



NURSING
HOME
SURVEY ON
PATIENT SAFETY
CULTURE:
2016 User
Comparative
Database Report



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Nursing Home Survey on Patient Safety Culture: 2016 User Comparative Database Report

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Appendixes cited in this report are provided electronically at <http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/nursing-home/nh-reports.html>.

Executive Summary

The *Nursing Home Survey on Patient Safety Culture* is an expansion of AHRQ's *Hospital Survey on Patient Safety Culture* to the nursing home setting. The nursing home survey is designed to measure the culture of resident safety in nursing homes from the perspective of providers and staff. The *Nursing Home Survey on Patient Safety Culture 2016 User Comparative Database Report* consists of data from 209 nursing homes and 12,395 nursing home staff respondents who completed the survey between January 2014 and April 2016.

This comparative database report was developed as a tool for the following purposes:

- **Comparison**—To allow nursing homes to compare their patient safety culture survey results with other nursing homes.
- **Assessment and learning**—To provide data to nursing homes to facilitate internal assessment and learning in the patient safety improvement process.
- **Supplemental information**—To provide supplemental information to help nursing homes identify their strengths and areas with potential for improvement in patient safety culture.

Survey Content

The nursing home survey includes 42 items that measure 12 composites of organizational culture pertaining to patient safety culture:

1. Communication Openness
2. Compliance With Procedures
3. Feedback and Communication About Incidents
4. Handoffs
5. Management Support for Resident Safety
6. Nonpunitive Response to Mistakes
7. Organizational Learning
8. Overall Perceptions of Resident Safety
9. Staffing
10. Supervisor Expectations and Actions Promoting Resident Safety
11. Teamwork
12. Training and Skills

The survey also includes two questions that ask respondents whether they would tell friends that this is a safe nursing home for their family (also called “willingness to recommend”) and to provide an overall rating on resident safety for their nursing home.

2016 Database Nursing Homes

The 209 nursing homes in the 2016 database fall into two categories:

- The 42 nursing homes from the 2014 database that completed survey administration between January 2014 and May 2014.

- The 167 nursing homes that completed survey administration between June 2014 and April 2016.

Survey Administration Statistics

- The average nursing home response rate was 56 percent, with an average of 59 completed surveys per nursing home.
- The highest percentage of nursing homes (41 percent) administered both paper and Web surveys.
- Nursing homes that administered paper-only surveys had a higher average response rate (64 percent) than nursing homes that administered Web only (59 percent) or paper and Web (46 percent) surveys.

Characteristics of Participating Nursing Homes

- Nursing homes with 50-199 beds made up the largest percentage of database nursing homes (77 percent).
- The majority of database nursing homes are for profit (60 percent).
- Approximately three out of four database nursing homes are located in urban areas (76 percent).
- Overall, the characteristics of the 209 database nursing homes are fairly consistent with the distribution of nursing homes in Nursing Home Compare.

Characteristics of Respondents

- The top three job titles of respondents were:
 - Nursing Assistant/Aide (35 percent).
 - Licensed Nurse (20 percent).
 - Support Staff (18 percent).
- Most respondents indicated they worked in many different units/no specific unit (49 percent). Skilled nursing was the second largest work unit (30 percent).
- Most respondents (71 percent) indicated they had direct interaction with residents.
- Most respondents indicated they worked between 25 and 40 hours per week (66 percent). The second largest group of respondents worked more than 40 hours per week (20 percent).
- Most respondents (70 percent) indicated they worked the day shift most often.
- Tenure in the nursing home was evenly distributed across the range of years of employment, with a range of 19 to 21 percent of respondents in each category.
- Nearly all respondents indicated they were not paid by a staffing agency (93 percent).

Areas of Strength for Most Nursing Homes

The two areas of strength, or composites with the highest average percent positive responses, wereⁱ:

1. ***Overall Perceptions of Resident Safety (average 86 percent positive)***. This composite is defined as the extent to which residents are well cared for and safe. This composite had the highest average percent positive response.
2. ***Feedback and Communication About Incidents (average 85 percent positive)***. This composite is defined as the extent to which staff discuss ways to keep residents safe, tell someone if they see something that might harm a resident, and talk about ways to keep incidents from happening again. This composite had the second highest average percent positive response.

Areas With Potential for Improvement for Most Nursing Homes

The two areas with potential for improvement, or composites with the lowest average percent positive responses, were:

1. ***Staffing (average 48 percent positive)***. This composite is defined as the extent to which there are enough staff to handle the workload, meet residents' needs during shift changes, and keep residents safe, because there is not much staff turnover. This composite had the lowest average percent positive response.
2. ***Nonpunitive Response to Mistakes (average 54 percent positive)***. This composite is defined as the extent to which staff are not blamed when a resident is harmed, are treated fairly when they make mistakes, and feel safe reporting their mistakes. This composite had the second lowest average percent positive response.

Results by Nursing Home Characteristics

Bed Size

- The *Staffing* composite had the greatest average percent positive difference (9 percentage points) between nursing homes with *49 or fewer beds* (53 percent) and nursing homes with *200 beds or more* (44 percent).
- Nursing homes with *49 or fewer beds* had the highest percentage of respondents who were willing to recommend their nursing home (77 percent); nursing homes with *200 beds or more* had the lowest (69 percent).
- Nursing homes with *49 or fewer beds* had the highest percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (63 percent); nursing homes with *200 beds or more* had the lowest (53 percent).

ⁱ Percent positive is the percentage of positive responses (e.g., Agree, Strongly agree) to positively worded items (e.g., “Staff support one another in this nursing home”) or negative responses (e.g., Disagree, Strongly disagree) to negatively worded items (e.g., “Staff use shortcuts to get their work done faster”).

Ownership

- The *Compliance With Procedures* composite had the greatest average percent positive difference (5 percentage points) between *Nonprofit/Government* (67 percent) and *For Profit* nursing homes (62 percent).
- *Nonprofit/Government* nursing homes had a higher percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (64 percent) than *For Profit* nursing homes (57 percent).

Urban/Rural Status

- The *Handoffs* composite had the greatest average percent positive difference (6 percentage points) between *Urban* (66 percent) and *Rural* nursing homes (60 percent).

Census Region

- Nursing homes in the *South* had the highest average percent positive response across the patient safety culture composites (72 percent); nursing homes in the *Northeast* and *Midwest* had the lowest (66 percent).
- The *Training and Skills* composite had the greatest average percent positive difference (12 percentage points) between nursing homes in the *South* (77 percent) and the *Midwest* (65 percent).
- Nursing homes in the *South* had the highest percentage of respondents who were willing to recommend their nursing home (78 percent); nursing homes in the *Midwest* had the lowest (71 percent).
- Nursing homes in the *South* had the highest percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (66 percent); nursing homes in the *Midwest* had the lowest (57 percent).

Results by Respondent Characteristics

Job Title

- *Administrators/Managers* had the highest average percent positive response across the patient safety culture composites (79 percent); *Nursing Assistants/Aides* had the lowest (64 percent).
- The *Communication Openness* composite had the greatest average percent positive difference (30 percentage points) between *Administrators/Managers* (77 percent) and *Nursing Assistants/Aides* (47 percent).
- *Administrators/Managers* had the highest percentage of respondents who were willing to recommend their nursing home (91 percent); *Physicians/Other Providers* had the lowest (68 percent).
- *Administrators/Managers* had the highest percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (80 percent); *Physicians/Other Providers* had the lowest (53 percent).

Work Area

- The *Communication Openness* composite had the highest average percent positive response in *Rehabilitation* units (55 percent); *Alzheimer's/Dementia* units were the least positive (49 percent) on this composite.

Interaction With Residents

- Respondents *without* direct interaction with residents had a higher average percent positive response (73 percent) than those *with* direct interaction with residents (65 percent).
- Respondents *without* direct interaction with residents had a higher percentage of respondents who were willing to recommend their nursing home (79 percent) than respondents *with* direct interaction with residents (73 percent).
- Respondents *without* direct interaction with residents had a higher percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (66 percent) than respondents *with* direct interaction with residents (58 percent).

Shift Worked Most Often

- Respondents working the *day shift* had the highest average percent positive response across the composites (69 percent); respondents working the *night shift* had the lowest average percent positive response (63 percent).
- The *Communication Openness* composite had the greatest average percent positive difference (12 percentage points) between respondents working the *day shift* (58 percent) and respondents working the *night shift* (46 percent).
- Respondents working the *day shift* had the highest percentage who were willing to recommend their nursing home (77 percent); respondents working the *night shift* had the lowest (69 percent).
- Respondents working the *day shift* had the highest percentage who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (63 percent); respondents working the *night shift* had the lowest (52 percent).

