Comparing Nursing Home Quality And Performance:

An Evaluation of the Basic Method in Nursing Home Ranking Systems

Health Services Research and Evaluation
American Health Care Association

Staff:

Lisa Matthews-Martin, BBA and Peter Gruhn, MA

Frederic H. Decker, PhD

September 22, 2003

Comparing Nursing Home Quality And Performance: An Evaluation of the Basic Method in Nursing Home Ranking Systems

Introduction

Selecting a nursing home to provide care for oneself or a family member can be a difficult decision. In an effort to assist consumers in evaluating the quality of nursing facilities, the Centers for Medicare & Medicaid Services (CMS) developed a database providing detailed information about current and prior performance of Medicare and Medicaid certified nursing homes throughout the United States. To make the CMS data more consumer-friendly, some state governments and private businesses have developed rating systems to help consumers evaluate the nursing facilities they are considering by ranking nursing home performance.

Most rating systems that rank nursing facility performance use deficiencies received by facilities during certification surveys as a proxy for quality. In such rating systems, deficiencies over a three or four year period receive numeric weights based on the scope and severity of each deficiency, which are in turn aggregated to obtain a total score reflecting each facility's performance over the period. Facility scores are then compared and grouped by various means to obtain a relative ranking of facility performance. Although an assessment of relative performance using data obtained from certification surveys could assist consumers, rating systems based upon relative performance over time may misrepresent current facility performance, particularly for facilities that have an excellent record of improvement, which in turn could bias consumers' evaluations inappropriately.

In this paper, we report the results of our analysis to determine the extent to which the ranking of performance on a score based upon deficiencies received over a period of years could mislead consumers about the performance of a facility that has shown substantial improvement. Our analysis, based on the deficiency weighting method used by the Gannett News Service (GNS) for their special report examining and rating nursing home quality, compared the rankings of facilities when scoring all standard survey results of a facility over a period of about three years with the rankings based upon the scoring of the most recent survey only. Before describing the results, we provide background on the subject in the next section, illustrate the empirical issue, and outline the method of analysis.

Background

In November 2002, the Centers for Medicare & Medicaid Services (CMS) made available to consumers the Nursing Home Compare database, which provides detailed information about current and prior performance of Medicare and Medicaid certified nursing homes throughout the United States, primarily on certification surveys. Making available to the public information about the performance of nursing facilities represented an important step in enabling consumers to better assess nursing facilities. In an effort to make the CMS nursing home data more consumer-friendly, government agencies and private businesses have developed rating systems to compare and rank nursing facilities in order to further help consumers evaluate nursing home performance.

Most of the rating systems use deficiencies received by facilities during certification surveys as a proxy for the quality of care.[1] The rating systems developed by such public agencies as the Florida Agency for Health Care Administration (Florida AHCA) Nursing Home Guide, the Indiana Nursing Facility Report Card, the California Nursing Home Search, the New Jersey Report Care for Nursing Homes, and the Massachusetts Division of Health Care Quality nursing home survey performance tool, as well as private sector businesses such as the Gannett News Service (GNS), CarePathways.com, and Health Grades' Nursing Home Comparison Report, are all based on an evaluation of nursing home deficiencies.

The CMS Nursing Home Compare database also includes scores of facilities on quality indicators developed from the resident assessment data that facilities are required to provide to the CMS. Quality indicator based rating systems are employed in the California Nursing Home Search, Texas Quality Report System of nursing homes, assisted living facilities, ICF/MR facilities, and home health agencies as well as by GNS and the Florida Nursing Home Guide. In this study we examined the basic method underlining most deficiency-based rating systems. We will examine quality indicator-based rating systems in a future study.

