



MEDICAL OFFICE SURVEY ON PATIENT SAFETY CULTURE



2012 USER COMPARATIVE DATABASE REPORT



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**PATIENT
SAFETY**

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Medical Office Survey on Patient Safety Culture: 2012 User Comparative Database Report

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Executive Summary

The *Medical Office Survey on Patient Safety Culture* is an expansion of AHRQ's *Hospital Survey on Patient Safety Culture*. The medical office survey is designed to measure the culture of patient safety in medical offices from the perspective of providers and staff. The Medical Office Survey on Patient Safety Culture Comparative Database consists of data from more than 900 medical offices and nearly 24,000 medical office staff respondents who completed the survey.

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

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

Survey Content

The medical office survey includes 38 items that measure 10 composites of organizational culture pertaining to patient safety:

1. Communication About Error
2. Communication Openness
3. Office Processes and Standardization
4. Organizational Learning
5. Overall Perceptions of Patient Safety and Quality
6. Owner/Managing Partner/Leadership Support for Patient Safety
7. Patient Care Tracking/Followup
8. Staff Training
9. Teamwork
10. Work Pressure and Pace

The survey also includes questions that ask respondents about problems exchanging information with other settings and about access to care. In addition, it has questions that ask respondents to rate their medical office in five areas of health care quality (patient centered, effective, timely, efficient, equitable) and to provide an overall rating on patient safety.

Survey Administration Statistics

- The 2012 database consists of data from 23,679 medical office staff respondents from 934 participating medical offices.
- The average medical office response rate was 71 percent, with an average of 25 completed surveys per medical office.

Characteristics of Participating Medical Offices

- Database medical offices vary in number of providers and specialties.
- Nearly two-thirds (62 percent) of medical offices had fully implemented electronic medical/health records.
- Nearly three-fourths (73 percent) of medical offices were owned by a hospital or health system.

Characteristics of Respondents

- The top three staff positions of respondents were:
 - Administrative or clerical staff (28 percent).
 - Other clinical staff or clinical support staff (24 percent).
 - Registered Nurse (RN), Licensed Vocational Nurse (LVN), or Licensed Practical Nurse (LPN) (18 percent).
- Nearly two-thirds of respondents (63 percent) had worked at their medical office for at least 3 years.
- Most respondents (57 percent) worked between 33 and 40 hours per week.

Areas of Strength for Most Medical Offices

Results are expressed in terms of percent positive response. Percent positive is the percentage of positive responses (e.g., Agree, Strongly agree) to positively worded items (e.g., “Staff in this office follow standardized processes to get tasks done”) or negative responses (e.g., Disagree, Strongly disagree) to negatively worded items (e.g., “This office is more disorganized than it should be”).

Teamwork (average 84 percent positive response)—This composite is defined as the extent to which the office has a culture of teamwork, mutual respect, and close working relationships among staff and providers. This composite had the highest average percent positive response.

Patient Care Tracking/Follow-up (average 82 percent positive response)—This composite is defined as the extent to which the office reminds patients about appointments, documents how well patients follow treatment plans, follows up with patients who need monitoring, and follows up when reports from an outside provider are not received. This composite had the second highest average percent positive response.

Area With Potential for Improvement for Most Medical Offices

Work Pressure and Pace (average 46 percent positive response)—This composite is defined as the extent to which there are enough staff and providers to handle the office patient load, and the office work pace is not hectic. This composite had the lowest average percent positive response.

Results by Medical Office Characteristics

Number of Providers

- Medical offices with *one or two providers* had the highest average percent positive on all 10 patient safety culture composites.
- Percent positive scores (those responding “Excellent” or “Very Good”) for all five Overall Ratings on Quality were higher for medical offices with fewer providers.
- Medical offices with two *providers* had the highest (74 percent) percentage of respondents who gave their medical office an Average Overall Rating on Quality and Patient Safety of “Excellent” or “Very good.” Medical offices with *14 to 19 providers* had the lowest (57 percent).

Single vs. Multi-Specialty

- *Single specialty* medical offices had a higher average percent positive response than *Multi-specialty* medical offices on all 10 patient safety culture composites.
- *Single specialty* medical offices had higher percent positive scores (those responding “Excellent” or “Very good”) for all five Overall Ratings on Quality.
- *Single specialty* medical offices had a higher percentage of respondents who gave their medical office an Average Overall Rating on Quality and Patient Safety of “Excellent” or “Very good” (68 percent) than *Multi-specialty* medical offices (59 percent).

Specialty

- No clear patterns emerged across specialties (Cardiology, Hematology, OB/GYN, Pediatrics, Primary Care) on the patient safety culture composites or the five Overall Ratings on Quality.
- Medical offices that only specialized in *Pediatrics* had the highest Average Overall Rating on Quality and Patient Safety (those responding “Excellent” or “Very good”) (69 percent); *OB/GYN* had the lowest (66 percent).

Ownership

- *Community health center* and *Provider and/or Physician owned* medical offices had the highest average percent positive response across the composites (72 percent).
- *Federal, State, or local government* medical offices had the lowest percent positive scores (those responding “Excellent” or “Very Good”) for all five Overall Ratings on Quality.
- *Federal, State, or local government* medical offices had the lowest Average Overall Rating on Quality and Patient Safety (those responding “Excellent” or “Very good”) (51 percent).

Region

- *South Atlantic* medical offices had the highest average percent positive response on all 10 patient safety culture composites.
- *South Atlantic* medical offices had higher percent positive scores (those responding “Excellent” or “Very good”) for all five Overall Ratings on Quality.

- *South Atlantic* medical offices had the highest percentage of respondents who gave their medical office an Average Overall Rating on Quality and Patient Safety of “Excellent” or “Very good” (70 percent).

Results by Respondent Characteristics

Staff Position

- *Management* had the highest average percent positive response across the composites (80 percent).
- *Management* had the highest percent positive scores (those selecting “Excellent” or “Very good”) for three of the five Overall Ratings on Quality; *Physicians* had the highest percent positive scores for the other two ratings.
- *Management* had the highest percentage who gave their medical office an Average Overall Rating on Quality and Patient Safety of “Excellent” or “Very good” (73 percent); *Administrative/Clerical* had the lowest (60 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.

Seven steps of action planning are provided to give medical offices guidance on next steps to take to turn their survey results into actual patient safety culture improvement.

1. Understand your survey results.
2. Communicate and discuss the survey results.
3. Develop focused action plans.
4. Communicate action plans and deliverables.
5. Implement action plans.
6. Track progress and evaluate impact.
7. Share what works.

Purpose and Use of This Report

In response to requests from medical offices interested in comparing results with those of other medical offices on the *Medical Office Survey on Patient Safety Culture*, the Agency for Healthcare Research and Quality established the Medical Office Survey on Patient Safety Culture Comparative Database. The *Preliminary Comparative Results Report* was released in 2010 and consisted of results from 470 medical offices and 10,567 staff respondents.

The *Medical Office Survey on Patient Safety Culture 2012 User Comparative Database Report* consists of data from 934 medical offices and 23,679 staff respondents. The 934 medical offices in the 2012 report fall into three categories:

- 290 medical offices from the 2010 *Preliminary Comparative Results Report* that are still included in the 2012 report as their survey administration occurred within the last 5 years.
- 644 medical offices that submitted data for the 2012 report.

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

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

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 medical office characteristics (number of providers, single vs. multi-specialty, specialty, ownership, and region) and respondent characteristics (staff position).

Chapter 1. Introduction

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

Survey Development and Content

Recognizing the need for a measurement tool to assess the culture of patient safety in medical offices, the Agency for Healthcare Research and Quality (AHRQ) funded and supervised development of the *Medical Office Survey on Patient Safety Culture*. This work is an extension of research used to develop the *Hospital Survey on Patient Safety Culture*.

Developers reviewed research pertaining to safety, patient safety, health care quality, ambulatory medicine, medical errors, error reporting, safety climate and culture, and organizational climate and culture. In addition, they reviewed existing medical office surveys. The researchers also consulted more than two dozen experts in the field of medical office practice and patient safety and many medical office providers and staff for help in identifying key topics and issues. Based on these activities, the researchers identified a potential list of dimensions to include in the survey.

The survey was pilot tested and revised, and AHRQ released it in 2009. It was designed to assess medical office staff opinions about patient safety issues, medical error, and event reporting. The survey includes 38 items that measure 10 composites of patient safety culture. In addition to the composite items, 14 items measure how often medical offices have problems exchanging information with other settings and other patient safety and quality issues. Each of the 10 patient safety culture composites is listed and defined in Table 1-1.

Table 1-1. Patient Safety Culture Composites and Definitions

Patient Safety Culture Composite	Definition: <i>The extent to which....</i>
1. Communication About Error	Staff are willing to report mistakes they observe and do not feel like their mistakes are held against them, and providers and staff talk openly about office problems and how to prevent errors from happening.
2. Communication Openness	Providers in the office are open to staff ideas about how to improve office processes, and staff are encouraged to express alternative viewpoints and do not find it difficult to voice disagreement.
3. Office Processes and Standardization	The office is organized, has an effective workflow, has standardized processes for completing tasks, and has good procedures for checking the accuracy of work performed.
4. Organizational Learning	The office has a learning culture that facilitates making changes in office processes to improve the quality of patient care and evaluates changes for effectiveness.

Patient Safety Culture Composite	Definition: <i>The extent to which....</i>
5. Overall Perceptions of Patient Safety and Quality	The quality of patient care is more important than getting more work done, office processes are good at preventing mistakes, and mistakes do not happen more than they should.
6. Owner/Managing Partner/Leadership Support for Patient Safety	Office leadership actively supports quality and patient safety, places a high priority on improving patient care processes, does not overlook mistakes, and makes decisions based on what is best for patients.
7. Patient Care Tracking/Follow-up	The office reminds patients about appointments, documents how well patients follow treatment plans, follows up with patients who need monitoring, and follows up when reports from an outside provider are not received.
8. Staff Training	The office provides staff with effective on-the-job training, trains staff on new processes, and does not assign staff tasks they have not been trained to perform.
9. Teamwork	The office has a culture of teamwork, mutual respect, and close working relationships among staff and providers.
10. Work Pressure and Pace	There are enough staff and providers to handle the patient load, and the office work pace is not hectic.

The survey also includes questions that ask respondents to rate their medical office in five areas of health care quality (patient centered, effective, timely, efficient, equitable) and to provide an overall patient safety rating. In addition, respondents are asked to provide limited background demographic information.

The survey's toolkit materials are available at the AHRQ Web site (www.ahrq.gov/qual/patientsafetyculture/mosurvindex.htm) and include the survey, survey items and dimensions, user's guide, feedback report template, information about the Microsoft® Excel® Data Entry and Analysis Tool, and the Medical Office Patient Safety Improvement Resource List. The toolkit provides medical offices with the basic knowledge and tools needed to conduct a patient safety culture assessment and suggestions for using the data.

2012 Comparative Database Report

Since its release, the medical office survey has been implemented in hundreds of medical offices across the United States. Medical offices administering the survey have expressed interest in comparing their results with other medical offices as an additional source of information to help them identify areas of strength and areas for improvement. In response to these requests, AHRQ funded the Medical Office Survey on Patient Safety Culture Comparative Database to enable medical offices to compare their most recent survey results with other medical offices and to eventually examine trends in patient safety culture over time. Medical offices interested in submitting to the database should go to the AHRQ Web site for more information (www.ahrq.gov/qual/mosurvey11/mosubinfo.htm).

Data Limitations

The survey results presented in this report represent the largest compilation of medical office patient 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, medical offices that administered the survey were not required to undergo any training and administered the survey in different ways. Some medical offices used an outside company or vendor to handle the survey data collection tasks. Other medical offices administered the survey themselves. It is possible that these different collection methods could lead to differences in survey response; further research is needed to determine whether and how different collection methods affect the results.

Second, the data medical offices submitted have been cleaned for out-of-range values (e.g., invalid response values due to data entry errors) 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.

Finally, medical offices that submitted data to the database are not a statistically selected sample of all U.S. medical offices since only medical offices that voluntarily administered the survey and were willing to submit their data for inclusion in the database are represented.

Medical offices are typically characterized as either those with one or two physicians or group medical practices consisting of three or more physicians. According to the U.S. Census Bureau 2007 Economic Census (2007 NAICS code 6211 “Offices of physicians”), there were 220,131 physicians’ offices in the United States (http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=D&-ds_name=EC0762A1&-lang=en).

A 2008 report from the National Center for Health Statistics presents estimates of the number and characteristics of medical practices with which physicians are associated. These data, from the 2005-2006 National Ambulatory Medical Care Surveys (NAMCS), estimate that during 2005-2006 there were 163,700 medical practices in the United States. This is considerably lower than the 220,131 physicians’ offices in the U.S. Census Bureau 2007 Economic Census.