Tenure in Nursing Home

- Respondents who had worked in the nursing home *less than 1 year* had the highest average percent positive responses across the patient safety culture composites (73 percent); respondents who had worked in the nursing home *3 to 5 years* had the lowest (65 percent).
- The *Communication Openness* composite had the greatest average percent positive difference (16 percentage points) between respondents who had worked *less than 1 year* (66 percent) and respondents who had worked *3 to 5 years* (50 percent).
- Respondents who had worked in the nursing home *11 years or more* had the highest percentage who were willing to recommend their nursing home (80 percent); respondents working *3 to 5 years* had the lowest (72 percent).
- Respondents who had worked in their nursing home *less than 1 year* and *11 years or more* had the highest percentage who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (65 percent); respondents who had worked in their nursing home *1 to 2 years* and *3 to 5 years* had the lowest (57 percent).

Action Planning for Improvement

The delivery of survey results is not the *end point* in the survey process; it is just the *beginning*. Often, the perceived failure of surveys to create lasting change is actually due to faulty or nonexistent action planning or survey followup. Organizations may find it useful to brainstorm the potential barriers that make it difficult to implement initiatives and strategies to overcome them. Two products recommended to provide nursing homes guidance on next steps to turn their survey results into actual patient safety culture improvement are:

- The AHRQ Action Planning Tool (<http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/planningtool.html>).
- The Resource List for Users of the AHRQ Nursing Home Survey (<http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/nursing-home/resources/nhimpptsaf.pdf>).

Purpose and Use of This Report

In response to requests from nursing homes interested in comparing their results with those of other nursing homes on the *Nursing Home Survey on Patient Safety Culture*, the Agency for Healthcare Research and Quality (AHRQ) established the *Nursing Home Survey on Patient Safety Culture* comparative database. The submission period for the Nursing Home database occurs every 2 years.

Nursing homes do not necessarily administer the nursing home patient safety culture survey every year. They may administer it on an 18-month, 24-month, or other cycle. Therefore, the comparative database is a “rolling” indicator that contains data from January 2014 to April 2016. When a nursing home has new data to submit, older data are replaced with more recent data when available. The database also contains new data from nursing homes submitting for the first time.

The report presents statistics (averages, standard deviations, minimum and maximum scores, and percentiles) on the patient safety culture composites and items from the survey.

Appendixes A and B present overall results by nursing home characteristics (bed size, ownership, census region, and urban/rural status) and respondent characteristics (job title, nursing home work area, interaction with residents, shift worked most often, and tenure in nursing home).

Chapter 1. Introduction

Resident safety is a critical component of health care quality. As nursing homes continually strive to improve, there is growing recognition of the importance of establishing a culture of resident safety. Achieving a culture of resident safety requires an understanding of the values, beliefs, and norms about what is important in a nursing home and which attitudes and behaviors related to resident safety are supported, rewarded, and expected.

Survey Content

The Agency for Healthcare Research and Quality (AHRQ) funded the development of the *Nursing Home Survey on Patient Safety Culture*. The survey includes 42 items that measure 12 composites of patient safety culture. The 12 patient safety culture composites are listed and defined in Table 1-1.

Table 1-1. Patient Safety Culture Composites and Definitions

Patient Safety Culture Composite	Definition: The extent to which...
Communication openness	Staff speak up about problems and their ideas and suggestions are valued.
Compliance with procedures	Staff follow standard procedures to care for residents and do not use shortcuts to get their work done faster.
Feedback and communication about incidents	Staff discuss ways to keep residents safe, tell someone if they see something that might harm a resident, and talk about ways to keep incidents from happening again.
Handoffs	Staff are told what they need to know before taking care of a resident or when a resident's care plan changes and have all the information they need when residents are transferred from the hospital.
Management support for resident safety	Nursing home management provides a work climate that promotes resident safety and shows that resident safety is a top priority.
Nonpunitive response to mistakes	Staff are not blamed when a resident is harmed, are treated fairly when they make mistakes, and feel safe reporting their mistakes.
Organizational learning	There is a learning culture that facilitates making changes to improve resident safety and evaluates changes for effectiveness.
Overall perceptions of resident safety	Residents are well cared for and safe.
Staffing	There are enough staff to handle the workload, meet residents' needs during shift changes, and keep residents safe, because there is not much staff turnover.
Supervisor expectations and actions promoting resident safety	Supervisors listen to staff ideas and suggestions about resident safety, praise staff who follow the right procedures, and pay attention to safety problems
Teamwork	Staff treat one another with respect, support one another, and feel like they are part of a team.
Training and skills	Staff get the training they need, have enough training on how to handle difficult residents, and understand the training they get in the nursing home.

The survey also includes two questions that ask respondents whether they would tell friends that this is a safe nursing home for their family (also called “willingness to recommend”) and to provide an overall rating on resident safety for their nursing home. In addition, respondents are asked to provide limited background demographic information.

Chapter 2. Survey Administration Statistics

This chapter presents descriptive information on how the 2016 database nursing homes administered the survey.

Highlights

- The 2016 database consists of data from 12,395 nursing home staff respondents across 209 participating nursing homes.
- The average nursing home response rate was 56 percent, with an average of 59 completed surveys per nursing home.
- The highest percentage of nursing homes (41 percent) administered both *paper and Web surveys*.
- Nursing homes that administered *paper only* surveys had a higher average response rate (64 percent) than nursing homes that administered *Web only* (59 percent) or *paper and Web* (46 percent) surveys.

Overall statistics included in the 2016 database are shown in Table 2-1 and 2-2.

Table 2-1. Overall Statistics—2016 Database Nursing Homes

Response Rate Information	Number or Rate
Number of nursing homes	209
Number of respondents	12,395
Average number of respondents per nursing home (range: 10 to 299)	59
Average number of surveys administered per nursing home (range: 10 to 623)	124
Overall average nursing home response rate (range: 5% to 100%)	56%

Table 2-2. Survey Administration Mode Statistics—2016 Database Nursing Homes

Survey Administration Mode	Database Nursing Homes		Average Nursing Home Response Rate
	Number	Percent	Percent
Paper only	75	36%	64%
Web only	49	23%	59%
Both paper and Web (mixed mode)	85	41%	46%
Total	209	100%	

Chapter 3. Nursing Home Characteristics

This chapter presents information about the distribution of database nursing homes by bed size, ownership, geographic region, and additional nursing home characteristics. Although the nursing homes that submitted data to the database do not constitute a statistically selected sample, the characteristics of these nursing homes are fairly consistent with the distribution of nursing homes included in the Centers for Medicare & Medicaid Services (CMS) Nursing Home Compare database.ⁱⁱ

Highlights

- Nursing homes with *50-199 beds* made up the largest percentage of database nursing homes (77 percent).
- The majority of database nursing homes are *for profit* (60 percent).
- Approximately three out of four database nursing homes are located in *urban areas* (76 percent).
- Overall, the characteristics of the 209 database nursing homes are fairly consistent with the distribution of nursing homes in Nursing Home Compare.

ⁱⁱ CMS Nursing Home Compare data were obtained from Nursing Home Compare, available at: <https://data.medicare.gov/data/nursing-home-compare> (accessed April 28, 2016).

Table 3-1. Distribution of 2016 Database Nursing Homes by Nursing Home Characteristics

Nursing Home Characteristics	CMS Nursing Home Compare Nursing Homes (N = 15,633)		Database Nursing Homes (N = 209)	
	Number	Percent	Number	Percent
Bed Size				
1-49	2,002	13%	37	18%
50-99	5,838	37%	92	44%
100-199	6,863	44%	68	33%
200 or more	930	6%	12	6%
Ownership				
For profit	10,805	69%	125	60%
Nonprofit/Government	4,828	31%	84	40%
Census Bureau Regionⁱⁱⁱ				
Northeast	2,622	17%	75	36%
Midwest	5,166	33%	59	28%
South	5,429	35%	46	22%
West	2,416	15%	29	14%
Urban/Rural Status				
Rural	4,468	29%	51	24%
Urban	11,165	71%	158	76%

Note: Percentages may not add up to 100 percent due to rounding.

ⁱⁱⁱStates are categorized into regions as follows:

- Northeast Region: CT, MA, ME, NH, NJ, NY, PA, RI, VT
- Midwest Region: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI
- South Region: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV
- West Region: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

Chapter 4. Respondent Characteristics

This chapter describes respondent characteristics within the participating nursing homes.

Highlights

- The top three job titles of respondents were:
 - Nursing Assistant/Aide (35 percent).
 - Licensed Nurse (20 percent).
 - Support Staff (18 percent).
- Most respondents indicated they worked in *many different units/no specific unit* (49 percent). *Skilled nursing* was the second largest work area (30 percent).
- Most respondents (71 percent) indicated they had *direct interaction* with residents.
- Most respondents indicated they worked between *25 and 40 hours* per week (66 percent). The second largest group of respondents worked *more than 40 hours* per week (20 percent).
- Most respondents (70 percent) indicated they worked the *day shift* most often.
- *Tenure* in the nursing home was evenly distributed across the range of years of employment, with a range of 19 to 21 percent of respondents in each category.
- Nearly all respondents indicated they were *not paid by a staffing agency* (93 percent).