The deficiency-based measures of nursing home performance developed by both the public agencies as well as the private businesses are broadly similar. Nursing Home Compare data or the underlying CMS Online Survey Certification and Reporting (OSCAR) data are used. Nursing home health deficiencies (f-tags) and occasionally life-safety deficiencies (k-tags) from standard surveys are used. In addition, complaint surveys that may occur between standard surveys are also used in the development of many of the measures. Most of the measures use three standard surveys worth of data coupled with complaint surveys covering the three standard survey periods from the oldest survey in the period through the present. Each deficiency has an indicator for the scope of the problem, from an isolated incident through an identifiable pattern to widespread occurrences, and an indicator for the severity of the problem. The severity indicator has four levels and indicates whether the deficiency resulted in no actual harm albeit with the potential for more than minimal harm, no actual harm but with potential for more than minimal harm that did not place resident health and safety in immediate jeopardy, actual harm that did not place residents in immediate jeopardy, and immediate jeopardy to the health and safety of residents. CMS assigns an alphabetic score to each deficiency based on the combination of the deficiency's scope and severity indicators (See Table 1).

Each deficiency-based measurement system uses various criteria for assigning numeric weights to each cell in the scope and severity matrix, and formulas for aggregating the individual numeric scores to a total score for the facility. Although the various rating systems are broadly similar a number of important differences exist.

- Some rating systems (Florida) use health and life-safety deficiencies, while other rating systems (GNS and CarePathways) use only health deficiencies in their computations.

[1] Of course, the wide variation across states in the implementation of the regulatory survey process, as noted recently in the report entitled "Nursing Home Deficiency Trends and Survey and Certification Process Consistency" by the Office of Inspector General, Department of Health and Human Services (March 2003, OEI-02-01-00600, limits the value of using deficiencies to compare and rank nursing homes nationally.

Table 1: CMS Scope and Severity Matrix

Severity	Scope		
	Isolated	Pattern	Widespread
Immediate jeopardy to resident health or safety	J	K	L
Actual harm that is not immediate jeopardy	G	H	I
No actual harm but with potential for more than minimal harm that is not immediate jeopardy	D	E	F
No actual harm but with potential for more than minimal harm	A	B	C

- Florida and GNS use all deficiencies in the computation of their score in their rating systems, while other rating systems (Indiana and Massachusetts) use a subset of deficiencies that were assumed to be most indicative of the quality of care received by nursing home residents.
- Computations for Florida, Massachusetts, Indiana, and GNS use three standard plus complaint surveys, while the Health Grades computations use four standard surveys plus complaint surveys, and the California computations uses only the most recent standard survey results.
- Some rating systems include mechanisms that more heavily penalize facilities with deficiencies in critical quality of care related categories (Florida), or that were repeatedly cited for the same deficiency over time (Health Grades), or were cited for substandard quality of care or having placed residents in immediate jeopardy (Indiana).
- In addition, various methods are used to rank and compare facilities – Florida and GNS rank facility scores by quintile, Indiana and Massachusetts rank facilities using a computed overall facility score, while California ranks facilities by their overall federal deficiency rating (compliance or in substantial compliance, serious noncompliance requiring corrective action, or very serious noncompliance requiring corrective action or provision of substandard care).

Given the substantial differences in criteria and methodologies, care needs to be taken when examining and comparing facility ratings by the various rating systems.

The Empirical Issue

As mentioned previously, the purpose of our study is to determine the extent to which the ranking of performance on a score based upon deficiencies received over a period of years can mislead consumers about the performance of a facility that has shown substantial improvement. For illustrative purposes, our analysis is based on the deficiency scoring formula used by the Gannett News Service (GNS) that was used in their special report examining and rating the

quality of nursing facilities (http://content.gannettonline.com/gns/nursinghomes/index.html) released in May 2003. The GNS analysis was based on methodology used to develop the Florida Health and Human Services Department's Agency for Health Care Administration's Nursing Home Guide (http://www.fdjc.state.fl.us/nhcguide/guide_intro.cfm).