To provide a basic comparison of the database medical offices with these medical office population estimates, Table 1-2 shows the geographic distribution (www.census.gov/econ/industry/geo/g6211.htm) of the AHRQ Medical Office Survey on Patient Safety Culture database. This distribution is compared with the distribution of physicians’ offices based on the 2007 U.S. Economic Census and the NAMCS estimates of the number of office-based medical practices in 2005-2006. The table shows that the 934 AHRQ database medical offices represent less than 1 percent of the estimated population of medical offices. In addition, database medical offices overrepresent the Midwest region and underrepresent medical offices in the West and Northeast.

Table 1-2. Distribution of AHRQ Database Medical Offices (2012) Compared With U.S. Economic Census (2007) and NAMCS (2005-2006) Data by Region

Census Region	AHRQ Medical Office Survey on Patient Safety Culture Database Medical Offices (2012)		U.S. Economic Census, Offices of Physicians (2007)		NAMCS Office-Based Medical Practices (2005-2006)	
	Number	Percent	Number	Percent	Number	Percent
South	331	35%	84,424	38%	60,700	37%
Northeast	128	14%	44,605	20%	36,300	22%
Midwest	425	46%	38,951	18%	30,100	18%
West	50	5%	52,151	24%	36,600	22%
TOTAL	934	100%	220,131	100%	163,700	100%

Note: Column percent totals may not add to exactly 100 percent because of rounding.

Additional comparisons of the AHRQ database medical offices with other characteristics of the population of medical offices are not available. Subsequent chapters of this report only present information about the characteristics of AHRQ database medical offices.

Chapter 2. Survey Administration Statistics

This chapter presents descriptive information on how the 2012 database medical offices administered the survey.

Highlights

- The 2012 database consists of data from 23,679 medical office staff respondents from 934 participating medical offices.
- The average medical office response rate was 71 percent, with an average of 25 completed surveys per medical office.

The 2012 database consists of survey data from 934 medical offices with a total of 23,679 medical office providers and staff respondents. Participating medical offices administered the medical office survey to their providers and staff between November 2009 and October 2011 and voluntarily submitted their data for inclusion in the database.

Overall statistics for medical offices included in the 2012 database are shown in Table 2-1. An average of 25 completed surveys were submitted per medical office (range: 5 to 402), with an average medical office response rate of 71 percent (range: 7 to 100 percent).

Table 2-1. Overall Statistics for 934 Participating Medical Offices

Response Rate Information	Statistic
Number of respondents	23,679
Number of surveys administered	35,438
Overall response rate	67%
Average number of respondents per medical office (range: 5 to 402)	25
Average number of surveys administered per medical office (range: 5 to 685)	38
Overall average medical office response rate (range: 7% to 100%)	71%

Most medical offices administered the survey by web only (63%) as shown in Table 2-2, but web only had the lowest average response rate (66%) as shown in Table 2-3.

Table 2-2. Survey Administration Statistics by Survey Mode

Survey Administration Mode	2012 Database Medical Offices		2012 Database Respondents	
	Number	Percent	Number	Percent
Paper only	324	35%	7,175	30%
Web only	587	63%	14,175	60%
Both paper and Web	23	2%	2,329	10%
Total	934	100%	23,679	100%

Table 2-3. Average Medical Office Response Rate by Mode

Survey Administration Mode	Average Medical Office Response Rate
Paper only	80%
Web only	66%
Both Web and paper	87%

Chapter 3. Characteristics of Participating Medical Offices

Highlights

- Database medical offices vary in number of providers and specialties.
- Nearly two-thirds (62 percent) of medical offices had fully implemented electronic medical/health records.
- Nearly three-fourths (73 percent) of medical offices were owned by a hospital or health system.

This chapter presents information about the distribution of database medical offices by number of providers, single vs. multi-specialty, specialty, implementation status of electronic tools, majority ownership, region, and number of locations.

Number of Providers

Table 3-1 shows the distribution of medical offices and respondents by number of providers. More than two-thirds of database medical offices (69 percent) had fewer than 10 providers, but they account for less than half (42 percent) of the database respondents.

Table 3-1. Distribution of Medical Offices by Number of Providers

Number of Providers	2012 Database Medical Offices		2012 Database Respondents	
	Number	Percent	Number	Percent
1	34	4%	435	2%
2	111	12%	970	4%
3	110	12%	1,337	6%
4-9	382	41%	7,006	30%
10-13	87	9%	2,394	10%
14-19	63	7%	1,899	8%
More than 19	139	15%	9,506	40%
Total	926	100%	23,547	100%
Missing	8		132	

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

Single vs. Multi-Specialty

As shown in Table 3-2, more than two-thirds of medical offices were single specialty (69 percent).

Table 3-2. Distribution of Medical Offices by Single vs. Multi-Specialty

Single vs. Multi-Specialty	2012 Database Medical Offices		2012 Database Respondents	
	Number	Percent	Number	Percent
Single specialty	641	69%	11,188	47%
Multi-specialty with primary care only (e.g., family medicine, internal medicine, pediatrics, OB/GYN, general practice, general preventive medicine)	85	9%	2,039	9%
Multi-specialty with primary care and specialty care	188	20%	9,643	41%
Multi-specialty with specialty care only	18	2%	768	3%
Total	932	100%	23,638	100%
Missing	2		41	

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

Specialty

The 934 medical offices represent a wide range of specialties, with most categorized as Family Practice/Family Medicine (437 offices) (Table 3-3).

Table 3-3. Number of Medical Offices by Specialty

Specialty	Number of Medical Offices	Specialty	Number of Medical Offices
Allergy/Immunology	63	Neurology	51
Anesthesiology	16	Nuclear Medicine	2
Cardiology	100	OB/GYN or GYN	158
Child & Adolescent Psychiatry	20	Ophthalmology	41
Dermatology	48	Orthopedics	90
Diagnostic Radiology	16	Otolaryngology	42
Emergency Medicine	17	Pathology – Anatomic/Clinical	4
Endocrinology/Metabolism	50	Pediatrics	165
Family Practice/Family Medicine	437	Physical Medicine & Rehabilitation	23
Forensic Pathology	1	Psychiatry	76
Gastroenterology	56	Public Health & Rehabilitation	6
General Practice	45	Pulmonary Medicine	45
General Preventive Medicine	22	Radiology	38
General Surgery	63	Rheumatology	40
Geriatrics	34	Surgery (All)	55
Hematology/Oncology	53	Urology	43
Internal Medicine	245	Vascular Medicine	16
Medical Genetics	3	Other specialty	155
Nephrology	39		

Note: The total number of medical offices will not necessarily sum to 934 as some medical offices may categorize themselves as more than one type of specialty.

Implementation of Electronic Tools

Most medical offices had fully implemented four of the five computer-based tools (Table 3-4). Electronic appointment scheduling was the electronic tool most fully implemented across medical offices (88 percent); electronic ordering of tests, imaging, or procedures was the least (48 percent).

Table 3-4. Implementation Status of Electronic Tools

Electronic Tools	Implementation Status					
	Not Implemented		Implementation in Process		Fully Implemented	
	Number	Percent	Number	Percent	Number	Percent
Electronic appointment scheduling	38	4%	75	8%	818	88%
Electronic ordering of medications	280	30%	170	18%	483	52%
Electronic ordering of tests, imaging, or procedures	314	34%	166	18%	450	48%
Electronic access to your patients' test or imaging results	150	16%	141	15%	641	69%
Electronic medical/health records (EMR/EHR)	235	25%	118	13%	579	62%

Note: Percentages may not add to exactly 100 percent due to rounding. Results are at the medical office level.

Ownership

As shown in Table 3-5, nearly three-fourths of medical offices were owned by a hospital or health system (73 percent).

Table 3-5. Distribution of Medical Offices by Majority Ownership

Majority Ownership	2012 Database Medical Offices		2012 Database Respondents	
	Number	Percent	Number	Percent
Provider(s) and/or physician(s)	92	10%	1,643	7%
University or academic medical institution	53	6%	1,446	6%
Hospital or health system	678	73%	16,500	70%
Community health system	58	6%	1,342	6%
Government (Federal, State, local)	34	4%	2,378	10%
Other	14	2%	312	1%
Total	929	100%	23,621	100%
Missing	5		58	

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

Region

Table 3-6 shows the distribution of database medical offices by geographic regions. The largest proportions of database medical offices are from the East Central (35 percent) and South Atlantic regions (28 percent).

Table 3-6. Distribution of Database Medical Offices and Respondents by Region

Region	2012 Database Medical Offices		2012 Database Respondents	
	Number	Percent	Number	Percent
New England/Mid-Atlantic	128	14%	3,524	15%
South Atlantic	257	28%	4,721	20%
East Central	325	35%	10,568	45%
West North Central	113	12%	1,957	8%
West South Central	61	7%	1,743	7%
Mountain/Pacific	50	5%	1,166	5%
Total	934	100%	23,679	100%

Note: Percentages may not add to exactly 100 percent due to rounding. States are categorized into regions as follows: New England/Mid-Atlantic: CT, MA, ME, NH, NJ, NY, PA, RI, VT; South Atlantic: DC, DE, FL, GA, MD, NC, SC, VA, WV; East Central: AL, IL, IN, KY, MI, MS, OH, TN, WI; West North Central: IA, KS, MN, MO, ND, NE, SD; West South Central: AR, LA, OK, TX; Mountain/ Pacific: AK , AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY.

Number of Locations

As shown in Table 3-7, more than half of medical offices had only one location (60 percent).

Table 3-7. Distribution of Medical Offices by Number of Locations

Number of Locations	2012 Database Medical Offices		2012 Database Respondents	
	Number	Percent	Number	Percent
One Location	556	60%	10,581	45%
Multiple Locations	376	40%	13,080	55%
Total	932	100%	23,661	100%
Missing	2		18	

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

Chapter 4. Characteristics of Respondents

Highlights

- The top three staff positions of respondents were: Administrative or clerical staff (28 percent), Other clinical staff or clinical support staff (24 percent), and Registered Nurse (RN), Licensed Vocational Nurse (LVN), or Licensed Practical Nurse (LPN) (18 percent).
- Nearly two-thirds (63 percent) had worked at their medical office for at least 3 years.
- Most respondents (57 percent) worked between 33 and 40 hours per week.

This chapter describes respondents within the participating medical offices. In this chapter, respondents from medical offices that omitted one of these questions, or those who did not respond, are shown as missing in the tables and are excluded from total percentages.

Staff Position

More than one-quarter (28 percent) of respondents selected “Administrative or clerical staff” as their staff position, followed by “Other clinical staff or clinical support staff” (24 percent), and “Registered Nurse (RN), Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN)” (18 percent) (Table 4-1).

Table 4-1. Distribution of Respondents by Staff Position

Staff Position	2012 Database Respondents	
	Number	Percent
Administrative or clerical staff	6,378	28%
Other clinical staff or clinical support staff	5,557	24%
Registered Nurse (RN), Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN)	4,203	18%
Physician (M.D. or D.O.)	2,943	13%
Management	1,621	7%
Physician Assistant, Nurse Practitioner, Clinical Nurse Specialist, Nurse Midwife, Advanced Practice Nurse, etc.	1,061	5%
Other position	1,200	5%
TOTAL	22,963	100%
Missing	716	
Overall total	23,679	

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

Additional Characteristics of Respondents

Tables 4-2 and 4-3 show the distribution of medical offices by tenure and hours worked per week.

Table 4-2. Distribution of Respondents by Tenure

Tenure in Medical Office	2012 Database Respondents	
	Number	Percent
Less than 2 months	560	2%
2 months to less than 1 year	2,600	12%
1 year to less than 3 years	5,180	23%
3 years to less than 6 years	5,003	22%
6 years to less than 11 years	4,433	20%
11 years or more	4,746	21%
Total	22,522	100%
Missing	1,157	
Overall total	23,679	

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

Table 4-3. Distribution of Hours Worked per Week

Hours Worked per Week in the Medical Office	2012 Database Respondents	
	Number	Percent
1 to 4 hours	255	1%
5 to 16 hours	970	4%
17 to 24 hours	1,559	7%
25 to 32 hours	2,145	10%
33 to 40 hours	12,814	57%
41 hours or more	4,813	21%
Total	22,556	100%
Missing	1,123	
Overall total	23,679	

Note: Percentages may not add to exactly 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 medical offices on each of the survey's items and composites. Reporting the average across medical offices ensures that each medical office receives an equal weight that contributes to the overall average.

Reporting the data at the medical office 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 medical offices.

Highlights

- Two composites were identified as areas of strength for the medical offices:
 - *Teamwork*—the average percent positive response (84 percent) was the highest.
 - *Patient Care Tracking/Follow-up*—the average percent positive response (82 percent) was the second highest.
- One composite was identified as an area for improvement for the medical offices:
 - *Work Pressure and Pace*—the average percent positive response (46 percent) was the lowest.
- Most respondents within medical offices (65 percent) gave their medical office an Average Overall Quality and Patient Safety rating of “Excellent” (28 percent) or “Very good” (37 percent).