Table 4-1. Distribution of 2016 Database Nursing Homes by Respondent Characteristics

Respondent Characteristics	Database Respondents	
Job Title	Number	Percent
Nursing Assistant/Aide	3,784	35%
Licensed Nurse	2,168	20%
Support Staff	1,923	18%
Direct Care Staff	1,080	10%
Administrator/Manager	975	9%
Administrative Support Staff	681	6%
Physician/Other Provider	322	3%
Total	10,933	100%
Missing	1,462	
Overall	12,395	
Work Area	Number	Percent
Many different areas/no specific area or unit	4,545	49%
Skilled nursing unit	2,803	30%
Rehab unit	1,113	12%
Alzheimer's/dementia unit	878	9%
Total	9,339	100%
Missing	3,056	
Overall	12,395	
Interaction With Residents	Number	Percent
YES, I work directly with residents most of the time	8,241	71%
NO, I do NOT work directly with residents most of the time	3,293	29%
Total	11,534	100%
Missing	861	
Overall	12,395	
Hours Worked Per Week	Number	Percent
15 or fewer	526	4%
16 to 24	1,112	9%
25 to 40	7,717	66%
More than 40	2,410	20%
Total	11,765	100%
Missing	630	
Overall	12,395	

Note: Percentages may not add up to 100 percent due to rounding.

Table 4-1. Distribution of 2016 Database Nursing Homes by Respondent Characteristics (continued)

Respondent Characteristics	Database Respondents	
Shift Worked Most Often	Number	Percent
Days	8,090	70%
Evenings	2,365	20%
Nights	1,152	10%
Total	11,607	100%
Missing	788	
Overall	12,395	
Tenure in Nursing Home	Number	Percent
Less than 1 year	2,246	19%
1 to 2 years	2,334	20%
3 to 5 years	2,485	21%
6 to 10 years	2,204	19%
11 years or more	2,459	21%
Total	11,728	100%
Missing	667	
Overall	12,395	
Staffing Agency Status	Number	Percent
Paid by a staffing agency	746	7%
Not paid by a staffing agency	10,728	93%
Total	11,474	100%
Missing	921	
Overall	12,395	

Note: Percentages may not add up to 100 percent due to rounding.

Chapter 5. Overall Results

This chapter presents the overall survey results for the database, showing the average percentage of positive responses across the database nursing homes on each of the survey's items and composites. Reporting the average across nursing homes ensures that each nursing home receives an equal weight that contributes to the overall average. Reporting the data at the nursing home level in this way is important because culture is considered to be a group characteristic and is not considered to be a solely individual characteristic.

An alternative method would be to report a straight percentage of positive responses across all respondents, but this method would give greater weight to respondents from larger nursing homes (there are more than twice as many respondents from larger nursing homes as those from smaller nursing homes).

Highlights

- The areas of strength or the composites with the highest average percent positive responses were:
 - *Overall Perceptions of Resident Safety*—86 percent.
 - *Feedback and Communication About Incidents*—85 percent.
- The areas with potential for improvement or the composites with the lowest average percent positive responses were:
 - *Staffing*—48 percent.
 - *Nonpunitive Response to Mistakes*—54 percent.
- On average, most respondents within nursing homes (75 percent) indicated they would tell their friends that this was a safe nursing home for their family.
- On average, most respondents within nursing homes (60 percent) gave their nursing home a rating of “Excellent” (25 percent) or “Very good” (35 percent) on resident safety.

Composite- and Item-Level Charts

This section provides the overall composite- and item-level results. The method for calculating the percent positive scores at the item and composite level are described in the Notes section of this document.

Composite-Level Results

Chart 5-1 shows the average percent positive response for each of the 12 patient safety culture composites across nursing homes in the database.^{iv} The patient safety culture composites are shown in order from the highest average percent positive response to the lowest.

Item-Level Results

Chart 5-2 shows the average percent positive response for each of the 42 survey items. The survey items are grouped by the patient safety culture composite they are intended to measure. Within each composite, the items are presented in the order in which they appear in the survey.

Nursing Home Recommendation

Chart 5-3 shows the results from the item that asked respondents whether they would tell their friends that this was a safe nursing home for their family.

Overall Rating on Resident Safety

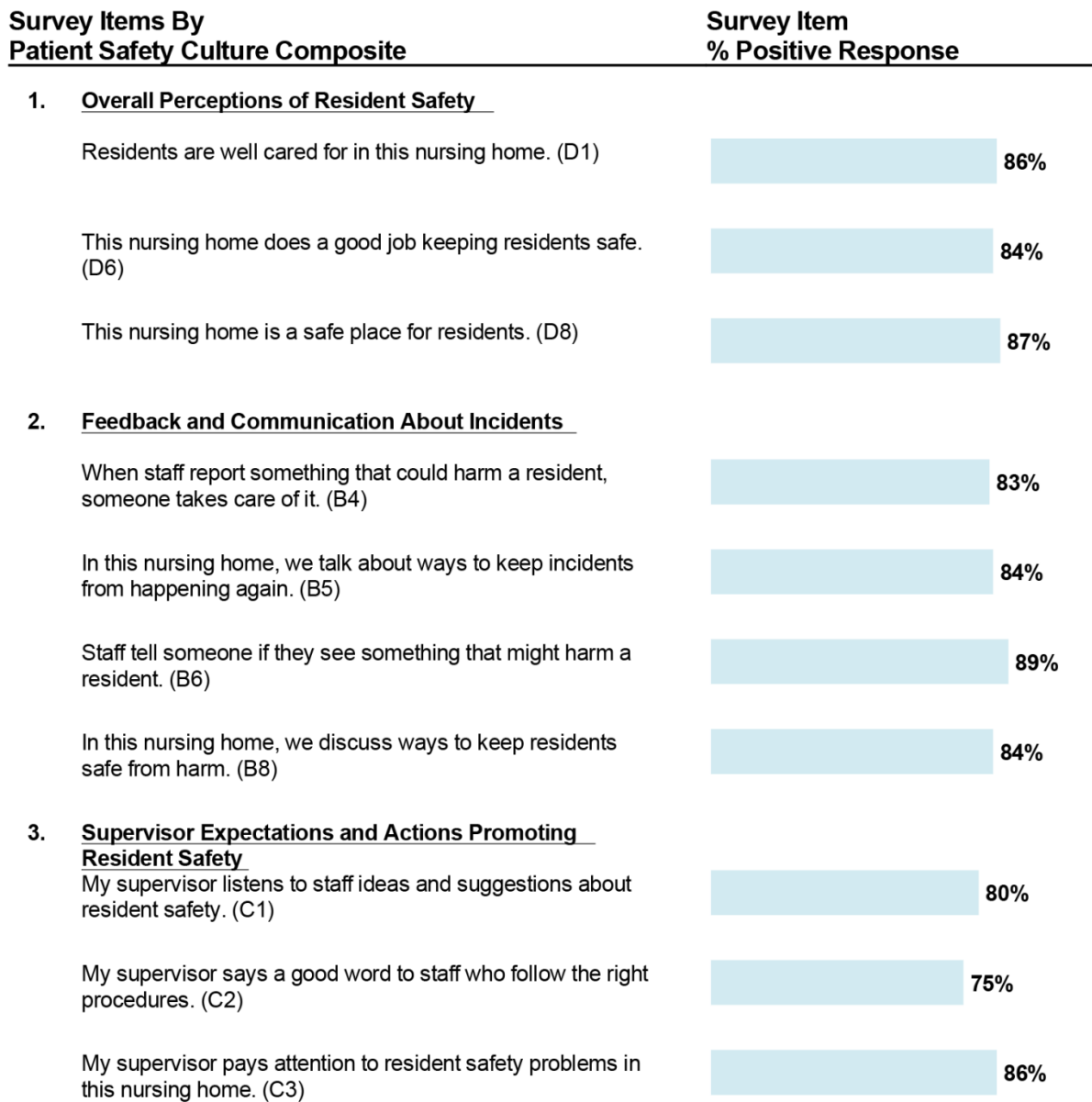
Chart 5-4 shows the results from the item that asked respondents to give their nursing home an overall rating on resident safety.

^{iv} Some nursing homes excluded one or more survey items and are therefore excluded from composite-level calculations when the omitted items pertain to a particular composite. For the 2016 report, 11 nursing homes were excluded from one or more composite-level calculations for this reason.

Chart 5-1. Composite-Level Average Percent Positive Response—2016 Database Nursing Homes



**Chart 5-2. Item-Level Average Percent Positive Response—2016 Database Nursing Homes
(Page 1 of 4)**



Note: The item’s survey location is shown after the item text.

