying nursing homes in Kansas, KDOA makes continual efforts to examine nursing home performance, identify factors effecting performance, and implement measures to improve quality. We appreciate the additional perspective the Legislative Post Audit team brought to this effort.

Question one of the audit asks if empirical studies clearly identifies a relationship between nursing hours and quality of care and reduced costs in nursing homes. Staffing is understood to be a key element in the delivery of quality long term care services in nursing homes. Kansas maintains a vigorous survey process of nursing homes which includes examination of the ability of facility staff to meet the needs of individuals residing in their care. KDOA currently has the regulatory authority under KAR 28-39-154, and corresponding federal regulations to cite facilities failing to provide sufficient staff to meet resident needs. This is currently cited as deficient under the survey process regardless if a facility maintains staffing ratios in excess of the specific minimum ratio of 2.0 hours per resident day. KDOA has used this authority to cite facilities maintaining staffing ratios as high as 4.85 hours per resident day based on the actual performance of the staff, not simply the mathematical ratio of staff to residents.

KDOA's experience generally concurs with the conclusions put forth by the Legislative Post Audit to question one that nursing homes with high staffing ratios typically perform at a higher level than nursing homes with low staffing ratios. However, from KDOA's years of experience, higher staffing ratios do not necessarily guarantee higher staff performance. KDOA's experience indicates quality nursing home outcomes are often attributable to the quality, not the quantity of staff available to serve the needs of residents. This experience correlates to the recommendations contained in the 2001 CMS report indicating eight factors important to improving quality of care outcomes.

The second question asked in the audit relates to the fiscal note for implementing SB 184. The final note is very close in total to KDOA's estimation and the agency does not find errors in the process the Legislative Post Audit used for recalculating the fiscal impact in this report.

A number of initiatives are currently underway to improve the quality of the state's nursing homes including, but not limited to the following:

- Entering into consent agreements with troubled facilities to implement comprehensive quality improvement projects focusing on staff education, quality assurance and risk management programs under close agency oversight.
- Redesign of the PEAK program which promotes the "culture change" concept which includes best practices that have been shown to reduce turnover, improved resident and family satisfaction, and lower rates of deficient practices. There have been 183 facilities that have registered to participate in the new quality improvement program.
- The development of a report card to facilitate public access to information on various nursing home quality measures including resident satisfaction, survey deficiencies, clinical outcomes, and facility staffing levels.

These additional initiatives show that the agency is rigorously looking for ways to improve the quality of nursing homes in Kansas. KDOA will also continue the vigilant efforts to examine nursing home performance, identify factors affecting performance, and implement measures to improve quality.

Sincerely,

Shawn Sullivan
Secretary