In the GNS scoring matrix, a score is assigned to each deficiency based upon the citations scope and severity (See Table 2). For example, a deficiency with a scope and severity of I is scored as a 28, whereas a deficiency with a scope and severity of C receives a score of 3.

Table 2: GNS Scoring Matrix

Severity	**Scope**		
	Isolated	Pattern	Widespread
Immediate jeopardy to resident health or safety	J=32	K=45	L=60
Actual harm that is not immediate jeopardy	G=16	H=22	I=28
No actual harm but with potential for more than minimal harm that is not immediate jeopardy	D=5	E=8	F=11
No actual harm but with potential for more than minimal harm	A=0	B=1	C=3

The GNS method assigned a scope and severity based score to each health deficiency a facility received over the period of the most recent three standard surveys. Health deficiencies from the three standard surveys as well as from any complaint surveys during the period were included. The scores were summed and divided by the number of standard surveys (a maximum of three) to get the facility's average score over the period. To show the relative performance of each nursing home after average scores were calculated, nursing homes were grouped into quintiles defined by the distribution of average scores. Each quintile represents approximately twenty percent of nursing facilities. Each facility was assigned a "star" rating depending on its quintile location where a rating of five stars was the highest rating (top quintile representing the best performance or average score) and one star was the lowest rating (the bottom quintile representing the bottom twenty percent of nursing homes with the lowest average scores).

As noted above, a potential problem with a rating system like that used by GNS is that the scoring does not show the overall trend of a facility's performance and could, accordingly, be biased against facilities that have improved their performance over time. For illustrative purposes, let us examine two hypothetical facilities (See Table 3). Over the three year period, let us assume that facility A received G-level deficiencies representing actual harm in each year, while facility B had a problematic survey in the first year showing actual harm but improved to where in the last year facility B had no citations. As the illustration shows, despite having improved substantially over the period, facility B is rated lower (has a higher overall average deficiency score) than facility A, which has a history of repeated citations for the same

Table 3: Illustrative example of deficiency score computations

Facility A

Year	F-Tag	Deficiency	Severity	Score
2000	241	Provide care in a way that keeps or builds each resident's dignity and self respect.	G	16
2001	314	Give residents proper treatment to prevent new bed (pressure) sores or heal existing bed sores.	G	16
2002	253	Provide needed housekeeping and maintenance.	C	3
2002	314	Give residents proper treatment to prevent new bed (pressure) sores or heal existing bed sores.	G	16
		Average score		**17.0**

Facility B

Year	F-Tag	Deficiency	Severity	Score
2000	314	Give residents proper treatment to prevent new bed (pressure) sores or heal existing bed sores.	I	28
2000	279	Develop a complete care plan that meets all of a resident's needs, with timetables and actions that can be measured.	F	11
2001	444	Make sure that staff members wash their hands when needed.	E	8
2001	253	Provide needed housekeeping and maintenance.	C	5
2002	None			0
		Average score		**17.3**

deficiency. Translating the scores into the quintile based rating system, facility B could conceivably get a lower ranking than facility A—e.g., two stars, **, for facility B compared to three stars, ***, for facility A.

Analysis

The Nursing Home Compare Data

For the analysis, we used health deficiency data obtained from the CMS Nursing Home Compare database (available at: http://www.medicare.gov/NHCompare/home.asp) downloaded on May 1, 2003. These data include certification survey information covering the period from October 1999 through March 2003 for 16,437 nursing facilities. As standard surveys are usually conducted every 12 to 15 months, the database contains a maximum of three surveys for each

facility. Facilities that are newly opened, newly licensed for Medicare or Medicaid or have changed ownership status may have fewer than three surveys over the period.