**Chart 5-2. Item-Level Average Percent Positive Response—2016 Database Nursing Homes
(Page 2 of 4)**

Survey Items By Patient Safety Culture Composite	Survey Item % Positive Response
4. <u>Organizational Learning</u>	
This nursing home lets the same mistakes happen again and again. (D3R)	66%
It is easy to make changes to improve resident safety in this nursing home. (D4)	65%
This nursing home is always doing things to improve resident safety. (D5)	75%
When this nursing home makes changes to improve resident safety, it checks to see if the changes worked. (D10)	73%
5. <u>Training and Skills</u>	
Staff get the training they need in this nursing home. (A7)	72%
Staff have enough training on how to handle difficult residents. (A11)	57%
Staff understand the training they get in this nursing home. (A13)	77%
6. <u>Management Support for Resident Safety</u>	
Management asks staff how the nursing home can improve resident safety. (D2)	67%
Management listens to staff ideas and suggestions to improve resident safety. (D7)	67%
Management often walks around the nursing home to check on resident care. (D9)	68%

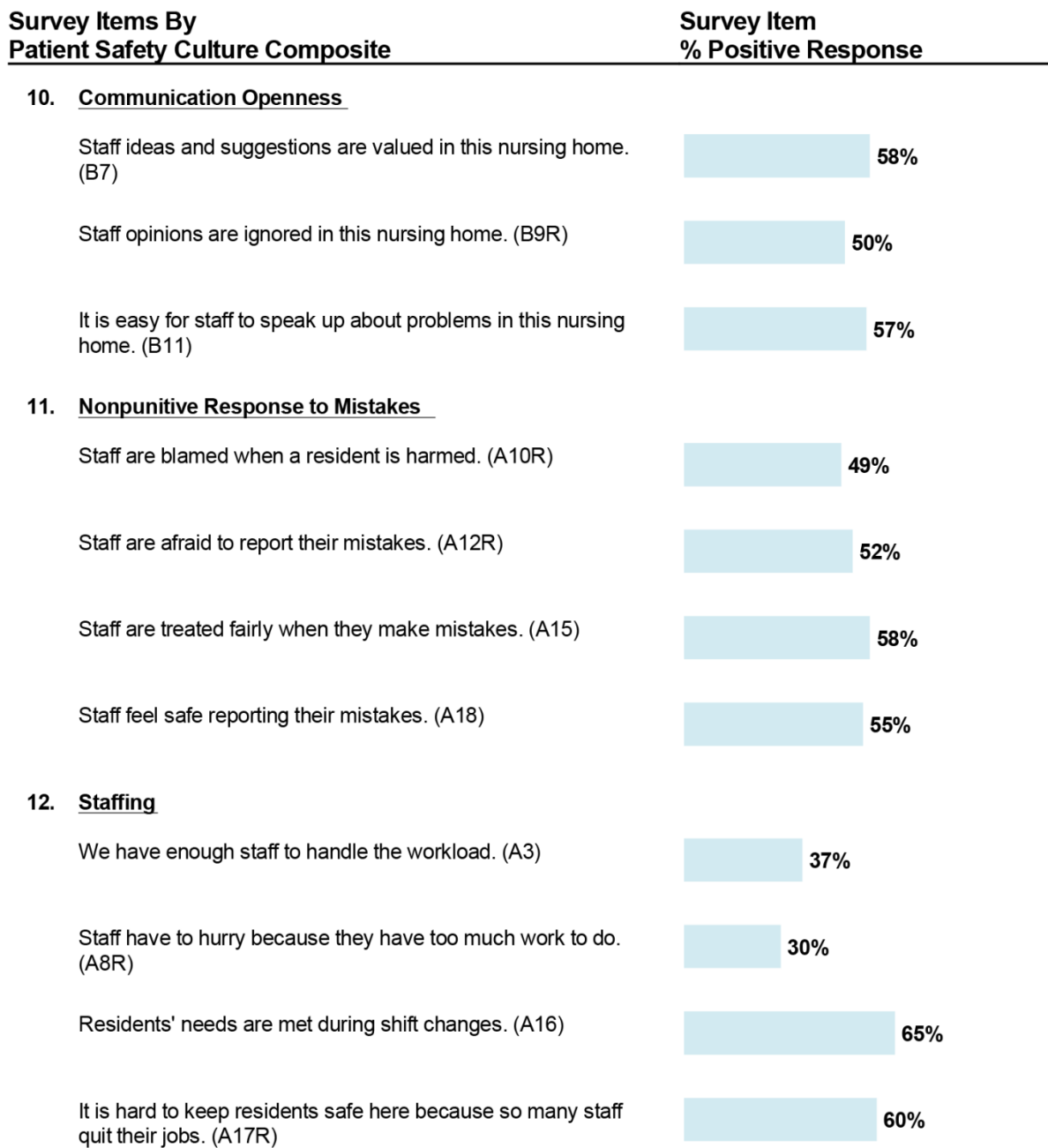
Note: The item’s survey location is shown after the item text. An “R” indicates a negatively worded item, where the percent positive response is based on those who responded “Strongly disagree” or “Disagree,” or “Never” or “Rarely” (depending on the response category used for the item).

**Chart 5-2. Item-Level Average Percent Positive Response—2016 Database Nursing Homes
(Page 3 of 4)**

Survey Items By Patient Safety Culture Composite	Survey Item % Positive Response
7. <u>Teamwork</u>	
Staff in this nursing home treat each other with respect. (A1)	69%
Staff support one another in this nursing home. (A2)	69%
Staff feel like they are part of a team. (A5)	62%
When someone gets really busy in this nursing home, other staff help out. (A9)	65%
8. <u>Handoffs</u>	
Staff are told what they need to know before taking care of a resident for the first time. (B1)	69%
Staff are told right away when there is a change in a resident's care plan. (B2)	59%
We have all the information we need when residents are transferred from the hospital. (B3)	57%
Staff are given all the information they need to care for residents. (B10)	73%
9. <u>Compliance With Procedures</u>	
Staff follow standard procedures to care for residents. (A4)	82%
Staff use shortcuts to get their work done faster. (A6R)	44%
To make work easier, staff often ignore procedures. (A14R)	66%

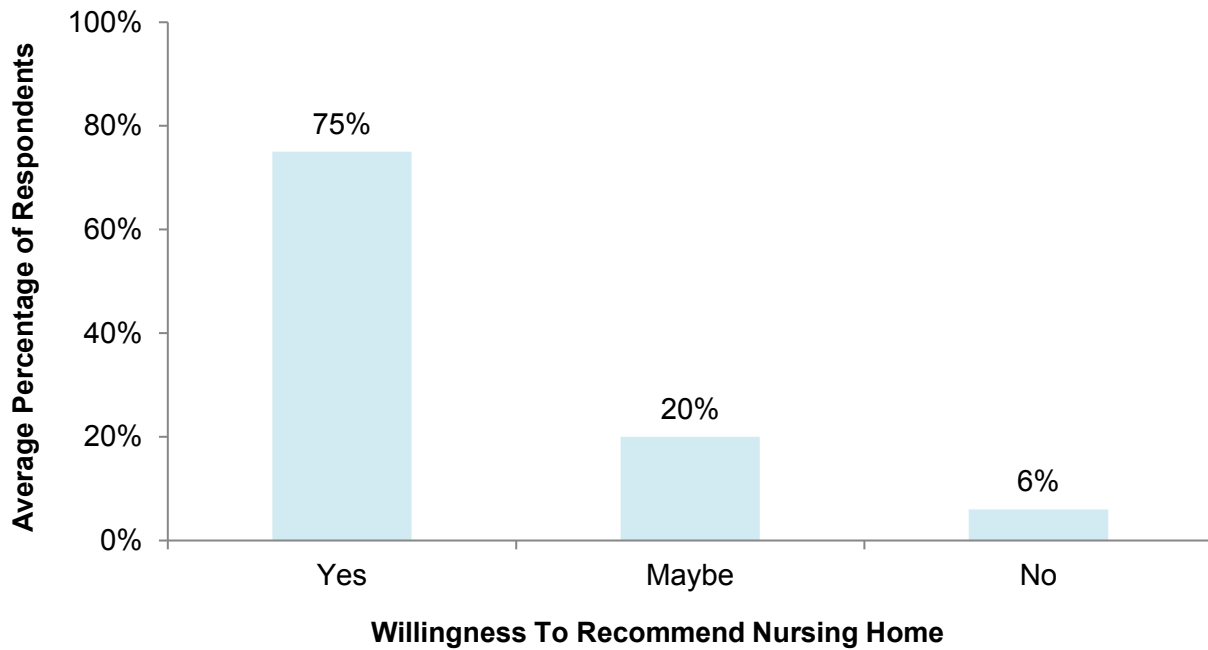
Note: The item's survey location is shown after the item text. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