Composite and Item-Level Charts

This section provides the overall item and composite-level results. The methods for calculating the percent positive scores at the item and composite levels 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 10 patient safety culture composites across the database medical offices. The patient safety culture composites are shown in order from the highest average percent positive response to the lowest.

Areas of Strength

- **Teamwork**—the office has a culture of teamwork, mutual respect, and close working relationships among staff and providers. This patient safety culture composite had the highest average percent positive response (84 percent), indicating it is an area of strength across the database medical offices.
- **Patient Care Tracking/Follow-up**—the office reminds patients about appointments, documents how well patients follow treatment plans, follows up with patients who need monitoring, and follows up when reports from an outside provider are not received. This patient safety culture composite had the second highest average percent positive response (82 percent).

Area With Potential for Improvement

- **Work Pressure and Pace**—there are enough staff and providers to handle the patient load, and the office work pace is not hectic. This patient safety culture composite had the lowest average percent positive response (46 percent), indicating it is an area with potential for improvement across the database medical offices.

Item-Level Results

Chart 5-2 shows the average percent positive response for each of the 38 survey composite items. The 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. Chart 5-3 shows the item-level average ratings on a list of patient safety and quality issues, and Chart 5-4 shows the item-level average ratings on information exchange with other settings.

Area of Strength for the Patient Safety Culture Composite Items

- The survey item with the highest average percent positive response (89 percent) was from the patient safety culture composite *Patient Care Tracking/Follow-up*: “This office follows up with patients who need monitoring.”

Area With Potential for Improvement for the Patient Safety Culture Composite Items

- The survey item with the lowest average percent positive response (31 percent) was from the patient safety culture composite *Work Pressure and Pace*: “In this office, we often feel rushed when taking care of patients.” (That is, an average of only 31 percent of respondents in each medical office *Strongly disagreed* or *Disagreed* with this negatively worded item.)

Area of Strength for Noncomposite Items

- The survey item with the highest average percent positive response (96 percent) was: “The wrong chart/medical record was used for a patient.” (That is, an average of 96 percent of respondents in each medical office indicated that the frequency of this event occurring was several times or less in the past 12 months.)

Area With Potential for Improvement for Noncomposite Items

- The survey item with the lowest average percent positive response (51 percent) was “A pharmacy contacted our office to clarify or correct a prescription.”

Overall Ratings

Chart 5-5 shows the results from the five items on quality, and Chart 5-6 shows an Overall Rating on Patient Safety. On average across medical offices, the area of greatest strength was providing equitable care to patients, with 81 percent of medical office staff giving their medical office a rating of “Excellent” (51 percent) or “Very good” (30 percent).

The area with most potential for improvement was providing timely health care to patients, with only 50 percent of medical office staff giving their medical office a rating of “Excellent” (17 percent) or “Very good” (33 percent). Most respondents were positive on the overall rating on patient safety, with 65 percent giving their medical office a rating of “Excellent” (22 percent) or “Very good” (43 percent).

Average Overall Rating on Quality and Patient Safety

Chart 5-7 shows the average overall rating on quality and patient safety, which is the average of the five quality items and the overall rating on patient safety across all 2012 database medical offices. Consistent with the items in Chart 5-5, most respondents were positive, with 65 percent giving their medical office a rating of “Excellent” (28 percent) or “Very good” (37 percent).

Chart 5-1. Composite-Level Average Percent Positive Response Across All 2012 Database Medical Offices

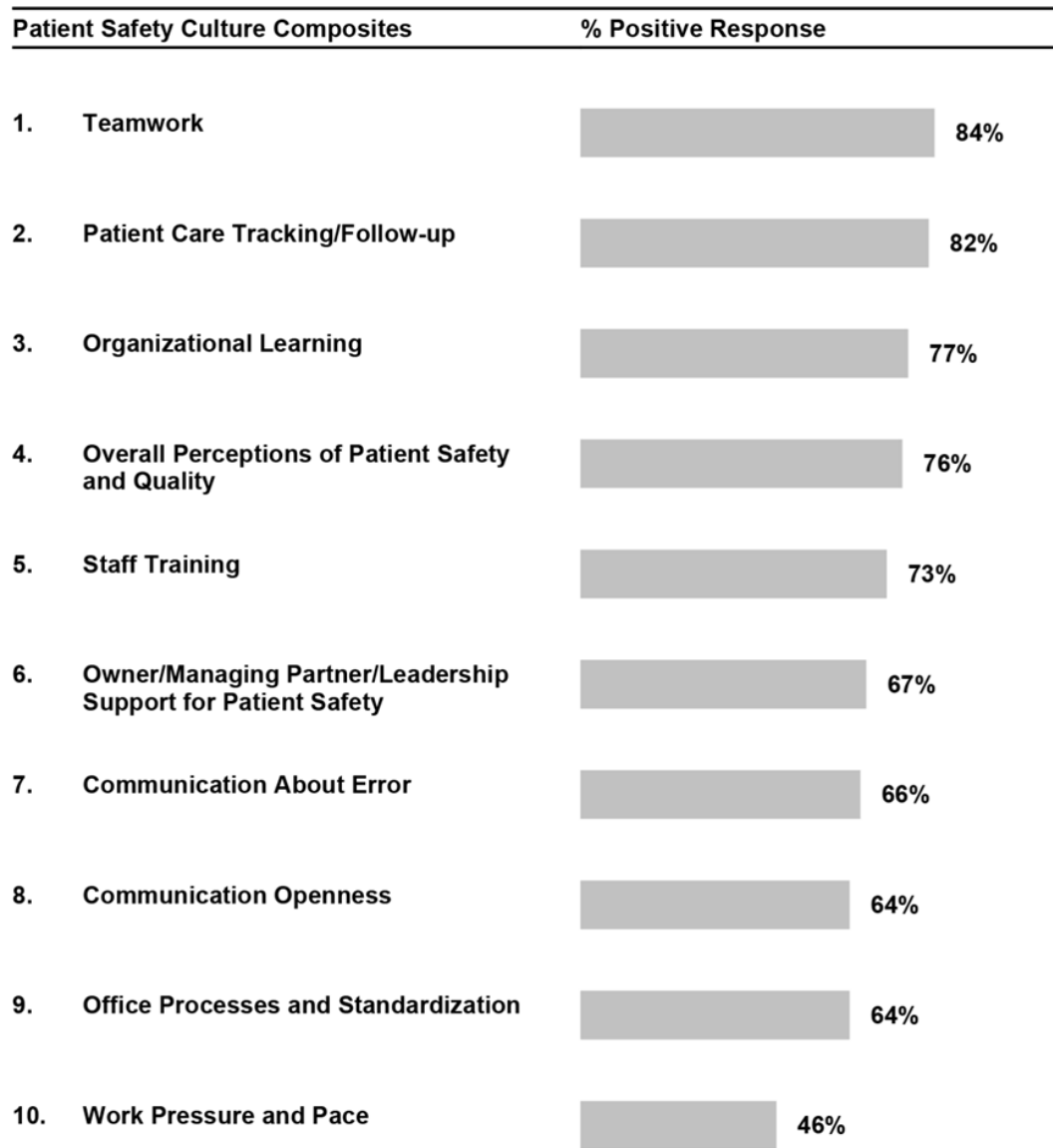


Chart 5-2. Item-Level Average Percent Positive Response Across All 2012 Database Medical Offices (Page 1 of 4)

Survey Items By Patient Safety Culture Composite	Survey Item % Positive Response
1. <u>Teamwork</u>	
1. When someone in this office gets really busy, others help out. (C1)	84%
2. In this office, there is a good working relationship between staff and providers. (C2)	88%
3. In this office, we treat each other with respect. (C5)	82%
4. This office emphasizes teamwork in taking care of patients. (C13)	83%
2. <u>Patient Care Tracking/Follow-up</u>	
1. This office reminds patients when they need to schedule an appointment for preventive or routine care. (D3)	83%
2. This office documents how well our chronic-care patients follow their treatment plans. (D5)	74%
3. Our office follows up when we do not receive a report we are expecting from an outside provider. (D6)	84%
4. This office follows up with patients who need monitoring. (D9)	89%
3. <u>Organizational Learning</u>	
1. When there is a problem in our office, we see if we need to change the way we do things. (F1)	83%
2. This office is good at changing office processes to make sure the same problems don't happen again. (F5)	78%
3. After this office makes changes to improve the patient care process, we check to see if the changes worked. (F7)	70%

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

Chart 5-2. Item-Level Average Percent Positive Response Across All 2012 Database Medical Offices (Page 2 of 4)

Survey Items By Patient Safety Culture Composite	Survey Item % Positive Response
4. Overall Perceptions of Patient Safety and Quality	
1. Our office processes are good at preventing mistakes that could affect patients. (F2)	82%
2. Mistakes happen more than they should in this office. (F3R)	75%
3. It is just by chance that we don't make more mistakes that affect our patients. (F4R)	77%
4. In this office, getting more work done is more important than quality of care. (F6R)	70%
5. Staff Training	
1. This office trains staff when new processes are put into place. (C4)	76%
2. This office makes sure staff get the on-the-job training they need. (C7)	74%
3. Staff in this office are asked to do tasks they haven't been trained to do. (C10R)	69%
6. Owner/Managing Partner/Leadership Support for Patient Safety	
1. They aren't investing enough resources to improve the quality of care in this office. (E1R)	49%
2. They overlook patient care mistakes that happen over and over. (E2R)	79%
3. They place a high priority on improving patient care processes. (E3)	78%
4. They make decisions too often based on what is best for the office rather than what is best for patients. (E4R)	60%

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 Across All 2012 Database Medical Offices (Page 3 of 4)

Survey Items By Patient Safety Culture Composite	Survey Item % Positive Response
7. <u>Communication About Error</u>	
1. Staff feel like their mistakes are held against them. (D7R)	56%
2. Providers and staff talk openly about office problems. (D8)	58%
3. In this office, we discuss ways to prevent errors from happening again. (D11)	79%
4. Staff are willing to report mistakes they observe in this office. (D12)	73%
8. <u>Communication Openness</u>	
1. Providers in this office are open to staff ideas about how to improve office processes. (D1)	68%
2. Staff are encouraged to express alternative viewpoints in this office. (D2)	68%
3. Staff are afraid to ask questions when something does not seem right. (D4R)	69%
4. It is difficult to voice disagreement in this office. (D10R)	53%

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 Across All 2012 Database Medical Offices (Page 4 of 4)

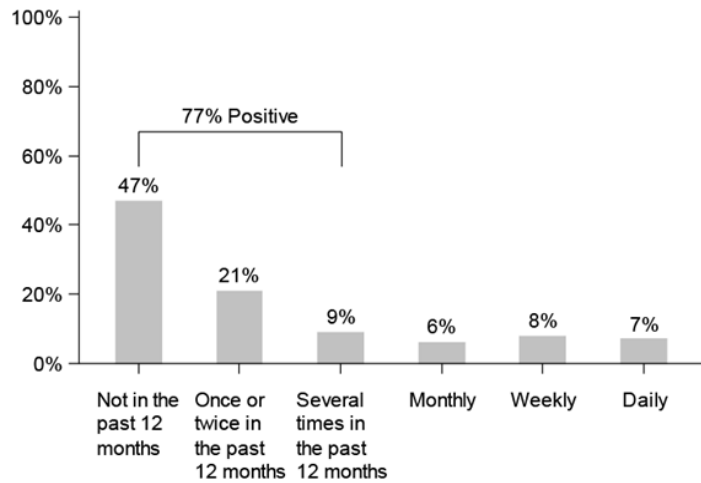
Survey Items By Patient Safety Culture Composite	Survey Item % Positive Response
9. <u>Office Processes and Standardization</u>	
1. This office is more disorganized than it should be. (C8R)	61%
2. We have good procedures for checking that work in this office was done correctly. (C9)	66%
3. We have problems with workflow in this office. (C12R)	49%
4. Staff in this office follow standardized processes to get tasks done. (C15)	79%
10. <u>Work Pressure and Pace</u>	
1. In this office, we often feel rushed when taking care of patients. (C3R)	31%
2. We have too many patients for the number of providers in this office. (C6R)	48%
3. We have enough staff to handle our patient load. (C11)	47%
4. This office has too many patients to be able to handle everything effectively. (C14R)	59%

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).

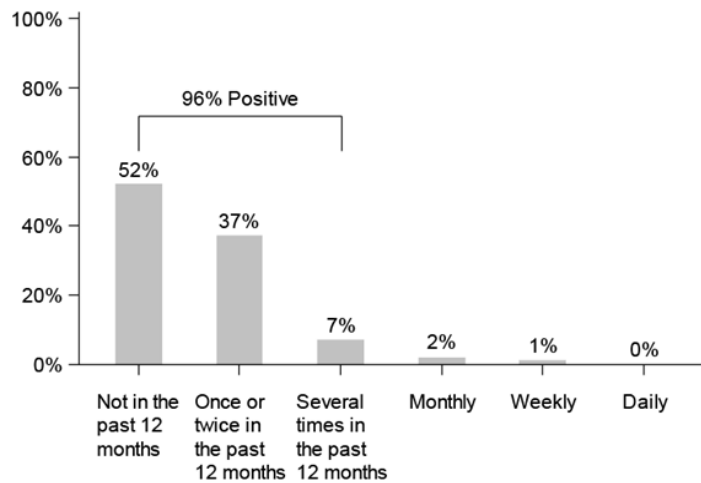
Chart 5-3. Item-Level Average Ratings on List of Patient Safety and Quality Issues Across All 2012 Database Medical Offices (Page 1 of 5)

In your best estimate, how often did the following things happen in your medical office OVER THE PAST 12 MONTHS

A1. A patient was unable to get an appointment within 48 hours for an acute/serious problem.