Methodology

The analysis undertaken as part of this study follows the methodology used by GNS as to assess nursing home ranking systems. Unlike the GNS analysis, which used standard and complaint survey data, we used only data from the standard surveys. Since the purpose of our study is to compare the ranking of facilities based upon multiple surveys with the ranking from the most recent survey, we did not include complaint surveys. We wanted to use the same data source used by GNS which does not include a sufficient period after the most recent standard survey to capture relevant complaint surveys to calculate performance surrounding the period of the most recent standard survey to compare to performance based upon multiple survey periods. In a future study, we plan to build our own database from OSCAR data covering a sufficient period to include complaint survey results in the comparison of performance scored over a period of three surveys to performance related to the period of the most recent standard survey.

Two measures of facility performance based upon standard survey deficiencies were used in this study. The first measure, following that used by GNS, calculated an average facility score over the 1999 to 2003 period by assigning a score to each health deficiency using the GNS scoring matrix (Table 2), adding the scores, and dividing by the number of standard surveys over the 1999-2003 period represented in the data. For the second measure, only facility performance during the most recent survey was computed. For neither measure were additional penalties applied to facilities with citations defined as "quality care deficiencies" by CMS.[2] In the computation for both measures, the facility's average score over the survey period is then ranked by quintile and a rating is assigned using the five star assignment used by GNS described above.

Note that 387 facilities did not receive any citations for deficiencies over the period from 1999 through 2003. As was done by GNS, these facilities were excluded from the ranking system and were not rated.

Results

The comparison of the average deficiency score for the most recent survey to that for all surveys between 1999-2003 shows that average deficiency scores for the most recent survey were generally better for many facilities than that based upon all surveys. As shown in Figure 1, 52.2 percent of facilities showed an improvement in performance in the current survey period, while 38.8 percent performed worse. The improvement in performance is evident in nearly all states (see Table 4 in Appendix). Overall, total deficiency scores fell from an average of 43.6 for the entire period to 41.1 for the current survey period, a reduction of 5.7 percent (see Table 5 in Appendix). As shown in Figure 2, the distribution of the percentage change in total deficiency

[2] CMS groups deficiencies in the Nursing Home Compare database by categories such as mistreatment deficiencies, resident rights deficiencies, resident assessment deficiencies and the like. The category, "quality care deficiencies," includes 31 items. Examples are: "provide activities to meet the needs of the resident;" "give each resident care and services to get or keep the highest quality of life possible;" "give residents proper treatment to prevent new bed (pressure) sores or heal existing bed sores;" and "give or get dental care for each resident."

scores clearly shows an improvement in facility performance between the current period and the overall period. The improvement in performance is even greater in citations grouped by CMS under the heading "quality care deficiencies," where deficiency scores were over 9.3 percent lower in the current survey period than over the entire period (see Table 6 in Appendix).