**Chart 5-2. Item-Level Average Percent Positive Response—2016 Database Nursing Homes
(Page 4 of 4)**



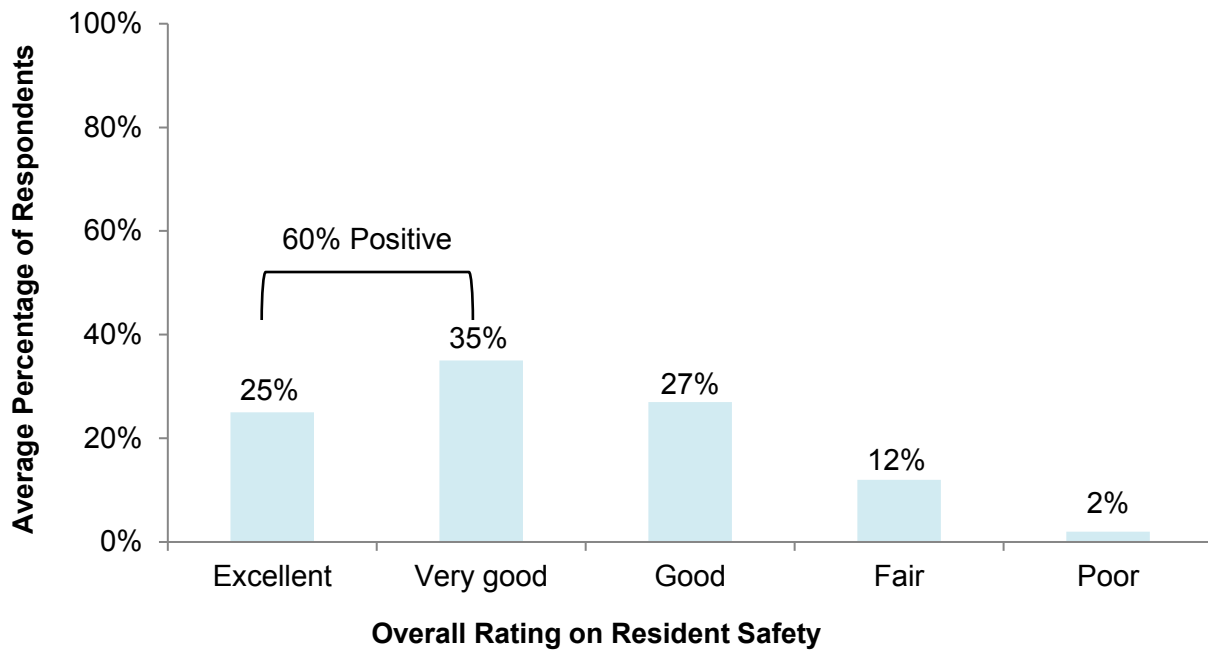
Note: The item’s survey location is shown after the item text. An “R” indicates a negatively worded item, where the percent positive response is based on those who responded “Strongly disagree” or “Disagree,” or “Never” or “Rarely” (depending on the response category used for the item).

Chart 5-3. Average Percentage of 2016 Database Respondents Willing To Recommend Their Nursing Home



Note: Percentages may not add up to 100 percent due to rounding.

Chart 5-4. Average Percentage of 2016 Database Respondents Giving Overall Rating on Resident Safety



Note: Percentages may not add up to 100 percent due to rounding.

Chapter 6. Comparing Your Results

To compare your nursing home's survey results with the results from the database, you need to calculate your nursing home's percent positive response on the survey's 12 composites and other survey items, including the two questions on willingness to recommend the nursing home and resident safety grade. The Notes section at the end of this report describes how to calculate these percent positive scores as well as a number of other statistics to facilitate comparisons with the nursing home database. You can then compare your nursing home's results with the database averages and examine the percentile scores to place your nursing home's results relative to the distribution of database nursing homes.

When comparing your nursing home's results with results from the database, keep in mind that the database only provides *relative* comparisons. Even though your nursing home's survey results may be better than the database statistics, you may still believe there is room for improvement in a particular area within your nursing home in an *absolute* sense.

As you will notice from the database results, there are some patient safety composites that even the highest scoring nursing homes could improve on. Therefore, the comparative data provided in this report should be used to supplement your nursing home's own efforts to identify areas of strength and areas on which to focus patient safety culture improvement efforts.

Highlights

- The Communication Openness and Training and Skills composites showed the largest variability across nursing homes, ranging from 16 percent to 96 percent and 20 percent to 100 percent, respectively.
- Willingness to recommend one's nursing home also had a wide range of responses, with a median of 76 percent and a maximum of 100 percent.
- Overall rating on resident safety showed a wide range of responses as well, from 13 percent giving their unit a rating of "Excellent" or "Very good" to 100 percent.

Composite and Item-Level Comparative Tables

Table 6-1 presents comparative statistics (average percent positive and standard deviation, minimum and maximum scores, and percentiles) for each of the 12 patient safety culture composites.

Table 6-2 presents comparative statistics for each of the 42 survey items. The survey items are grouped by the patient safety culture composite they are intended to measure. Within each composite, the items are presented in the order in which they appear in the survey.

Table 6-3 presents comparative statistics for respondent's willingness to recommend their nursing home. Statistics are presented for respondents who would tell friends that the nursing home is safe for their family.

Table 6-4 presents comparative statistics for respondent's overall rating of resident safety. Statistics are presented for respondents who gave the nursing home an overall rating on resident safety of "Excellent" or "Very good."

Table 6-1. Composite-Level Comparative Results for the 2016 Database

Patient Safety Culture Composites	Average % Positive	s.d.	Composite % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Overall Perceptions of Resident Safety	86%	10.56%	54%	71%	79%	88%	94%	99%	100%
2. Feedback and Communication About Incidents	85%	9.18%	54%	72%	80%	86%	92%	96%	100%
3. Supervisor Expectations and Actions Promoting Resident Safety	80%	10.26%	52%	66%	73%	82%	88%	93%	100%
4. Organizational Learning	70%	13.87%	36%	50%	60%	70%	80%	88%	97%
5. Training and Skills	69%	14.22%	20%	49%	60%	69%	79%	88%	100%
6. Management Support for Resident Safety	67%	14.45%	33%	46%	57%	69%	78%	84%	100%
7. Teamwork	66%	14.38%	30%	45%	57%	67%	76%	84%	97%
8. Handoffs	64%	13.74%	19%	46%	55%	65%	75%	83%	90%
9. Compliance With Procedures	64%	12.54%	32%	48%	56%	64%	72%	80%	97%
10. Communication Openness	55%	15.08%	16%	36%	44%	55%	65%	73%	96%
11. Nonpunitive Response to Mistakes	54%	13.34%	21%	36%	43%	54%	62%	71%	97%
12. Staffing	48%	15.19%	17%	28%	37%	47%	58%	68%	95%
Average Across Composites	67%	11.90%	48%	54%	60%	67%	75%	85%	86%

Table 6-2. Item-Level Comparative Results for the 2016 Database (Page 1 of 4)

Survey Items By Patient Safety Culture Composite	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Overall Perceptions of Resident Safety									
1. Residents are well cared for in this nursing home. (D1)	86%	11.33%	50%	70%	81%	90%	95%	100%	100%
2. This nursing home does a good job keeping residents safe. (D6)	84%	11.55%	49%	67%	78%	86%	93%	99%	100%
3. This nursing home is a safe place for residents. (D8)	87%	10.71%	50%	73%	82%	89%	95%	100%	100%
2. Feedback and Communication About Incidents									
1. When staff report something that could harm a resident, someone takes care of it. (B4)	83%	10.56%	47%	70%	77%	85%	91%	96%	100%
2. In this nursing home, we talk about ways to keep incidents from happening again. (B5)	84%	11.65%	38%	67%	78%	85%	93%	97%	100%
3. Staff tell someone if they see something that might harm a resident. (B6)	89%	8.06%	45%	80%	86%	91%	95%	99%	100%
4. In this nursing home, we discuss ways to keep residents safe from harm. (B8)	84%	11.05%	36%	68%	76%	86%	92%	96%	100%
3. Supervisor Expectations and Actions Promoting Resident Safety									
1. My supervisor listens to staff ideas and suggestions about resident safety. (C1)	80%	10.96%	55%	63%	72%	82%	88%	93%	100%
2. My supervisor says a good word to staff who follow the right procedures. (C2)	75%	12.46%	37%	57%	68%	76%	84%	91%	100%
3. My supervisor pays attention to safety problems in this nursing home. (C3)	86%	9.43%	58%	72%	82%	89%	93%	97%	100%

Note: The item's survey location is shown after the item text.

Table 6-2. Item-Level Comparative Results for the 2016 Database (Page 2 of 4)

Survey Items By Patient Safety Culture Composite	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
4. Organizational Learning									
1. This nursing home lets the same mistakes happen again and again. (D3R)	66%	16.71%	11%	43%	56%	66%	77%	88%	100%
2. It is easy to make changes to improve resident safety in this nursing home. (D4)	65%	14.83%	24%	45%	53%	65%	76%	85%	97%
3. This nursing home is always doing things to improve resident safety. (D5)	75%	14.15%	33%	56%	68%	76%	86%	94%	100%
4. When this nursing home makes changes to improve resident safety, it checks to see if the changes worked. (D10)	73%	15.50%	29%	50%	62%	74%	85%	93%	100%
5. Training and Skills									
1. Staff get the training they need in this nursing home. (A7)	72%	15.46%	25%	50%	61%	75%	83%	92%	100%
2. Staff have enough training on how to handle difficult residents. (A11)	57%	17.40%	9%	35%	45%	57%	69%	82%	100%
3. Staff understand the training they get in this nursing home. (A13)	77%	13.25%	25%	59%	70%	79%	86%	93%	100%
6. Management Support for Resident Safety									
1. Management asks staff how the nursing home can improve resident safety. (D2)	67%	15.11%	30%	45%	57%	68%	78%	86%	100%
2. Management listens to staff ideas and suggestions to improve resident safety. (D7)	67%	15.24%	25%	44%	57%	69%	78%	87%	100%
3. Management often walks around the nursing home to check on resident care. (D9)	68%	17.65%	11%	41%	58%	71%	81%	90%	100%

Note: The item’s survey location is shown after the item text. An “R” indicates a negatively worded item, where the percent positive response is based on those who responded “Strongly disagree” or “Disagree,” or “Never” or “Rarely” (depending on the response category used for the item).