A2. The wrong chart/medical record was used for a patient.

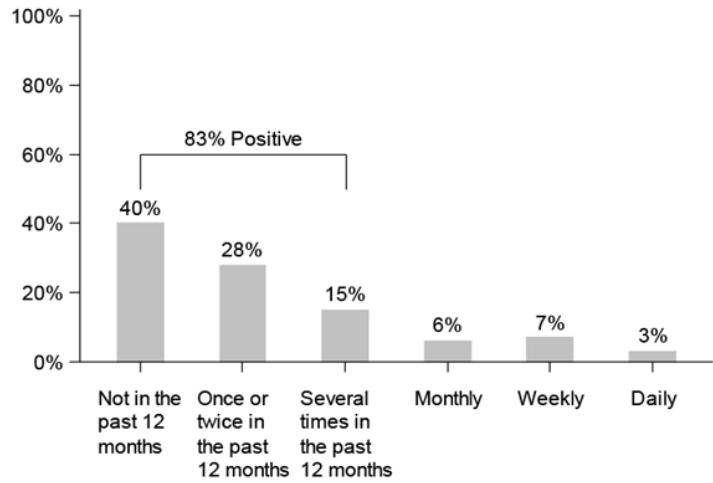


Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices, (2) the percent positive displayed may not equal the sum of the response option percentages due to rounding, and (3) all six percentages may not add to 100 percent due to rounding.

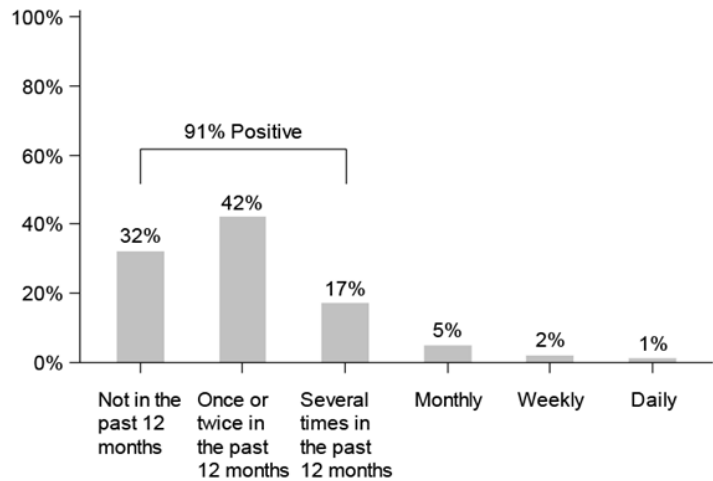
Chart 5-3. Item-Level Average Ratings on List of Patient Safety and Quality Issues Across All 2012 Database Medical Offices (Page 2 of 5)

In your best estimate, how often did the following things happen in your medical office OVER THE PAST 12 MONTHS

A3. A patient's chart/medical record was not available when needed.



A4. Medical information was filed, scanned, or entered into the wrong patient's chart/medical record.

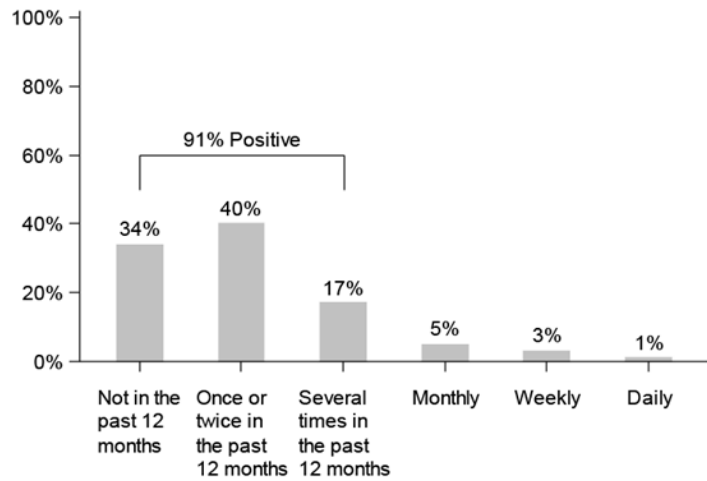


Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices, (2) the percent positive displayed may not equal the sum of the response option percentages due to rounding, and (3) all six percentages may not add to 100 percent due to rounding.

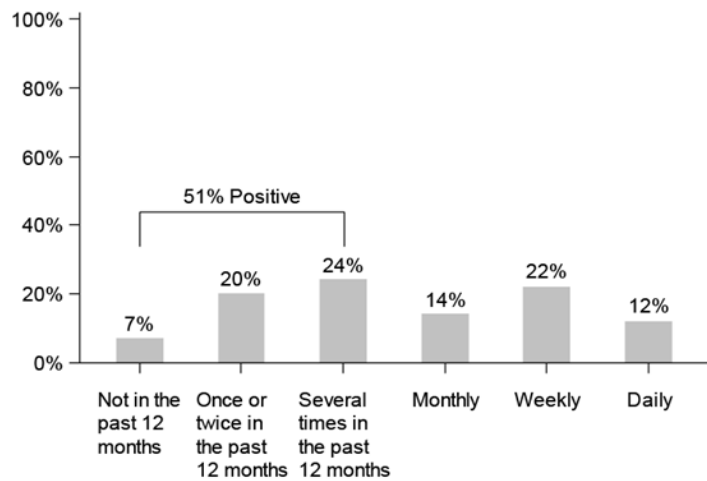
Chart 5-3. Item-Level Average Ratings on List of Patient Safety and Quality Issues Across All 2012 Database Medical Offices (Page 3 of 5)

In your best estimate, how often did the following things happen in your medical office OVER THE PAST 12 MONTHS ?

A5. Medical equipment was not working properly or was in need of repair or replacement.



A6. A pharmacy contacted our office to clarify or correct a prescription.

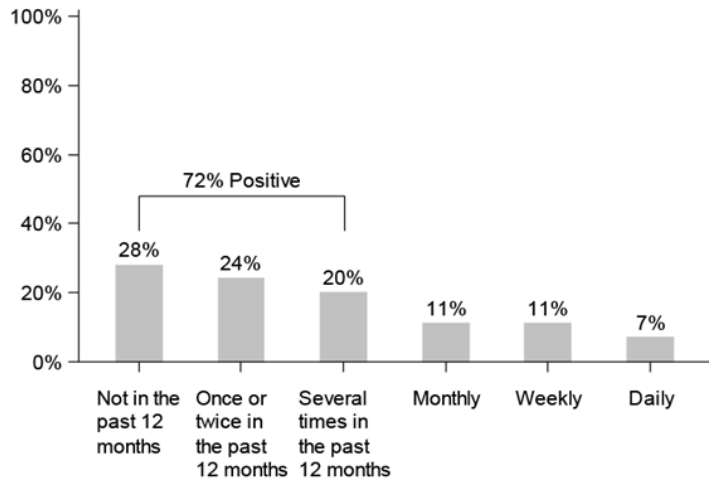


Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices, (2) the percent positive displayed may not equal the sum of the response option percentages due to rounding, and (3) all six percentages may not add to 100 percent due to rounding.

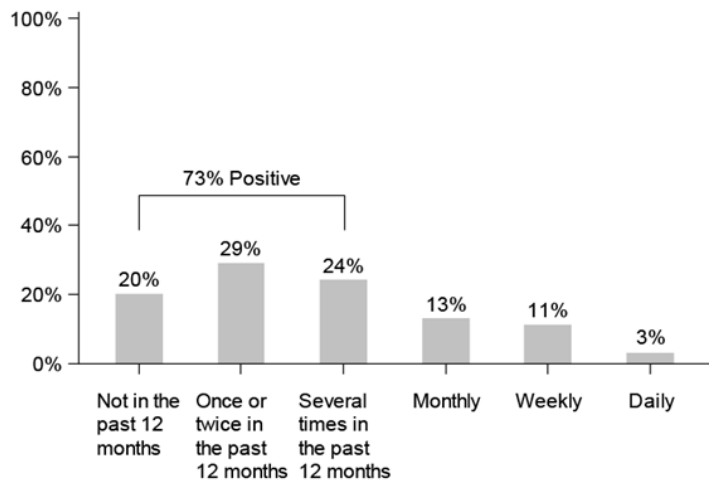
Chart 5-3. Item-Level Average Ratings on List of Patient Safety and Quality Issues Across All 2012 Database Medical Offices (Page 4 of 5)

In your best estimate, how often did the following things happen in your medical office OVER THE PAST 12 MONTHS ?

A7. A patient's medication list was not updated during his or her visit.



A8. The results from a lab or imaging test were not available when needed.

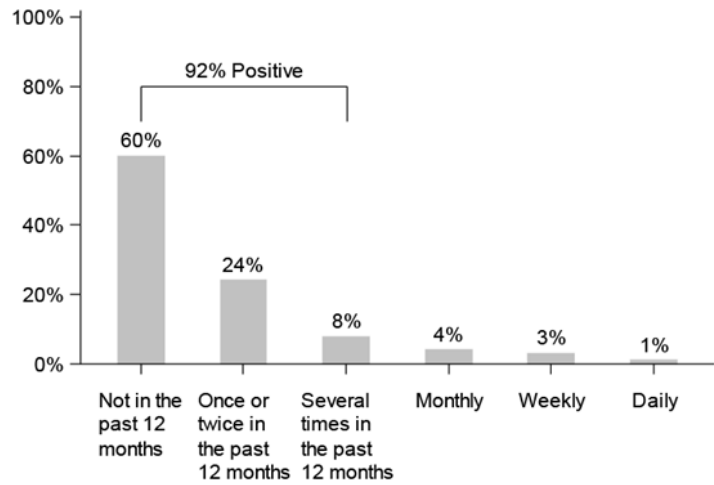


Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices, (2) the percent positive displayed may not equal the sum of the response option percentages due to rounding, and (3) all six percentages may not add to 100 percent due to rounding.

Chart 5-3. Item-Level Average Ratings on List of Patient Safety and Quality Issues Across All 2012 Database Medical Offices (Page 5 of 5)

In your best estimate, how often did the following things happen in your medical office OVER THE PAST 12 MONTHS?

A9. A critical abnormal result from a lab or imaging test was not followed up within 1 business day.



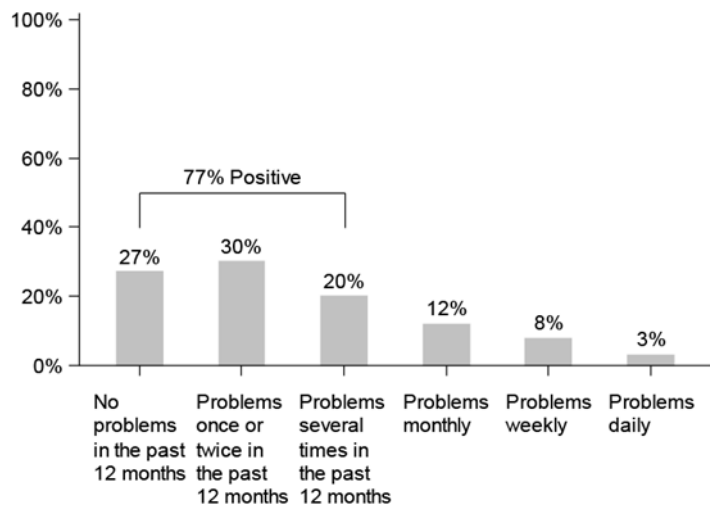
Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices, (2) the percent positive displayed may not equal the sum of the response option percentages due to rounding, and (3) all six percentages may not add to 100 percent due to rounding.