Figure 1: Deficiency Score In Current Survey Period Versus Overall Period

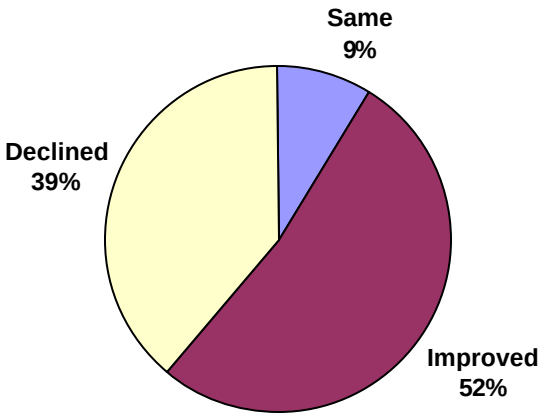
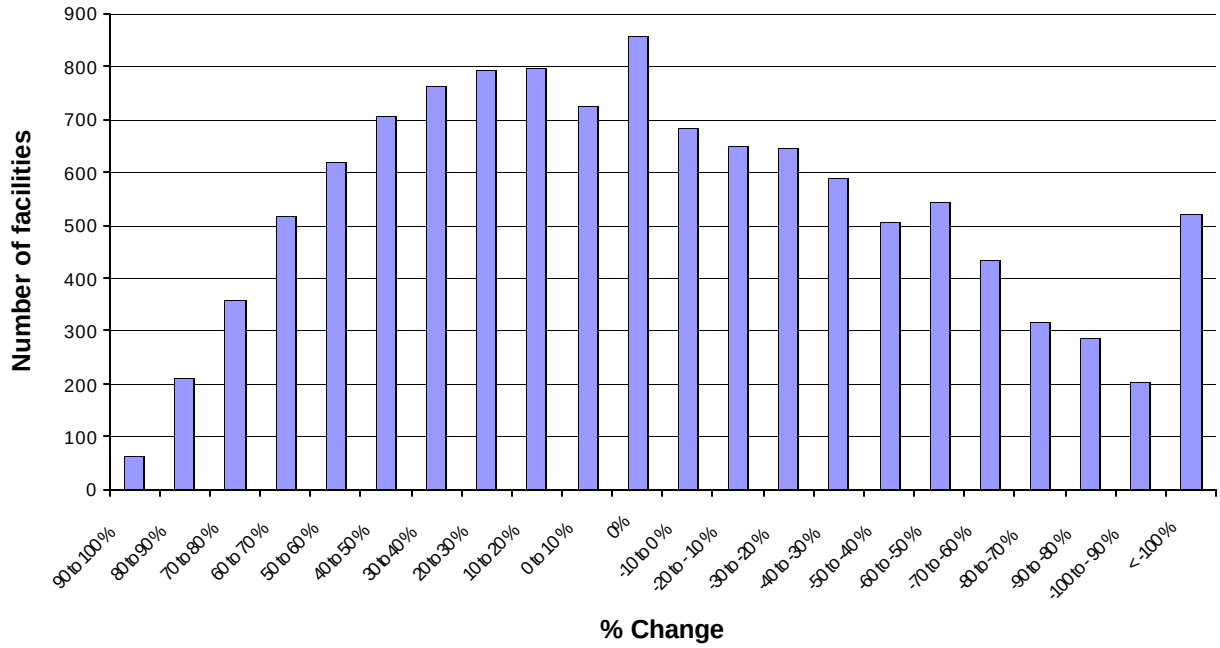


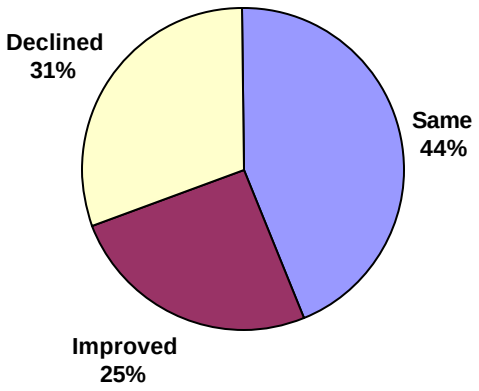
Figure 2: Distribution of Percent Change in Deficiency Score for Current Survey Period Compared to Overall Period (Standard Surveys only)



(Negative % change is improvement or lower deficiency score in current period compared to overall period)

Absolute improvements in facility performance over time, however, may not be reflected in the particular facilities rating. Even though 52.2 percent of facilities showed improvement, only 25.3 percent of the facilities reflected this improvement by moving up in the quintile ranking system. Further, even though facility performance improved in the current period, the ranking system shows that 30.8 percent of facilities moved down in their ranking, while only 25.3 percent moved up (See Figure 3).

Figure 3: Comparison of Facility Ranking for Current Survey Period with Overall Period



Discussion

The main goal of the various rating systems is to help consumers evaluate and compare the quality of care provided at nursing facilities. Unfortunately, deficiencies in the design of the rating systems may have the undesirable result of misleading consumer on the current performance of the nursing facilities that they are considering to care for themselves or a family member.