Table 6-2. Item-Level Comparative Results for the 2016 Database (Page 3 of 4)

Survey Items By Patient Safety Culture Composite	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50 th %ile	75th %ile	90th %ile	Max
7. Teamwork									
1. Staff in this nursing home treat each other with respect. (A1)	69%	15.65%	20%	49%	60%	71%	81%	88%	100%
2. Staff support one another in this nursing home. (A2)	69%	15.31%	27%	47%	59%	70%	79%	89%	100%
3. Staff feel like they are part of a team. (A5)	62%	16.31%	20%	40%	51%	63%	73%	82%	100%
4. When someone gets really busy in this nursing home, other staff help out. (A9)	65%	14.40%	20%	47%	54%	65%	75%	82%	100%
8. Handoffs									
1. Staff are told what they need to know before taking care of a resident for the first time. (B1)	69%	14.48%	21%	48%	58%	70%	79%	86%	100%
2. Staff are told right away when there is a change in a resident's care plan. (B2)	59%	16.45%	17%	38%	47%	58%	71%	81%	100%
3. We have all the information we need when residents are transferred from the hospital. (B3)	57%	16.08%	5%	38%	46%	56%	69%	78%	91%
4. Staff are given all the information they need to care for residents. (B10)	73%	13.65%	32%	53%	65%	74%	83%	90%	100%
9. Compliance with Procedures									
1. Staff follow standard procedures to care for residents. (A4)	82%	11.49%	40%	67%	75%	84%	91%	95%	100%
2. Staff use shortcuts to get their work done faster. (A6R)	44%	15.24%	0%	27%	33%	43%	53%	64%	96%
3. To make work easier, staff often ignore procedures. (A14R)	66%	14.59%	22%	49%	55%	67%	75%	84%	100%

Note: The item’s survey location is shown after the item text. An “R” indicates a negatively worded item, where the percent positive response is based on those who responded “Strongly disagree” or “Disagree,” or “Never” or “Rarely” (depending on the response category used for the item).

Table 6-2. Item-Level Comparative Results for the 2016 Database (Page 4 of 4)

Survey Items By Patient Safety Culture Composite	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90 th %ile	Max
10. Communication Openness									
1. Staff ideas and suggestions are valued in this nursing home. (B7)	58%	15.95%	14%	37%	47%	58%	70%	79%	100%
2. Staff opinions are ignored in this nursing home. (B9R)	50%	16.43%	0%	30%	38%	50%	59%	70%	93%
3. It is easy for staff to speak up about problems in this nursing home. (B11)	57%	15.33%	17%	38%	47%	56%	66%	76%	100%
11. Nonpunitive Response to Mistakes									
1. Staff are blamed when a resident is harmed. (A10R)	49%	15.19%	13%	29%	40%	50%	59%	68%	94%
2. Staff are afraid to report their mistakes. (A12R)	52%	15.23%	18%	34%	40%	51%	62%	73%	97%
3. Staff are treated fairly when they make mistakes. (A15)	58%	14.75%	16%	39%	50%	57%	68%	77%	98%
4. Staff feel safe reporting their mistakes. (A18)	55%	15.20%	22%	36%	44%	55%	67%	75%	100%
12. Staffing									
1. We have enough staff to handle the workload. (A3)	37%	19.84%	3%	11%	21%	34%	48%	64%	100%
2. Staff have to hurry because they have too much work to do. (A8R)	30%	16.17%	3%	12%	18%	26%	40%	54%	93%
3. Residents' needs are met during shift changes. (A16)	65%	16.23%	7%	42%	55%	64%	77%	86%	100%
4. It is hard to keep residents safe here because so many staff quit their jobs. (A17)	60%	18.17%	18%	36%	45%	60%	73%	83%	100%

Note: The item’s survey location is shown after the item text. An “R” indicates a negatively worded item, where the percent positive response is based on those who responded “Strongly disagree” or “Disagree,” or “Never” or “Rarely” (depending on the response category used for the item).

Table 6-3. Percentage of Respondents Willing To Recommend Nursing Home—2016 Database Comparative Results

Willingness to Recommend Nursing Home	Average % Positive	s.d.	Percentage of Responses						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Yes	75%	16.13%	0%	50%	67%	76%	87%	94%	100%

Note: For the full distribution of results, see Chart 5-3.

Table 6-4. Percentage of Respondents Giving Their Nursing Home an Overall Rating on Resident Safety of Excellent or Very Good—2016 Database Comparative Results

Overall Rating on Resident Safety	Average % Positive	s.d.	Percentage of Responses						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Excellent/Very good	60%	17.96%	13%	33%	47%	60%	73%	84%	100%

Note: For the full distribution of results, see Chart 5-4.

Chapter 7. What's Next? Action Planning for Improvement

The AHRQ Surveys on Patient Safety Culture are important sources of information for health care organizations striving to improve patient safety and can be used as an effective starting point for action planning to achieve changes in culture. Organizations may find it useful to brainstorm the potential barriers that make it difficult to implement initiatives and strategies to overcome them.

AHRQ Action Planning Tool

The [*Action Planning Tool for the AHRQ Surveys on Patient Safety Culture*](#) is intended for use after your organization administers the survey and analyzes the results. The first step toward improving the patient safety culture in your organization, facility, unit, or department is to develop an action plan using the Action Plan Template. This can be done by answering 10 key questions to help you record your goals, initiatives, resources needed, process and outcome measures, and timelines.

Define your goals and select your initiatives:

1. What areas do you want to focus on for improvement?
2. What are your goals?
3. What initiatives will you implement?

Plan your initiatives:

1. Who will be affected, and how?
2. Who can lead the initiative?
3. What resources will be needed?
4. What are possible barriers, and how can they be overcome?
5. How will you measure progress and success?
6. What is the timeline?

Communicate your action plan:

1. How will you share your action plan and with whom?

Your action plan should be flexible. The questions do not need to be answered in order. Keep in mind that as you begin to implement your plan, it may change. The complete Action Planning Tool, including the template in Microsoft® Word can be found here:

<http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/planningtool.html>.

Resource List for Users of the AHRQ Nursing Home Survey

The AHRQ *Resource List for Users of the AHRQ Nursing Home Survey on Patient Safety Culture* contains references to Web sites that provide practical resources nursing homes can use to implement changes to improve patient safety culture and patient safety. These resources are not a complete and exhaustive list but are provided to give initial guidance to nursing homes looking for information about patient safety initiatives. For a list of practical resources your organization can use to improve patient safety culture and patient safety, go to <http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/nursing-home/resources/nhimpptsaf.pdf>.

References

Action planning tool for the AHRQ Surveys on Patient Safety Culture. Rockville, MD: Agency for Healthcare Research and Quality; January 2016.. AHRQ Publication No. 16-0008-EF. <http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/planningtool.html>. Accessed September 14, 2016.

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Notes: Description of Data Cleaning, Calculations, and Data Limitations

This section provides additional detail regarding how various statistics presented in this report were calculated and data limitations.

Data Cleaning

Each participating nursing home submitted individual-level survey data. Once the data were submitted, response frequencies were run on each nursing home's data to look for out-of-range values, missing variables, or other data anomalies. When data problems were found, nursing homes were contacted and asked to make corrections and resubmit their data. In addition, each participating nursing home received a copy of its data frequencies to verify that the dataset received was correct. Nursing homes were not required to submit data for all the background characteristic questions.

The data were also cleaned for straight-lined answers, which is when respondents give the same answer for both a positively worded item (such as, "This nursing home does a good job keeping residents safe") and a negatively worded item (such as, "This nursing home lets the same mistakes happen again and again") in the same section of the survey. Positively worded and negatively worded items are in sections A, B, and D. When respondents supplied the same answers for all items in sections A, B, and D, the items in those sections were set to missing because the sections had negatively worded items.

After this initial cleaning, respondents with missing values across sections A, B, and D were deleted before analyses. Respondents who supplied "Don't know" answers or who had missing answers to all items across sections A, B, C, D, and E were also deleted before analysis. Nursing homes were included in the database only if they had at least 10 survey respondents after all data cleaning steps.