Chart 5-4. Item-Level Average Ratings on Information Exchange With Other Settings Across All 2012 Database Medical Offices

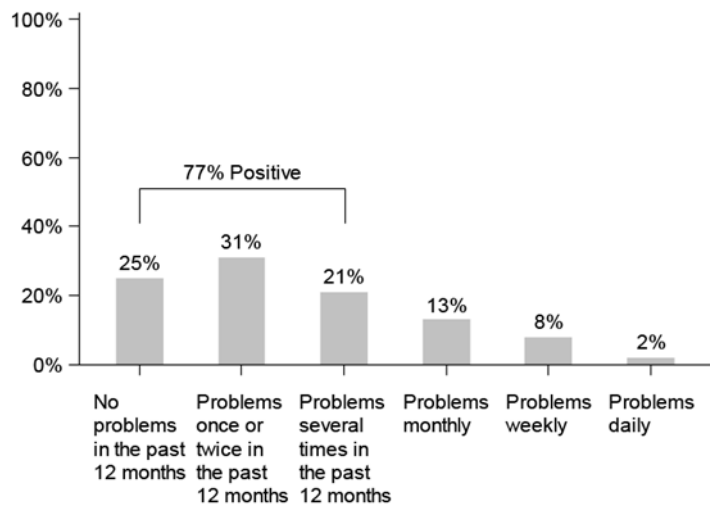
(Page 1 of 3)

Over the past 12 months, how often has your medical office had problems exchanging accurate, complete, and timely information with:

B1. Outside labs/imaging centers?



B2. Other medical offices/Outside physicians?

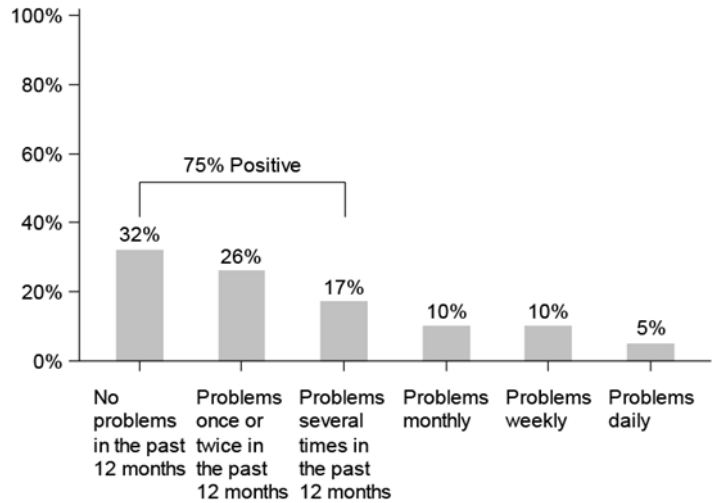


Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices, (2) the percent positive displayed may not equal the sum of the response option percentages due to rounding, and (3) all six percentages may not add to 100 percent due to rounding.

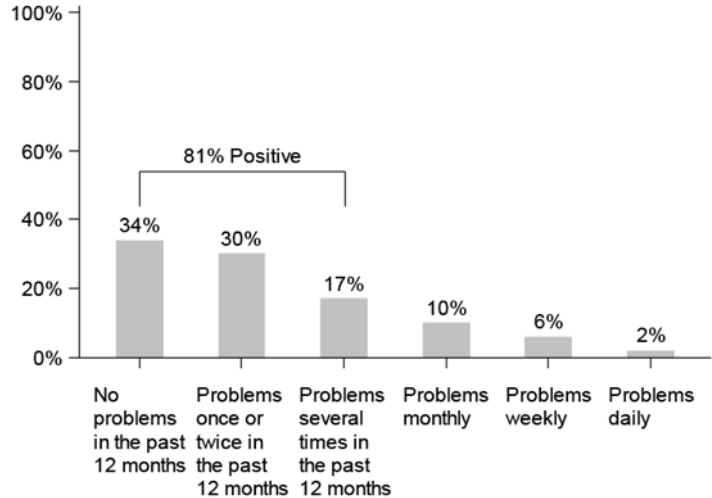
Chart 5-4. Item-Level Average Ratings on Information Exchange With Other Settings Across All 2012 Database Medical Offices (Page 2 of 3)

Over the past 12 months, how often has your medical office had problems exchanging accurate, complete, and timely information with:

B3. Pharmacies?



B4. Hospitals?

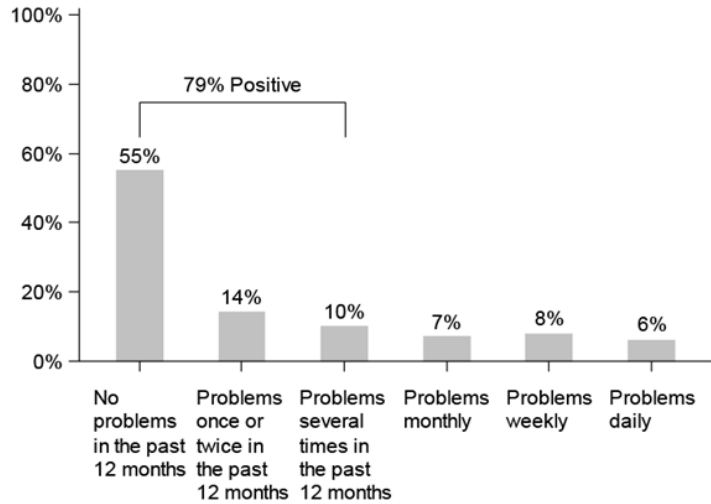


Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices, (2) the percent positive displayed may not equal the sum of the response option percentages due to rounding, and (3) all six percentages may not add to 100 percent due to rounding.

Chart 5-4. Item-Level Average Ratings on Information Exchange With Other Settings Across All 2012 Database Medical Offices (Page 3 of 3)

Over the past 12 months, how often has your medical office had problems exchanging accurate, complete, and timely information with:

B5. Other? (Specify)



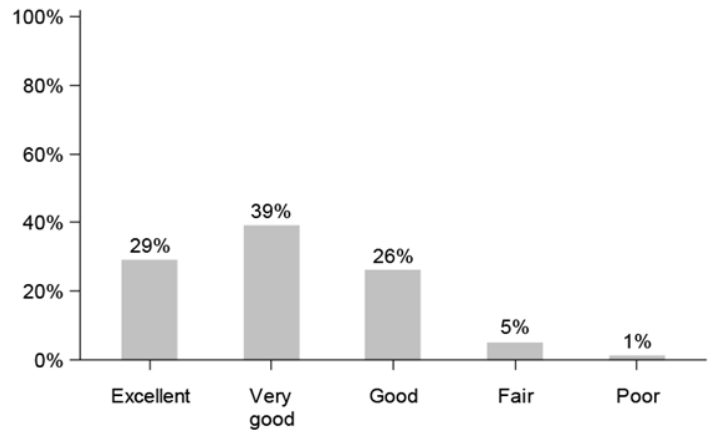
Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices, (2) the percent positive displayed may not equal the sum of the response option percentages due to rounding, and (3) all six percentages may not add to 100 percent due to rounding.

Chart 5-5. Item-Level Average Overall Ratings on Quality Across All 2012 Database Medical Offices (Page 1 of 3)

Overall, how would you rate your medical office on each of the following areas of health care quality?

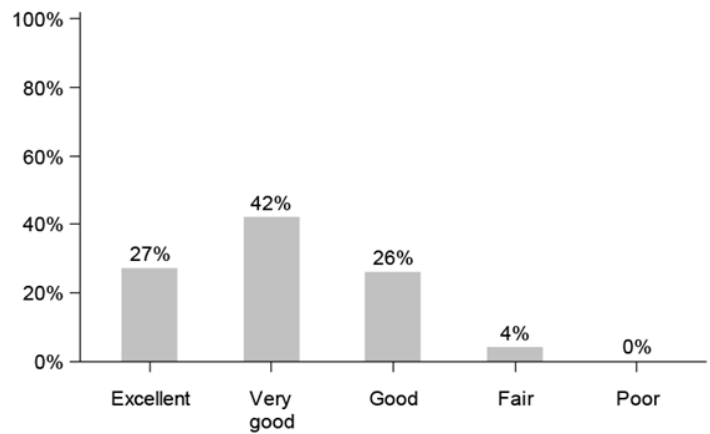
G1a. Patient Centered

Is responsive to individual patient preferences, needs, and values.



G1b. Effective

Is based on scientific knowledge.



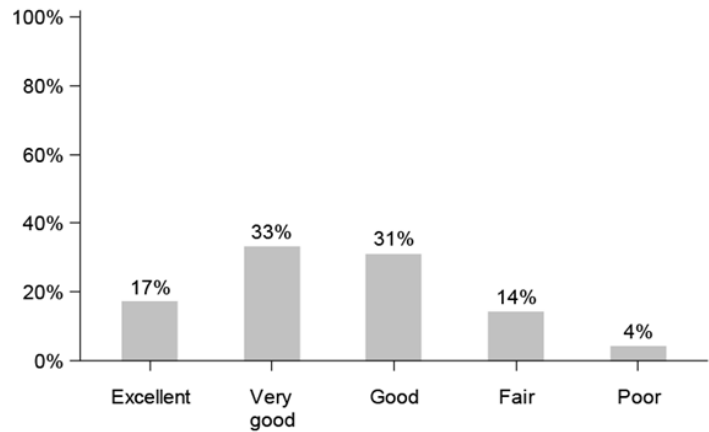
Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices and (2) percentages may not add to 100 percent due to rounding.

Chart 5-5. Item-Level Average Overall Ratings on Quality Across All 2012 Database Medical Offices (Page 2 of 3)

Overall, how would you rate your medical office on each of the following areas of health care quality?

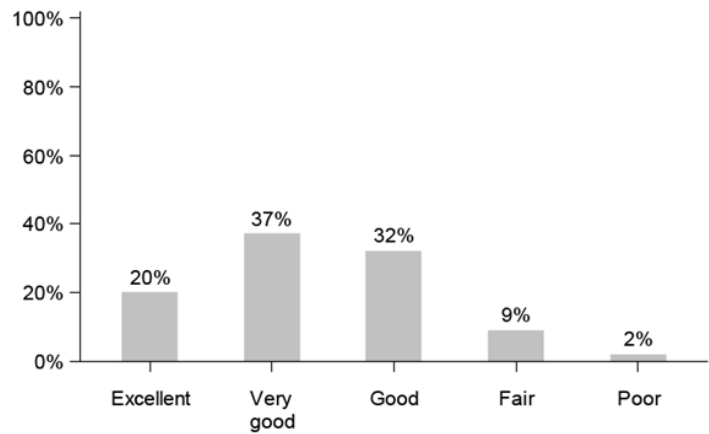
G1c. Timely

Minimizes waits and potentially harmful delays.



G1d. Efficient

Ensures cost-effective care (avoids waste, overuse, and misuse of services).



Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices and (2) percentages may not add to 100 percent due to rounding.

Chart 5-5. Item-Level Average Overall Ratings on Quality Across All 2012 Database Medical Offices (Page 3 of 3)

Overall, how would you rate your medical office on each of the following areas of health care quality?

G1e. Equitable

Provides the same quality of care to all individuals regardless of gender, race, ethnicity, socioeconomic status, language, etc.

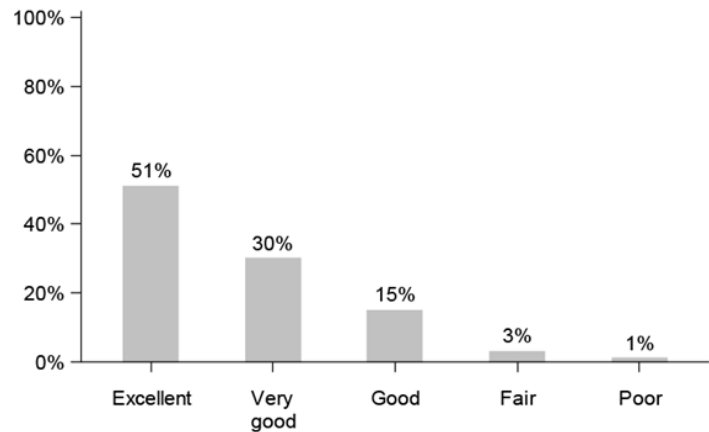
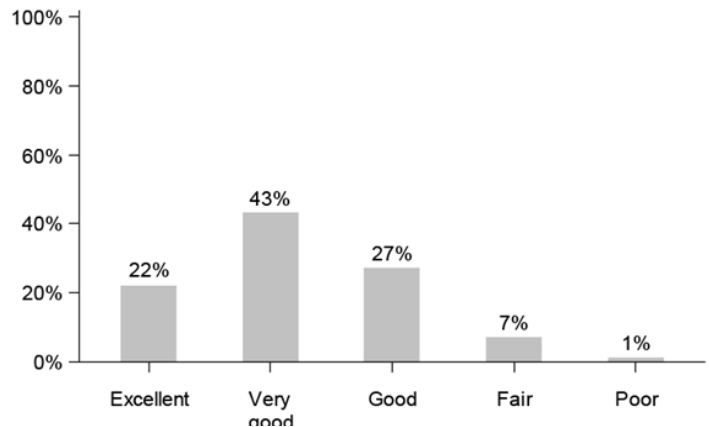


Chart 5-6. Item-Level Average Overall Rating on Patient Safety Across All 2012 Database Medical Offices