As demonstrated above, rankings based on current performance and performance over a broader period, such as three years, does not necessarily give the same results. Although a rating based on an average score over a multi-year period could give the consumer an idea of the general performance of a facility over time, the longer the time period used to compute the rating, the less useful the measure is to the consumer for assessing the current performance of a facility. In order to help consumers to better evaluate nursing home performance, a separate or weighted rating system that better reflects current facility performance would be more helpful.

Furthermore, rating systems that examine only relative performance may not capture changes in the absolute performance of facilities. As shown above, consumers could be misled in cases where a facilities performance relative to other facilities may have declined, yet its absolute level

of performance has improved. A useful rating system should thus not only reflect the performance of a facility relative to other nursing facilities, but also indicate performance relative to an objective standard.

For some unknown reason, some rating systems fail to include the best performing facilities in their rankings (facilities without citations over the survey period). This common oversight could mislead consumers into not considering the best performing facilities when making nursing home placement decisions, since those facilities are excluded in the ranking.

The strengths and weaknesses of the rating systems notwithstanding, the ranking systems are only one tool for evaluating the suitability of a nursing home. When evaluating nursing facilities, consumers should undertake a comprehensive review of the services needed, identify facilities that provide those services, visit and tour the nursing home to see residents, staff and the facility, and talk with staff, residents, and their family members. Recognizing the weaknesses in the indicators used in comparing nursing homes, a nursing home rating system that provides useful information on past and current performance may help a consumer plan questions to ask the nursing home on the type and quality of the services at a nursing facility to evaluate the suitability of the facility to care for oneself or a family member.

Appendix

Reference Tables

Table 4: Comparison of Nursing Facility Deficiency Scores in Current Survey Versus Overall Period

	Worse	Same	Better		Worse	Same	Better
United States	38.8%	9.0%	52.2%	United States	38.8%	9.0%	52.2%
Alabama	34.7%	4.9%	60.4%	Montana	28.7%	6.9%	64.4%
Alaska	46.7%	6.7%	46.7%	Nebraska	42.5%	12.6%	44.9%
Arizona	26.1%	3.0%	70.9%	New Hampshire	32.5%	27.5%	40.0%
Arkansas	38.3%	2.1%	59.6%	New Jersey	39.7%	9.3%	51.0%
California	33.3%	2.2%	64.5%	New Mexico	32.9%	16.5%	50.6%
Colorado	43.1%	12.0%	44.9%	Nevada	27.3%	4.5%	68.2%
Connecticut	38.6%	4.8%	56.6%	New York	42.3%	6.5%	51.2%
Delaware	29.3%	12.2%	58.5%	North Carolina	32.2%	7.7%	60.1%
District of Columbia	52.4%	0.0%	47.6%	North Dakota	40.5%	4.8%	54.8%
Florida	42.7%	4.0%	53.3%	Ohio	39.7%	10.2%	50.1%
Georgia	55.2%	6.9%	37.8%	Oklahoma	43.8%	9.0%	47.1%
Hawaii	44.4%	6.7%	48.9%	Oregon	37.6%	9.9%	52.5%
Idaho	47.6%	3.7%	48.8%	Pennsylvania	35.2%	10.3%	54.4%
Illinois	34.3%	8.9%	56.8%	Rhode Island	40.7%	18.7%	40.7%
Indiana	27.3%	13.9%	58.8%	South Carolina	32.0%	9.7%	58.3%
Iowa	41.4%	14.4%	44.1%	South Dakota	41.6%	6.2%	52.2%
Kansas	34.7%	11.9%	53.4%	Tennessee	46.0%	6.6%	47.5%
Kentucky	36.7%	2.7%	60.5%	Texas	38.4%	9.3%	52.3%
Louisiana	49.8%	10.4%	39.8%	Utah	45.9%	5.9%	48.2%
Maine	62.5%	5.0%	32.5%	Vermont	25.6%	25.6%	48.8%
Maryland	51.9%	11.9%	36.2%	Virginia	32.0%	25.9%	42.1%
Massachusetts	32.6%	20.8%	46.6%	Washington	41.7%	4.5%	53.8%
Michigan	46.3%	2.3%	51.4%	West Virginia	43.1%	4.4%	52.6%
Minnesota	47.2%	9.2%	43.6%	Wisconsin	30.7%	23.2%	46.1%
Mississippi	31.7%	10.9%	57.4%	Wyoming	43.6%	5.1%	51.3%
Missouri	42.3%	8.9%	48.8%				