Response Rates

As part of the data submission process, nursing homes were asked to provide the number of completed, returned surveys (numerator) as well as the total number of surveys distributed minus the ineligible (denominator). Ineligibles include deceased individuals or those who were no longer employed at the nursing home during data collection. Response rates were then calculated using the formula below:

$$\text{Response Rate} = \frac{\text{Number of complete, returned surveys}}{\text{Number of surveys distributed} - \text{Ineligibles}}$$

Calculation of Percent Positive Scores

Most of the survey's items ask respondents to answer using 5-point response categories in terms of agreement (Strongly agree, Agree, Neither, Disagree, Strongly disagree) or frequency (Always, Most of the time, Sometimes, Rarely, Never). Three of the 12 patient safety culture composites use the frequency response option (*Handoffs, Feedback and Communication About Incidents*, and *Communication Openness*) while the other nine composites use the agreement response option.

Item-Level Percent Positive Response

Both positively worded items (such as “Staff support one another in this nursing home”) and negatively worded items (such as “Staff use shortcuts to get their work done faster”) are included in the survey. Calculating the percent positive response on an item is different for positively and negatively worded items:

- **For positively worded items**, percent positive response is the combined percentage of respondents within a nursing home who answered “Strongly agree” or “Agree,” or “Always” or “Most of the time,” depending on the response categories used for the item.
- For example, for the item “Staff support one another in this nursing home,” if 50 percent of respondents within a nursing home *Strongly agree* and 25 percent *Agree*, the item-level percent positive response for that nursing home is $50\% + 25\% = 75\%$ positive.
- **For negatively worded items**, percent positive response is the combined percentage of respondents within a nursing home who answered “Strongly disagree” or “Disagree,” or “Never” or “Rarely,” because a *negative* answer on a negatively worded item indicates a *positive* response.
- For example, for the item “Staff use shortcuts to get their work done faster,” if 60 percent of respondents within a nursing home *Strongly disagree* and 20 percent *Disagree*, the item-level percent positive response is 80 percent (i.e., 80 percent of respondents *do not* believe staff use shortcuts to get their work done faster).

Composite-Level Percent Positive Response

The 12 patient safety culture composites are composed of three or four survey items. Composite scores were calculated for each nursing home by averaging the percent positive response on the items within a composite. For example, for a 3-item composite, if the item-level percent positive responses were 50 percent, 55 percent, and 60 percent, the nursing home's composite-level percent positive response would be the average of these three percentages, or 55 percent positive.

Item and Composite Percent Positive Scores

The average percent positive scores for each of the 12 patient safety culture composites and for the 42 survey items were calculated by averaging composite-level percent positive scores across all nursing homes in the database, as well as averaging item-level percent positive scores across nursing homes. Since the percent positive is displayed as an overall average, scores from each nursing home are weighted equally in their contribution to the calculation of the average.

To calculate your nursing home’s composite score, average the percentage of positive response to each item in the composite. Table N1 shows an example of computing a composite score for *Nonpunitive Response to Mistakes*:

1. This composite has four items. Two are positively worded (items A15 and A18) and two are negatively worded (items A10 and A12). Keep in mind that DISAGREEING with a negatively worded item indicates a POSITIVE response.
2. Calculate the percentage of positive responses at the item level (see example in Table N1).

Table N1. Example of Computing Item and Composite Percent Positive Scores

Four items measuring "Nonpunitive Response to Mistakes"	For positively worded items, count the # of "Strongly agree" or "Agree" responses	For negatively worded items, count the # of "Strongly disagree" or "Disagree" responses	Total # of responses to the item	Percent positive response on item
Item A10 - negatively worded "Staff are blamed when a resident is harmed."	NA*	120	260	120/260=46%
Item A12 - negatively worded "Staff are afraid to report their mistakes."	NA*	130	250	130/250=52%
Item A15 - positively worded "Staff are treated fairly when they make mistakes."	110	NA*	240	110/240=46%
Item A18 - positively worded "Staff feel safe reporting their mistakes."	140	NA*	250	140/250= 56%
Composite Score % Positive = (46% + 52% + 46% + 56%)/4 = 50%				

*NA = Not applicable.

This example includes four items, with percent positive response scores of 46 percent, 52 percent, 46 percent, and 56 percent. Averaging these item-level percent positive scores results in a composite score of .50 or 50 percent on Nonpunitive Response to Mistakes. In this example, an average of about 50 percent of the respondents responded positively to the survey items in this composite.

Once you calculate your nursing home’s percent positive response for each of the 12 patient safety culture composites, you can compare your results with the composite-level results from the database nursing homes.

Statistically “Significant” Differences Between Scores

You may be interested in determining the statistical significance of differences between your scores and the averages in the database, or between scores in various breakout categories (nursing home bed size, ownership, etc.). Statistical significance is greatly influenced by sample size; as the number of observations in comparison groups increases, small differences in scores become statistically significant. While a 1 percentage point difference between percent positive scores might be “statistically” significant (that is, not due to chance), the difference is not likely to be meaningful or “practically” significant.

Keep in mind that statistically significant differences are not always important, and nonsignificant differences are not always trivial. We provide the average, standard deviation, range, and percentile information so that you can compare your data with the database in different ways.

Standard Deviation

The standard deviation (s.d.), a measure of the spread or variability of nursing home scores around the average, displayed in Chapter 6, tells you the extent to which nursing homes’ scores differ from the average:

- If scores from all nursing homes were exactly the same, the average would represent all their scores perfectly and the standard deviation would be zero.
- If scores from all nursing homes were very close to the average, the standard deviation would be small and close to zero.
- If scores from many nursing homes were very different from the average, the standard deviation would be a large number.

When the distribution of nursing home scores follows a normal, bell-shaped curve (where most of the scores fall in the middle of the distribution, with fewer scores at the lower and higher ends of the distribution), the average, plus or minus the standard deviation, will include about 68 percent of all nursing home scores. For example, if an average percent positive score across the database nursing homes was 70 percent with a standard deviation of 10 percent (and scores were normally distributed), about 68 percent of all the database nursing homes would have scores between 60 percent and 80 percent.

Minimum and Maximum Scores

The minimum (lowest) and maximum (highest) percent positive scores are presented for each composite and item. These scores provide information about the range of percent positive scores obtained by nursing homes in the database and are actual scores from the lowest and highest scoring nursing homes. When comparing with the minimum and maximum scores, keep in mind that these scores may represent nursing homes that are extreme outliers (indicated by large differences between the minimum score and the 10th percentile score, or between the 90th percentile score and the maximum score).

Percentiles

Percentiles provide information about the distribution of nursing home scores. A specific percentile score shows the percentage of nursing homes that scored at or below a particular score.

Percentiles were computed using the SAS[®] Software default method. The first step in this procedure is to rank order the percent positive scores from all the participating nursing homes, from lowest to highest. The next step is to multiply the number of nursing homes (n) by the percentile of interest (p), which in our case would be the 10th, 25th, 50th, 75th, or 90th percentile.

For example, to calculate the 10th percentile, one would multiply 209 (the total number of nursing homes) by .10 (10th percentile). The product of $n \times p$ is equal to “j+g” where “j” is the integer and “g” is the number after the decimal. If “g” equals 0, the percentile is equal to the percent positive value of the nursing home in the jth position plus the percent positive value of the nursing home in the jth + 1 position, divided by 2 $[(X_{(j)} + X_{(j+1)})/2]$. If “g” is not equal to 0, the percentile is equal to the percent positive value of the nursing home in the jth + 1 position.

The following examples show how the 10th and 50th percentiles would be computed using a sample of percent positive scores from 12 nursing homes (using fake data shown in Table N2). First, the percent positive scores are sorted from low to high on Composite “A.”

Table N2. Data Table for Example of How To Compute Percentiles

Nursing Home	Composite “A” % Positive Score	
1	33%	
2	48%	← 10 th percentile score = 48%
3	52%	
4	60%	
5	63%	
6	64%	
7	66%	← 50 th percentile score = 65%
8	70%	
9	72%	
10	75%	
11	75%	
12	78%	

10th percentile

- For the 10th percentile, we would first multiply the number of nursing homes by 0.10: ($n \times p = 12 \times 0.10 = 1.2$).
- The product of $n \times p = 1.2$, where “j” = 1 and “g” = 2. Since “g” is *not* equal to 0, the 10th percentile score is equal to the percent positive value of the nursing home in the jth + 1 position:
 - “j” equals 1.
 - The 10th percentile equals the value for the nursing home in the 2nd position = 48%.

50th percentile

1. For the 50th percentile, we would first multiply the number of nursing homes by 0.50:
($n \times p = 12 \times 0.50 = 6.0$).
2. The product of $n \times p = 6.0$, where “j” = 6 and “g” = 0. Since “g” = 0, the 50th percentile score is equal to the percent positive value of the nursing home in the jth position plus the percent positive value of the nursing home in the jth + 1 position, divided by 2:
 - a. “j” equals 6.
 - b. The 50th percentile equals the average of the nursing homes in the 6th and 7th positions
($64\% + 66\%$)/2 = 65%.