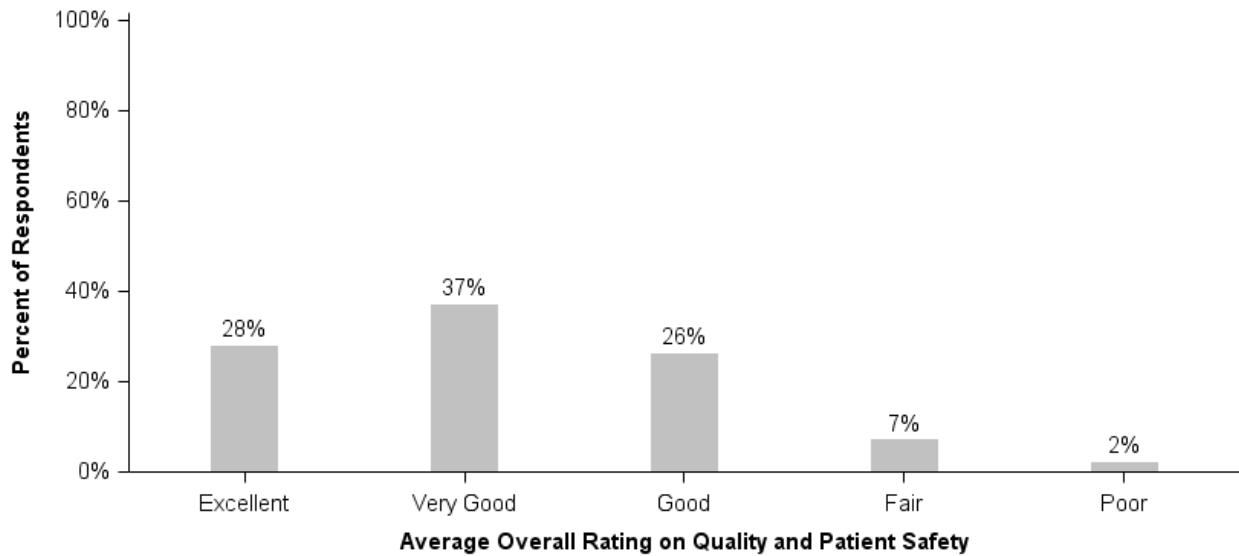
G2. Overall Rating on Patient Safety

Overall, how would you rate the systems and clinical processes your medical office has in place to prevent, catch, and correct problems that have the potential to affect patients?



Note: (1) Percentages indicate average percent response for each item response category across the 2012 database medical offices and (2) percentages may not add to 100 percent due to rounding.

Chart 5-7. Average Overall Rating on Quality and Patient Safety Across All 2012 DatabaseMedical Offices



Note: (1) Average Overall Rating on Quality and Patient Safety is the average percentage of respondents that rated their medical office as “Excellent” or “Very good” across the five Overall Ratings on Quality (patient centered, effective, timely, efficient, equitable) and the Overall Rating on Patient Safety (G2), and (2) percentages may not add to 100 due to rounding.

Additional Correlational Analyses

This section presents correlational analyses that examined the relationship between medical office size and health information technology (IT) with the *AHRQ Medical Office Survey on Patient Safety Culture* scores. Table 5-1 shows the correlation results for health IT implementation and patient safety culture composite results.

Correlations (*r*) are a type of statistic that conveys the extent to which two variables have a linear relationship. Correlations range from a low of 0 to a high of 1.00 and can be either positive or negative. The closer the correlation is to 1 (or -1.00), the greater the degree of association between the variables. A correlation is considered statistically significant (not due to chance) when the *p* value is less than .05 ($p < .05$).

Medical Office Size

We first examined the relationship between medical office size and patient safety culture. Medical office size was measured by the number of providers working in the medical office during a typical week. Patient safety culture was measured with the 10 composite scores, the Overall Rating on Patient Safety Item (those giving their medical office an “Excellent” or “Very good”), and an average score across the 10 composites.

We found that:

- Smaller medical offices tended to have slightly higher patient safety culture scores.
 - Six of the 10 composites were significantly related to medical office size, with correlations ranging from -0.06 to -0.10. However, the sizes of the relationships are relatively small.
 - The correlation between the average patient safety composite score and medical office size was relatively small ($r = -0.08$, $p < 0.05$).
- Smaller medical offices tended to have a slightly higher percentage of staff giving their medical office an “Excellent” or “Very good” Overall Rating on Patient Safety ($r = -0.09$, $p < 0.05$).

Health Information Technology Implementation

We also examined the extent to which medical office implementation of health IT systems (e.g., electronic medical reports or ordering of tests) was related to patient safety culture scores. We performed partial correlations, controlling for medical office size due to the relationship we found between size and patient safety culture. As shown in Table 5-1, we found that:

- Health IT implementation was related to higher patient safety culture scores for:
 - Electronic Medical/Health Records (EMR/EHRs). Implementation of EMR/EHRs was related to higher patient safety culture scores for 7 of the 10 composites (correlations ranging from 0.07 to 0.12). The correlation between the average patient safety composite score and EMR/EHR implementation was 0.09 ($p < 0.05$).
 - Electronic Ordering of Tests (EOT). Implementation of EOT was related to higher patient safety culture scores for 3 of the 10 composites (correlations ranging from 0.08 to 0.14). The correlation between the average patient safety composite score and EOT implementation was 0.07 ($p < 0.05$).
 - Electronic Ordering of Medications (EOM). Implementation of EOM was related to higher patient safety culture scores for 3 of the 10 composites (correlations ranging from 0.07 to 0.09). The correlation between the average patient safety composite score and EOM implementation was 0.07 ($p < 0.05$).
- Health IT implementation was related to lower patient safety culture scores for:
 - Electronic Access to Patients’ Tests or Imaging Results (ETI). Implementation of ETI was related to lower patient safety culture scores for 2 of the 10 composites (correlations ranging from -0.11 to -0.13).

Table 5-1. Correlation Results for Health IT Implementation and Patient Safety Measures

Patient Safety Composite	EMR/ EHR	Tests & Imaging	Appoint- ments	Order Tests	Order Medications
Teamwork	0.11*	-0.01	0.02	0.08*	0.07*
Patient Care Tracking/Follow-up	0.01	-0.11*	-0.05	0.03	0.02
Organizational Learning	0.10*	-0.02	0.04	0.06	0.05
Overall Perceptions of Patient Safety and Quality	0.12*	-0.03	0.04	0.14*	0.08*
Staff Training	0.07*	-0.03	0.03	0.04	0.05
Owner/Managing Partner/Leadership Support for Patient Safety	0.09*	0.00	0.03	0.04	0.09*
Communication About Error	0.06	0.02	0.06	0.02	0.04
Communication Openness	0.09*	0.01	0.05	0.04	0.06
Office Processes and Standardization	0.10*	-0.04	-0.04	0.10*	0.07
Work Pressure and Pace	-0.01	-0.13*	-0.07	0.03	0.02
Average Across Composites	0.09*	-0.04	0.01	0.07*	0.07*
Average Rating on Patient Safety	0.05	-0.06	0.02	0.03	0.02
Average Overall Rating on Quality and Patient Safety	0.01	-0.06	0.04	0.01	0.00

* $p < .05$.

Note: (1) Number of providers is controlled for in the presented correlations, and (2) Average Overall Rating on Quality and Patient Safety is the average percentage of respondents who rated their medical office as “Excellent” or “Very good” across the five Overall Ratings on Quality (patient centered, effective, timely, efficient, equitable) and the Overall Rating on Patient Safety (G2).

Chapter 6. Comparing Your Results

To compare your medical office's survey results with the results from the database, you need to calculate your medical office's percent positive response on the survey's 10 composites and other survey items, including patient safety and quality issues, information exchange with other settings, and ratings on quality and patient safety. The Notes section at the end of this report describes how to calculate these percent positive scores. You can then compare your medical office's results with the database averages and examine the percentile scores to place your medical office's results relative to the distribution of database medical offices.

When comparing your medical office's results with results from the database, keep in mind that the database only provides *relative* comparisons. Even though your medical office'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 medical office in an *absolute* sense.

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

Highlights

- There was considerable variability in the range of medical office scores (lowest to highest) across the 10 patient safety culture composites.
- Overall Rating on Patient Safety showed a wide range of response as well. At one medical office, none of the respondents (0 percent) rated their office as "Excellent," and in another medical office, 88 percent did.

Description of Comparative Statistics

In addition to the average percent positive scores presented in Chapter 5, a number of other statistics are provided to facilitate comparisons with the database medical offices. A description of each statistic shown in this chapter is provided next.

Average Percent Positive

The comparative results tables in this chapter present the average percent positive scores for each of the 10 patient safety culture composites and for the 51 survey items. In addition, a percent positive score is calculated for the Average Overall Rating on Quality and Patient Safety, which is the average percent positive scores across all five Overall Ratings on Quality and the Overall Rating on Patient Safety.

These average percent positive scores were calculated by averaging composite-level percent positive scores across all medical offices in the database, as well as averaging item-level percent

positive scores across medical offices. Since the percent positive is displayed as an overall average, scores from each medical office are weighted equally in their contribution to the calculation of the average.ⁱ

Standard Deviation

The standard deviation (s.d.), a measure of the spread or variability of medical office scores around the average, is also displayed. The standard deviation tells you the extent to which medical offices' scores differ from the average:

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

When the distribution of medical office 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 medical office scores. For example, if an average percent positive score across the database medical office was 70 percent with a standard deviation of 10 percent (and scores were normally distributed), then about 68 percent of all the database medical offices would have scores between 60 and 80 percent.

“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 (numbers of providers and staff, implementation status of electronic tools, 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.

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

ⁱ As described in the Notes section, an alternative method would be to report a straight percentage of positive response across all respondents, but this method would give greater weight to respondents from larger medical offices since they account for more responses than smaller medical offices.

obtained by medical offices in the database and are actual scores from the lowest and highest scoring medical offices. When comparing with the minimum and maximum scores, keep in mind that these scores may represent medical offices 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

The 10th, 25th, 50th (or median), 75th, and 90th percentile scores are displayed for the survey composites and items. Percentiles provide information about the distribution of medical office scores. To calculate percentile scores, we ranked all medical office percent positive scores in order from low to high. *A specific percentile score shows the percentage of medical offices that scored at or below a particular score.* For example, the 50th percentile, or median, is the percent positive score where 50 percent of the medical offices scored the same or lower and 50 percent of the medical offices scored higher.

When the distribution of medical office 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. Interpret the percentile scores as shown in Table 6-1.

Table 6-1. Interpretation of Percentile Scores

Percentile Score	Interpretation
10th percentile Represents the lowest scoring medical offices.	10% of the medical offices scored the same or lower. 90% of the medical offices scored higher.
25th percentile Represents lower scoring medical offices.	25% of the medical offices scored the same or lower. 75% of the medical offices scored higher.
50th percentile (or median) Represents the middle of the distribution of medical offices.	50% of the medical offices scored the same or lower. 50% of the medical offices scored higher.
75th percentile Represents higher scoring medical offices.	75% of the medical offices scored the same or lower. 25% of the medical offices scored higher.
90th percentile Represents the highest scoring medical offices.	90% of the medical offices scored the same or lower. 10% of the medical offices scored higher.

To compare with the database percentiles, compare your medical office's percent positive scores with the percentile scores for each composite and item. Look for the highest percentile where your medical office's score is *higher* than that percentile.

For example: On survey item 1 in Table 6-2, the 75th percentile score is 49 percent positive, and the 90th percentile score is 62 percent positive.

Table 6-2. Sample Percentile Statistics

			Survey Item % Positive Response						
Survey Item	Average % Positive	s.d.	Min	10th %ile	25th %ile	Median/	75th %ile	90th %ile	Max
						50th %ile			
Item 1	36%	17.43%	8%	10%	25%	35%	49%	62%	96%
			If your medical office's score is 55 percent, your score falls here:						
			If your medical office's score is 65 percent, your score falls here:						

- If your medical office's score is 55 percent positive, it falls above the 75th percentile (but below the 90th), meaning that your medical office scored higher than at least 75 percent of the medical offices in the database.
- If your medical office's score is 65 percent positive, it falls above the 90th percentile, meaning your medical office scored higher than at least 90 percent of the medical offices in the database.

Composite and Item-Level Comparative Tables

The comparative results in Tables 6-3 and 6-4 show considerable variability in the range of medical office scores (lowest to highest) across the 10 patient safety culture composites. The standard deviation around the average percent positive scores ranged from 12 percent to 20 percent on the composites and ranged from 12 percent to 26 percent on the composite items.

Tables 6-5, 6-6, 6-7, and 6-8 all show substantial variability, with responses ranging from 0 percent to a high score of 100 percent.