Table 5: Comparison of Current Survey and Overall Period Average Facility Deficiency Scores by State

	Overall Average Score	Current Period Score	Difference	Percent Difference		Overall Average Score	Current Period Score	Difference	Percent Difference
United States	43.6	41.1	-2.5	-5.7%	United States	43.6	41.1	-2.5	-5.7%
Alabama	43.3	39.0	-4.2	-9.8%	Montana	36.6	30.6	-6.0	-16.4%
Alaska	36.4	28.7	-7.7	-21.2%	Nebraska	34.7	33.8	-1.0	-2.8%
Arizona	46.1	31.7	-14.5	-31.4%	New Hampshire	38.1	42.9	4.8	12.7%
Arkansas	62.2	46.6	-15.6	-25.1%	New Jersey	42.3	40.6	-1.7	-4.1%
California	56.4	47.6	-8.8	-15.6%	New Mexico	49.4	48.9	-0.5	-0.9%
Colorado	34.6	35.4	0.8	2.2%	Nevada	55.6	46.2	-9.4	-16.9%
Connecticut	38.3	37.3	-1.0	-2.7%	New York	39.8	35.9	-3.8	-9.6%
Delaware	35.1	21.7	-13.4	-38.2%	North Carolina	38.7	32.8	-5.9	-15.3%
DC*	48.0	50.1	2.1	4.4%	North Dakota	24.2	22.3	-1.9	-7.8%
Florida	49.4	45.8	-3.6	-7.3%	Ohio	39.7	37.7	-1.9	-4.9%
Georgia	40.8	46.3	5.5	13.5%	Oklahoma	52.5	53.3	0.7	1.4%
Hawaii	52.2	53.1	1.0	1.9%	Oregon	49.2	43.8	-5.4	-11.0%
Idaho	52.0	51.6	-0.4	-0.7%	Pennsylvania	29.9	26.8	-3.1	-10.3%
Illinois	31.2	26.9	-4.3	-13.8%	Rhode Island	24.6	25.9	1.3	5.3%
Indiana	45.0	37.0	-8.0	-17.7%	South Carolina	45.3	45.4	0.1	0.2%
Iowa	27.8	27.4	-0.4	-1.5%	South Dakota	32.1	33.3	1.1	3.5%
Kansas	56.6	54.5	-2.0	-3.6%	Tennessee	55.8	60.4	4.6	8.2%
Kentucky	60.1	51.1	-9.0	-15.0%	Texas	47.9	44.2	-3.8	-7.9%
Louisiana	62.2	72.0	9.9	15.9%	Utah	34.1	42.8	8.7	25.6%
Maine	33.7	38.6	5.0	14.7%	Vermont	23.6	20.7	-2.9	-12.3%
Maryland	32.6	39.3	6.7	20.5%	Virginia	27.3	24.7	-2.6	-9.4%
Massachusetts	41.8	40.8	-1.0	-2.4%	Washington	61.8	60.5	-1.3	-2.1%
Michigan	56.7	57.7	1.0	1.7%	West Virginia	46.8	43.6	-3.2	-6.9%
Minnesota	39.1	43.7	4.5	11.6%	Wisconsin	23.5	22.1	-1.3	-5.7%
Mississippi	37.9	33.1	-4.8	-12.7%	Wyoming	60.4	60.6	0.2	0.4%
Missouri	44.1	43.9	-0.2	-0.4%					