When the distribution of nursing home scores follows a normal bell-shaped curve (where most of the scores fall in the middle of the distribution with fewer scores at the lower and higher ends of the distribution), the 50th percentile, or median, will be very similar to the average score. An interpretation of the percentile scores was shown in Table 6-1.

Table N3. Interpretation of Percentile Scores

Percentile Score	Interpretation
10th percentile This score represents the lowest scoring nursing homes.	10% of the nursing homes scored the same or lower. 90% of the nursing homes scored higher.
25th percentile This score represents lower scoring nursing homes.	25% of the nursing homes scored the same or lower. 75% of the nursing homes scored higher.
50th percentile (or median) This score represents the middle of the distribution of nursing homes.	50% of the nursing homes scored the same or lower. 50% of the nursing homes scored higher.
75th percentile This score represents higher scoring nursing homes.	75% of the nursing homes scored the same or lower. 25% of the nursing homes scored higher.
90th percentile This score represents the highest scoring nursing homes.	90% of the nursing homes scored the same or lower. 10% of the nursing homes scored higher.

To compare with the database percentiles, compare your nursing home’s percent positive scores with the percentile scores for each composite and item. See examples below in Table N4.

Table N4. Sample Percentile Statistics

Survey Item	Survey Item % Positive Response						
	Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Item 1	8%	10%	25%	35%	49%	62%	96%

If your nursing home’s score is 55%, your score falls here: ↑

If your nursing home’s score is 65%, your score falls here: ↑

If your nursing home's score is 55 percent positive, it falls above the 75th percentile (but below the 90th), meaning that your nursing home scored higher than at least 75 percent of the nursing homes in the database.

If your nursing home's score is 65 percent positive, it falls above the 90th percentile, meaning your nursing home scored higher than at least 90 percent of the nursing homes in the database.

Data Limitations

The survey results presented in this report represent the largest compilation of nursing home resident safety culture survey data currently available and therefore provide a useful reference for comparison. However, several limitations to these data should be kept in mind.

First, the nursing homes that submitted data to the database are not a statistically selected sample of all U.S. nursing homes, since only nursing homes that administered the survey on their own and were willing to submit their data for inclusion in the database are represented. However, the characteristics of the database nursing homes are fairly consistent with the distribution of nursing homes in the Centers for Medicare & Medicaid Services Nursing Home Compare database and are described further in Chapter 3.

Second, nursing homes that administered the survey were not required to undergo any training and administered the survey in different ways. Some nursing homes used a paper-only survey, others used Web-only surveys, and others used a combination of these two methods to collect the data. It is possible that these different modes could lead to differences in survey responses; further research is needed to determine whether and how different modes affect the results.

In addition, some nursing homes conducted a census, surveying all staff, while others administered the survey to a sample of staff. In cases in which a sample was drawn, no data were obtained to determine the methodology used to draw the sample. Survey administration statistics obtained about the database nursing homes, such as survey administration modes and response rates, are provided in Chapter 2.

Finally, the data nursing homes submitted have been cleaned for out-of-range values (e.g., invalid response values due to data entry errors), straight-lined records in sections A, B, and D, and blank records (where responses to all survey items were missing). In addition, some logic checks were made. Otherwise, data are presented as submitted. No additional attempts were made to verify or audit the accuracy of the data submitted.

Appendixes A and B: Overall Results by Nursing Home and Respondent Characteristics

In addition to the overall results on the database nursing homes presented, Part II of the report presents data tables showing average percent positive scores on the survey composites and items across database nursing homes, broken down by the following nursing home and respondent characteristics:

Appendix A: Results by Nursing Home Characteristics

- Bed size
- Ownership
- Urban/rural status
- Census region

Appendix B: Results by Respondent Characteristics

- Job title
- Work area
- Interaction with residents
- Shift worked most often
- Tenure in nursing home

The breakout tables are included as appendixes because there are a large number of them. Highlights of the findings from the breakout tables in these appendixes are provided on the following pages. The appendixes are available on the Web at:

<http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/nursing-home/nh-reports.html>.

Highlights From Appendix A: Overall Results by Nursing Home Characteristics

Bed Size (Tables A-1, A-3, A-4)

- The *Staffing* composite had the greatest average percent positive difference (9 percentage points) between nursing homes with *49 or fewer beds* (53 percent) and nursing homes with *200 beds or more* (44 percent).
- Nursing homes with *49 or fewer beds* had the highest percentage of respondents who were willing to recommend their nursing home (77 percent); nursing homes with *200 beds or more* had the lowest (69 percent).
- Nursing homes with *49 or fewer beds* had the highest percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (63 percent); nursing homes with *200 beds or more* had the lowest (53 percent).

Ownership (Tables A-5, A-7, A-8)

- The *Compliance With Procedures* composite had the greatest average percent positive difference (5 percentage points) between *Nonprofit/Government* (67 percent) and *For Profit* nursing homes (62 percent).
- *Nonprofit/Government* nursing homes had a higher percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (64 percent) than *For Profit* nursing homes (57 percent).

Urban/Rural Status (A-9, A-11, A-12)

- The *Handoffs* composite had the greatest average percent positive difference (6 percentage points) between *Urban* (66 percent) and *Rural* nursing homes (60 percent).

Census Region (A-13, A-15, A16)

- Nursing homes in the *South* had the highest average percent positive response across the patient safety culture composites (72 percent); nursing homes in the *Northeast* and *Midwest* had the lowest (66 percent).
- The *Training and Skills* composite had the greatest average percent positive difference (12 percentage points) between nursing homes in the *South* (77 percent) and the *Midwest* (65 percent).
- Nursing homes in the *South* had the highest percentage of respondents who were willing to recommend their nursing home (78 percent); nursing homes in the *Midwest* had the lowest (71 percent).
- Nursing homes in the *South* had the highest percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (66 percent); nursing homes in the *Midwest* had the lowest (57 percent).

Highlights From Appendix B: Overall Results by Respondent Characteristics

Job Title (Tables B-1, B-3, B-4)

- *Administrators/Managers* had the highest average percent positive response across the patient safety culture composites (79 percent); *Nursing Assistants/Aides* had the lowest (64 percent).
- The *Communication Openness* composite had the greatest average percent positive difference (30 percentage points) between *Administrators/Managers* (77 percent) and *Nursing Assistants/Aides* (47 percent).
- *Administrators/Managers* had the highest percentage of respondents who were willing to recommend their nursing home (91 percent); *Physicians/Other Providers* had the lowest (68 percent).
- *Administrators/Managers* had the highest percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (80 percent); *Physicians/Other Providers* had the lowest (53 percent).

Work Area (Tables B-5, B-7, B-8)

- The *Communication Openness* composite had the highest average percent positive response in *Rehabilitation* units (55 percent); *Alzheimer's/Dementia* units were the least positive (49 percent) on this composite.

Interaction With Residents (Tables B-9, B-11, B-12)

- Respondents *without* direct interaction with residents had a higher average percent positive response (73 percent) than those *with* direct interaction with residents (65 percent).
- Respondents *without* direct interaction with residents had a higher percentage of respondents who were willing to recommend their nursing home (79 percent) than respondents *with* direct interaction with residents (73 percent).
- Respondents *without* direct interaction with residents had a higher percentage of respondents who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (66 percent) than respondents *with* direct interaction with residents (58 percent).

Shift Worked Most Often (Tables B-13, B-15, B-16)

- Respondents working the *day shift* had the highest average percent positive response across the composites (69 percent); respondents working the *night shift* had the lowest average percent positive response (63 percent).
- The *Communication Openness* composite had the greatest average percent positive difference (12 percentage points) between respondents working the *day shift* (58 percent) and respondents working the *night shift* (46 percent).
- Respondents working the *day shift* had the highest percentage who were willing to recommend their nursing home (77 percent); respondents working the *night shift* had the lowest (69 percent).
- Respondents working the *day shift* had the highest percentage who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (63 percent); respondents working the *night shift* had the lowest (52 percent).

Tenure in Nursing Home (Tables B-17, B-19, B-20)

- Respondents who had worked in the nursing home *less than 1 year* had the highest average percent positive response across the patient safety culture composites (73 percent); respondents who had worked in the nursing home *3 to 5 years* had the lowest (65 percent).
- The *Communication Openness* composite had the greatest average percent positive difference (16 percentage points) between respondents who had worked *less than 1 year* (66 percent) and respondents who had worked *3 to 5 years* (50 percent).
- Respondents who had worked in the nursing home *11 years or more* had the highest percentage who were willing to recommend their nursing home (80 percent); respondents working *3 to 5 years* had the lowest (72 percent).
- Respondents who had worked in their nursing home *less than 1 year* and *11 years or more* had the highest percentage who gave their nursing home an overall rating on resident safety of “Excellent” or “Very good” (65 percent); respondents who had worked in their nursing home *1 to 2 years* and *3 to 5 years* had the lowest (57 percent).