Table 6-3. Composite-Level Percentiles for the 2012 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. Teamwork	84%	12.38%	25%	68%	78%	86%	94%	98%	100%
2. Patient Care Tracking/Follow-up	82%	12.30%	26%	65%	75%	84%	92%	96%	100%
3. Organizational Learning	77%	14.51%	11%	59%	69%	78%	88%	95%	100%
4. Overall Perceptions of Patient Safety and Quality	76%	14.77%	18%	58%	68%	78%	87%	94%	100%
5. Staff Training	73%	15.79%	13%	50%	63%	75%	84%	92%	100%
6. Owner/Managing Partner/Leadership Support for Safety	67%	15.96%	0%	45%	57%	67%	78%	87%	100%
7. Communication About Error	66%	15.06%	5%	49%	56%	66%	77%	88%	100%
8. Communication Openness	64%	16.61%	12%	43%	54%	64%	76%	86%	100%
9. Office Processes and Standardization	64%	17.33%	10%	39%	53%	65%	76%	86%	100%
10. Work Pressure and Pace	46%	19.68%	0%	21%	33%	46%	59%	74%	100%

Table 6-4. Item-Level Percentiles for the 2012 Database (Page 1 of 4)

Survey Items By Composite	Average % Positive	s.d.	Survey Item % Positive Response								
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max		
1. Teamwork											
1. When someone in this office gets really busy, others help out. (C1)	84%	13.78%	29%	67%	77%	87%	95%	100%	100%	100%	100%
2. In this office, there is a good working relationship between staff and providers. (C2)	88%	13.97%	0%	71%	81%	91%	100%	100%	100%	100%	100%
3. In this office, we treat each other with respect. (C5)	82%	16.56%	13%	60%	73%	84%	94%	100%	100%	100%	100%
4. This office emphasizes teamwork in taking care of patients. (C13)	83%	14.55%	17%	64%	75%	86%	95%	100%	100%	100%	100%
2. Patient Care Tracking/Follow-up											
1. This office reminds patients when they need to schedule an appointment for preventive or routine care. (D3)	83%	15.42%	18%	63%	75%	86%	96%	100%	100%	100%	100%
2. This office documents how well our chronic-care patients follow their treatment plans. (D5)	74%	19.50%	0%	48%	62%	76%	89%	100%	100%	100%	100%
3. Our office follows up when we do not receive a report we are expecting from an outside provider. (D6)	84%	15.87%	0%	62%	75%	87%	100%	100%	100%	100%	100%
4. This office follows up with patients who need monitoring. (D9)	89%	11.86%	40%	73%	83%	92%	100%	100%	100%	100%	100%
3. Organizational Learning											
1. When there is a problem in our office, we see if we need to change the way we do things. (F1)	83%	14.58%	17%	64%	75%	84%	94%	100%	100%	100%	100%
2. This office is good at changing office processes to make sure the same problems don't happen again. (F5)	78%	16.08%	17%	57%	67%	80%	89%	100%	100%	100%	100%
3. After this office makes changes to improve the patient care process, we check to see if the changes worked. (F7)	70%	18.84%	0%	47%	60%	72%	83%	94%	100%	100%	100%

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

Table 6-4. Item-Level Percentiles for the 2012 Database (Page 2 of 4)

Survey Items By Composite	Average % Positive	s.d.	Survey Item % Positive Response							
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max	
4. Overall Perceptions of Patient Safety and Quality										
1. Our office processes are good at preventing mistakes that could affect patients. (F2)	82%	15.94%	11%	61%	74%	85%	95%	100%	100%	100%
2. Mistakes happen more than they should in this office. (F3R)	75%	18.65%	0%	50%	65%	77%	89%	100%	100%	100%
3. It is just by chance that we don't make more mistakes that affect our patients. (F4R)	77%	16.92%	11%	55%	67%	80%	89%	100%	100%	100%
4. In this office, getting more work done is more important than quality of care. (F6R)	70%	20.04%	0%	44%	58%	72%	85%	100%	100%	100%
5. Staff Training										
1. This office trains staff when new processes are put into place. (C4)	76%	17.28%	0%	50%	66%	79%	88%	100%	100%	100%
2. This office makes sure staff get the on-the-job training they need. (C7)	74%	18.15%	0%	50%	63%	76%	86%	100%	100%	100%
3. Staff in this office are asked to do tasks they haven't been trained to do. (C10R)	69%	17.89%	0%	45%	57%	70%	80%	90%	100%	100%
6. Owner/Managing Partner/Leadership Support for Patient Safety										
1. They aren't investing enough resources to improve the quality of care in this office. (E1R)	49%	22.89%	0%	22%	33%	48%	67%	80%	100%	100%
2. They overlook patient care mistakes that happen over and over. (E2R)	79%	16.79%	0%	57%	71%	81%	92%	100%	100%	100%
3. They place a high priority on improving patient care processes. (E3)	78%	17.35%	0%	56%	70%	80%	90%	100%	100%	100%
4. They make decisions too often based on what is best for the office rather than what is best for patients. (E4R)	60%	20.95%	0%	33%	46%	60%	75%	86%	100%	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 6-4. Item-Level Percentiles for the 2012 Database (Page 3 of 4)

Survey Items By Composite	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
7. Communication About Error									
1. Staff feel like their mistakes are held against them. (D7R)	56%	21.72%	0%	29%	40%	55%	71%	85%	100%
2. Providers and staff talk openly about office problems. (D8)	58%	20.27%	0%	33%	44%	57%	71%	86%	100%
3. In this office, we discuss ways to prevent errors from happening again. (D11)	79%	15.70%	14%	60%	69%	80%	90%	100%	100%
4. Staff are willing to report mistakes they observe in this office. (D12)	73%	16.44%	0%	52%	62%	73%	84%	100%	100%
8. Communication Openness									
1. Providers in this office are open to staff ideas about how to improve office processes. (D1)	68%	20.14%	11%	40%	55%	68%	83%	100%	100%
2. Staff are encouraged to express alternative viewpoints in this office. (D2)	68%	19.36%	0%	43%	55%	70%	82%	93%	100%
3. Staff are afraid to ask questions when something does not seem right. (D4R)	69%	18.09%	0%	44%	57%	70%	82%	92%	100%
4. It is difficult to voice disagreement in this office. (D10R)	53%	21.00%	0%	28%	38%	50%	67%	80%	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 6-4. Item-Level Percentiles for the 2012 Database (Page 4 of 4)

Survey Items By Composite	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
9. Office Processes and Standardization									
1. This office is more disorganized than it should be. (C8R)	61%	21.78%	0%	32%	46%	61%	78%	89%	100%
2. We have good procedures for checking that work in this office was done correctly. (C9)	66%	20.16%	0%	38%	53%	67%	80%	91%	100%
3. We have problems with workflow in this office. (C12R)	49%	23.00%	0%	18%	32%	50%	65%	80%	100%
4. Staff in this office follow standardized processes to get tasks done. (C15)	79%	15.81%	17%	57%	70%	80%	90%	100%	100%
10. Work Pressure and Pace									
1. In this office, we often feel rushed when taking care of patients. (C3R)	31%	19.27%	0%	8%	17%	29%	42%	57%	100%
2. We have too many patients for the number of providers in this office. (C6R)	48%	25.67%	0%	13%	29%	47%	67%	83%	100%
3. We have enough staff to handle our patient load. (C11)	47%	25.11%	0%	14%	29%	46%	64%	81%	100%
4. This office has too many patients to be able to handle everything effectively. (C14R)	59%	23.08%	0%	28%	44%	60%	77%	89%	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 6-5. Item-Level Percentiles on Patient Safety and Quality for the 2012 Database

List of Patient Safety and Quality Issues	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
A. Access to Care									
1. A patient was unable to get an appointment within 48 hours for an acute/serious problem. (A1)	78%	21.49%	0%	47%	67%	83%	95%	100%	100%
Patient Identification									
2. The wrong chart/medical record was used for a patient. (A2)	96%	6.60%	44%	88%	94%	100%	100%	100%	100%
Charts/Medical Records									
3. A patient's chart/medical record was not available when needed. (A3)	83%	19.98%	0%	52%	75%	90%	100%	100%	100%
4. Medical information was filed, scanned, or entered into the wrong patient's chart/medical record. (A4)	92%	11.56%	33%	75%	86%	97%	100%	100%	100%
Medical Equipment									
5. Medical equipment was not working properly or was in need of repair or replacement. (A5)	91%	11.97%	17%	75%	86%	94%	100%	100%	100%
Medication									
6. A pharmacy contacted our office to clarify or correct a prescription. (A6)	52%	23.44%	0%	22%	33%	50%	67%	83%	100%
7. A patient's medication list was not updated during his or her visit. (A7)	72%	21.62%	0%	42%	58%	75%	88%	100%	100%
Diagnostics & Tests									
8. The results from a lab or imaging test were not available when needed. (A8)	73%	20.22%	0%	45%	60%	75%	88%	100%	100%
9. A critical abnormal result from a lab or imaging test was not followed up within 1 business day. (A9)	92%	11.07%	33%	77%	86%	99%	100%	100%	100%

Note: The item's survey location is shown after the item text. For items A1-A9, the percent positive response is based on those who responded "Not in the past 12 months," "Once or twice in the past 12 months," and "Several times in the past 12 months."

Table 6-6. Item-Level Percentiles on Information Exchange for the 2012 Database

Information Exchange With Other Settings	Average % Positive	s.d.	Survey Item % Positive Response									
			Min %ile	10th %ile	25th %ile	50th %ile / Median	75th %ile	90th %ile	Max			
B. Over the past 12 months, how often has your medical office had problems exchanging accurate, complete, and timely information with:												
1. Outside labs/imaging centers? (B1)	77%	18.61%	0%	50%	67%	80%	80%	90%	100%	100%	100%	100%
2. Other medical offices/Outside physicians? (B2)	77%	17.48%	17%	53%	67%	80%	80%	88%	100%	100%	100%	100%
3. Pharmacies? (B3)	75%	18.98%	0%	50%	63%	76%	76%	89%	100%	100%	100%	100%
4. Hospitals? (B4)	82%	16.23%	0%	60%	73%	83%	83%	100%	100%	100%	100%	100%

Note: The item's survey location is shown after the item text. For items B1-B4, the percent positive response is based on those who responded "No problems in the past 12 months," "One or two problems in the past 12 months," and "Several problems in the past 12 months."

Table 6-7. Percentiles on Average Overall Ratings on Quality for the 2012 Database (Page 1 of 2)

Average Overall Ratings on Quality	Average % Positive	s.d.	Survey Item % Positive Response									
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max			
1. Patient-Centered – Is responsive to individual patient preferences, needs, and values. (G1A)												
5 – Excellent	29%	19.57%	0%	7%	15%	27%	40%	56%	100%			
4 – Very good	39%	15.42%	0%	20%	29%	38%	47%	58%	100%			
3 – Good	26%	15.80%	0%	0%	15%	25%	37%	47%	83%			
2 – Fair	5%	7.32%	0%	0%	0%	0%	8%	14%	50%			
1 – Poor	1%	2.06%	0%	0%	0%	0%	0%	2%	17%			
2. Effective – Is based on scientific knowledge. (G1B)												
5 – Excellent	27%	17.79%	0%	7%	14%	23%	36%	50%	100%			
4 – Very good	42%	16.23%	0%	22%	31%	42%	50%	63%	100%			
3 – Good	26%	15.64%	0%	7%	15%	26%	36%	47%	86%			
2 – Fair	4%	6.58%	0%	0%	0%	0%	7%	13%	50%			
1 – Poor	0%	1.88%	0%	0%	0%	0%	0%	0%	29%			
3. Timely – Minimizes waits and potentially harmful delays. (G1C)												
5 – Excellent	17%	16.82%	0%	0%	5%	13%	25%	40%	100%			
4 – Very good	33%	16.48%	0%	14%	21%	33%	43%	55%	86%			
3 – Good	31%	14.79%	0%	13%	21%	31%	40%	50%	100%			
2 – Fair	14%	12.95%	0%	0%	0%	13%	22%	32%	83%			
1 – Poor	4%	7.47%	0%	0%	0%	0%	6%	13%	43%			

Note: The item's survey location is shown after the item text. Percentages may not add to exactly 100 percent due to rounding.

Table 6-7. Percentiles on Average Overall Ratings on Quality for the 2012 Database (Page 2 of 2)

Average Overall Ratings on Quality	Average % Positive	s.d.	Survey Item % Positive Response									
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max			
4. Efficient – Ensures cost-effective care (avoids waste, overuse, and misuse of services). (G1D)												
5 – Excellent	20%	16.86%	0%	0%	8%	16%	26%	42%	100%			
4 – Very good	37%	16.13%	0%	19%	27%	36%	45%	57%	100%			
3 – Good	32%	15.17%	0%	13%	22%	33%	42%	50%	83%			
2 – Fair	9%	9.34%	0%	0%	0%	8%	14%	22%	62%			
1 – Poor	2%	4.25%	0%	0%	0%	0%	3%	8%	33%			
5. Equitable – Provides the same quality of care to all individuals regardless of gender, race, ethnicity, socioeconomic status, language, etc. (G1E)												
5 – Excellent	51%	19.12%	0%	29%	38%	50%	63%	78%	100%			
4 – Very good	30%	14.30%	0%	13%	20%	30%	39%	47%	86%			
3 – Good	15%	12.08%	0%	0%	6%	14%	22%	31%	80%			
2 – Fair	3%	5.505	0%	0%	0%	0%	6%	11%	40%			
1 – Poor	1%	2.75%	0%	0%	0%	0%	0%	3%	33%			

Note: The item's survey location is shown after the item text. Percentages may not add to exactly 100 percent due to rounding.