*District of Columbia

Table 6: Comparison of Current Survey and Overall Period Average Facility Quality Care Deficiency Scores by State[3]

	Overall Average Score	Current Period Score	Difference	Percent Difference		Overall Average Score	Current Period Score	Difference	Percent Difference
United States	14.6	13.2	-1.4	-9.3%	United States	14.6	13.2	-1.4	-9.3%
Alabama	16.6	13.1	-3.5	-21.2%	Montana	14.6	9.5	-5.1	-35.1%
Alaska	8.4	4.5	-4.0	-47.1%	Nebraska	12.3	9.8	-2.5	-20.5%
Arizona	9.6	6.8	-2.8	-29.2%	New Hampshire	13.5	14.1	0.6	4.5%
Arkansas	15.6	11.1	-4.5	-28.8%	New Jersey	13.9	12.7	-1.2	-8.7%
California	16.4	12.6	-3.8	-23.0%	New Mexico	12.1	11.4	-0.7	-6.1%
Colorado	15.8	16.1	0.3	1.9%	Nevada	18.0	14.8	-3.2	-17.7%
Connecticut	18.8	17.4	-1.4	-7.4%	New York	17.3	16.0	-1.3	-7.8%
Delaware	13.8	5.3	-8.5	-61.7%	North Carolina	16.5	13.3	-3.2	-19.4%
DC*	12.0	11.0	-1.0	-8.3%	North Dakota	11.7	9.0	-2.6	-22.6%
Florida	11.3	9.3	-2.0	-17.6%	Ohio	14.4	13.6	-0.9	-6.2%
Georgia	14.5	17.1	2.6	17.9%	Oklahoma	13.7	13.2	-0.5	-3.7%
Hawaii	14.7	14.4	-0.3	-1.7%	Oregon	20.0	15.6	-4.3	-21.6%
Idaho	19.8	20.5	0.7	3.7%	Pennsylvania	12.1	10.1	-2.0	-16.8%
Illinois	13.4	11.3	-2.1	-15.6%	Rhode Island	8.7	9.1	0.5	5.5%
Indiana	17.1	14.1	-3.0	-17.5%	South Carolina	14.5	16.1	1.6	11.3%
Iowa	9.9	9.3	-0.6	-5.8%	South Dakota	9.8	10.6	0.8	7.7%
Kansas	23.3	22.4	-0.9	-4.0%	Tennessee	17.1	18.5	1.3	7.8%
Kentucky	19.5	15.3	-4.2	-21.4%	Texas	12.7	10.9	-1.8	-14.2%
Louisiana	13.3	15.7	2.3	17.5%	Utah	7.2	7.4	0.2	2.2%
Maine	7.6	9.4	1.8	23.3%	Vermont	9.8	7.9	-1.8	-18.8%
Maryland	10.8	10.2	-0.6	-5.2%	Virginia	10.8	9.3	-1.5	-14.2%
Massachusetts	16.4	15.6	-0.9	-5.3%	Washington	22.4	22.4	0.0	0.1%
Michigan	18.3	18.5	0.2	1.0%	West Virginia	12.5	11.3	-1.1	-9.1%
Minnesota	15.1	16.2	1.0	6.9%	Wisconsin	8.9	8.4	-0.5	-6.0%
Mississippi	12.2	11.5	-0.7	-5.6%	Wyoming	24.4	25.0	0.6	2.6%
Missouri	14.2	14.0	-0.2	-1.3%					

t of Columbia

[3] CMS groups deficiencies in the Nursing Home Compare database by categories such as mistreatment deficiencies, resident rights deficiencies, resident assessment deficiencies and the like. The category, "quality care deficiencies," includes 31 items. Examples are: "provide activities to meet the needs of the resident;" "give each resident care and services to get or keep the highest quality of life possible;" "give residents proper treatment to prevent new bed (pressure) sores or heal existing bed sores;" and "give or get dental care for each resident."