Table 6-8. Percentiles on Average Overall Rating on Patient Safety for the 2012 Database

Average Overall Rating on Patient Safety	Average % Positive	s.d.	Survey Item % Positive Response								
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max		
Overall Rating on Patient Safety — Overall, how would you rate the systems and clinical processes your medical office has in place to prevent, catch, and correct problems that have the potential to affect patients? (G2A).											
5 – Excellent	22%	16.58%	0%	4%	10%	18%	30%	44%	88%		
4 – Very good	43%	15.75%	0%	22%	33%	43%	50%	63%	100%		
3 – Good	27%	15.22%	0%	7%	17%	27%	38%	47%	85%		
2 – Fair	7%	8.70%	0%	0%	0%	5%	12%	18%	55%		
1 – Poor	1%	3.43%	0%	0%	0%	0%	0%	4%	40%		

Note: The item's survey location is shown after the item text. Percentages may not add to exactly 100 percent due to rounding.

Table 6-9. Percentiles on Average Overall Rating on Quality and Patient Safety for the 2012 Database

Average Overall Rating on Quality and Patient Safety	Average % Positive	s.d.	Average % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Excellent	28%	14.96%	0%	12%	17%	25%	35%	48%	97%
Very good	37%	10.60%	3%	23%	30%	37%	44%	50%	72%
Good	26%	11.54%	0%	11%	19%	26%	34%	41%	78%
Fair	7%	6.32%	0%	0%	3%	6%	10%	15%	42%
Poor	2%	2.61%	0%	0%	0%	1%	2%	4%	28%

Note: Average Overall Rating on Quality and Patient Safety is the average percentage of respondents who rated their medical office as “Excellent” or “Very good” across the five Ratings on Quality (G1a-G1e: patient centered, effective, timely, efficient, equitable) and the Overall Rating on Patient Safety (G2). Percentages may not add to exactly 100 percent due to rounding.

Appendixes A and B: Overall Results by Medical Office and Respondent Characteristics

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

Appendix A: Results by Medical Office Characteristics

- Number of Providers
- Single vs. Multi-specialty
- Specialty (Cardiology, Hematology, OB/GYN, Pediatrics, Primary Care)
- Ownership
- Region

Appendix B: Results by Respondent Characteristics

- Staff Position

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 following Web site: www.ahrq.gov/qual/mosurvey12/.

Number of Providers (Tables A-1, A-3, A-5)

- Medical offices with *one or two providers* had the highest average percent positive on all 10 patient safety culture composites.
- Percent positive scores (those responding “Excellent” or “Very good”) for all five Overall Ratings on Quality were higher for medical offices with fewer providers.
- Medical offices with *two providers* had the highest (74 percent) percentage of respondents who gave their medical office an Average Overall Rating on Quality and Patient Safety of “Excellent” or “Very good”; medical offices with *14 to 19 providers* had the lowest (57 percent).

Single vs. Multi-Specialty (Tables A-6, A-8, A-10)

- *Single specialty* medical offices had a higher average percent positive response than *Multi-specialty* medical offices on all 10 patient safety culture composites.
- *Single specialty* medical offices had higher percent positive scores (those responding “Excellent” or “Very good”) for all five Overall Ratings on Quality.
- *Single specialty* medical offices had a higher percentage of respondents who gave their medical office an Average Overall Rating on Quality and Patient Safety of “Excellent” or “Very good” (68 percent) than *Multi-specialty* medical offices (59 percent).

Specialtyⁱⁱ (Tables A-11, A-13, A-15)

- No clear patterns emerged across specialties (Cardiology, Hematology, OB/GYN, Pediatrics, Primary Care) on the patient safety culture composites or the five Overall Ratings on Quality.
- Medical offices that only specialized in *Pediatrics* had the highest Average Overall Rating on Quality and Patient Safety (those responding “Excellent” or “Very good”) (69 percent); *OB/GYN* had the lowest (66 percent).

Ownership (Tables A-16, A-18, A-20)

- *Community health center* and *Provider and/or Physician owned* medical offices had the highest average percent positive response across the composites (72 percent).
- *Federal, State, or local government* medical offices had the lowest percent positive scores (those responding “Excellent” or “Very good”) for all five Overall Ratings on Quality.
- *Federal, State, or local government* medical offices had the lowest Average Overall Rating on Quality and Patient Safety (those responding “Excellent” or “Very good”) (51 percent).

Region (Tables A-21, A-23, A-25)

- *South Atlantic* medical offices had the highest average percent positive response on all 10 patient safety culture composites.
- *South Atlantic* medical offices had higher percent positive scores (those responding “Excellent” or “Very good”) for all five Overall Ratings on Quality.
- *South Atlantic* medical offices had the highest percentage of respondents who gave their medical office an Average Overall Rating on Quality and Patient Safety of “Excellent” or “Very good” (70 percent).

Staff Position (Tables B-1, B-3, B-5)

- *Management* had the highest average percent positive response across the composites (80 percent).
- *Management* had the highest percent positive scores (those selecting “Excellent” or “Very Good”) for three of the five Overall Ratings on Quality; *Physicians* had the highest percent positive scores for the other two ratings.
- *Management* had the highest percentage who gave their medical office an Average Overall Rating on Quality and Patient Safety of “Excellent” or “Very good” (73 percent); *Administrative/Clerical* had the lowest (60%).

ⁱⁱ Primary Care includes internal medicine, family practice, general preventive medicine, and general practice.

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

The seven steps of action planning outlined in this chapter are primarily based on the book *Designing and Using Organizational Surveys: A Seven-Step Process* (Church & Waclawski, 1998).

Seven Steps of Action Planning

Administering the medical office survey can be considered an “intervention,” a means of educating staff and building awareness about issues of concern related to patient safety. But it should not be the only goal of conducting the survey. Administering the survey is not enough. The delivery of survey results is not the *end point* in the survey process; it is actually just the *beginning*. Often, the perceived failure of surveys as a means for creating lasting change is actually due to faulty or nonexistent action planning or survey followup.

Seven steps of action planning are provided to help your medical office go beyond simply conducting a survey to realizing patient safety culture change. The seven steps of action planning are:

1. Understand your survey results.
2. Communicate and discuss survey results.
3. Develop focused action plans.
4. Communicate action plans and deliverables.
5. Implement action plans.
6. Track progress and evaluate impact.
7. Share what works.

Step # 1: Understand Your Survey Results

It is important to review the survey results and interpret them before you develop action plans. Develop an understanding of your medical office’s key strengths and areas for improvement. Examine your medical office’s overall percent positive scores on the patient safety culture composites and items.

- Which areas were most and least positive?
- How do your medical office’s results compare with the results from the database medical offices?

Next, consider examining your survey data broken down by staff position.

- Are there different areas for improvement for different medical office staff?
- Do any patterns emerge?
- How do your medical office’s results for these breakouts compare with the results from the database medical offices?

After reviewing the survey results carefully, identify two or three areas for improvement to avoid focusing on too many issues at one time. Once you have identified areas for improvement, you

may find the Medical Office Resource List beneficial (www.ahrq.gov/qual/mosurvey10/moimpptsaf.htm).

Step # 2: Communicate and Discuss the Survey Results

Common complaints among survey respondents are that they never get any feedback about survey results and have no idea whether anything ever happens as a result of a survey. It is therefore important to thank your staff for taking the time to complete the survey and let them know that you value their input. Sharing results from the survey throughout the medical office shows your commitment to the survey and improvement process.

Use survey feedback as an impetus for change. However, to ensure respondent anonymity/confidentiality, it is important to report data only if there are enough respondents in a particular category or group. As a rule of thumb, reporting data is not recommended if a category has fewer than three respondents. For example, if only two people in a staff position respond, that staff position's data should not be reported separately because there are too few respondents to provide complete assurance of anonymity/confidentiality.

Summaries of the survey results should be distributed throughout the medical office in a top-down manner, beginning with senior management, administrators, and medical and senior leaders, followed by department managers and then staff. Managers at all levels should be expected to carefully review the findings. Summarize key findings, but also encourage discussion about the results throughout the medical office. What do others see in the data and how do they interpret the results?

In some cases, it may not be completely clear why an area of patient safety culture was particularly low. Keep in mind that surveys are only one way of examining culture, so strive for a deeper understanding when needed. Conduct followup activities, such as focus groups or interviews with staff to find out more about an issue, why it is problematic, and how it can be improved.

Step # 3: Develop Focused Action Plans

Once areas for patient safety culture improvement have been identified, formal written action plans need to be developed to ensure progress toward change. Encourage and empower staff to develop action plans that are "SMART":

- Specific.
- Measurable.
- Achievable.
- Relevant.
- Time bound.

When deciding whether a particular action plan or initiative would be a good fit in your facility, you may find *Will It Work Here? A Decisionmaker's Guide to Adopting Innovations* (Brach, et al., 2008) to be a useful resource (available at: www.innovations.ahrq.gov/guide/InnovationAdoptionGuide.pdf). The guide helps users answer four overarching questions:

- Does this innovation fit?
- Should we do it here?
- Can we do it here?
- How can we do it here?

Identify funding, staffing, or other resources needed to implement action plans and take steps to obtain these resources, which are often fundamental obstacles hindering implementation of action plans. It is also important to identify other obstacles you may encounter when trying to implement change and to anticipate and understand the rationale behind any potential resistance toward proposed action plans.

In the planning stage, it is also important to identify quantitative and qualitative measures that can be used to evaluate progress and the impact of changes implemented. Evaluative measures will need to be used before, during, and after implementation of your action plan initiatives to assess the effectiveness of the initiatives.

Step # 4: Communicate Action Plans and Deliverables

Once action plans have been developed, the plans, deliverables, and expected outcomes of the plans need to be communicated. Those directly involved or affected will need to know their roles and responsibilities, as well as the timeframe for implementation. Action plans and goals should also be shared widely so that their transparency encourages further accountability and demonstrates the medical office-wide commitments being made in response to the survey results.

At this step it is important for senior medical office managers and leaders to understand that they are the primary owners of the change process and that success depends on their full commitment and support. Senior-level commitment to taking action must be strong; without buy-in from the top, including medical leadership, improvement efforts are likely to fail.

Step # 5: Implement Action Plans

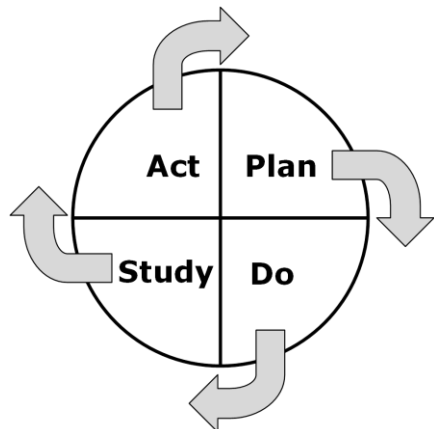
Implementing action plans is one of the hardest steps. Taking action requires the provision of necessary resources and support. It requires tracking quantitative and qualitative measures of progress and success that have already been identified. It requires publicly recognizing those individuals and units that take action to drive improvement. And it requires adjustments along the way.

This step is critical to realizing patient safety culture improvement. While communicating the survey results is important, taking action makes the real difference. However, as the Institute for Healthcare Improvement (IHI, 2006) suggests, actions do not have to be major, permanent changes. In fact, it is worthwhile to strive to implement easier, smaller changes that are likely to have a positive impact rather than big changes with unknown probability of success.

The “Plan-Do-Study-Act” cycle (Langley, et al., 1996) (Figure 7-1) is a pilot-study approach to change that involves first developing a small-scale plan to test a proposed change (Plan), carrying out the plan (Do), observing and learning from the consequences (Study), and determining what modifications should be made to the plan (Act). Implementation of action

plans can occur on a small scale, within a single unit, to examine impact and refine plans before rolling out the changes on a larger scale to other units or medical offices.

Figure 7-1. Plan-Do-Study-Act Cycle



Step # 6: Track Progress and Evaluate Impact

Use quantitative and qualitative measures to review progress and evaluate whether a specific change actually leads to improvement. Ensure that there is timely communication of progress toward action plans on a regular basis. If you determine that a change has worked, communicate that success to staff by telling them what was changed and that it was done in response to the safety culture survey results. Be sure to make the connection to the survey so that the next time the survey is administered, staff will know that it will be worthwhile to participate again because actions were taken based on the prior survey's results.

Alternatively, your evaluation may reveal that a change is not working as expected or has failed to reach its goals and will need to be modified or replaced by another approach. Before dropping the effort completely, try to determine why it failed and whether adjustments might be worth trying.

It is important not to reassess culture too frequently because lasting culture change will be slow and may take years. Frequent assessments of culture are likely to find temporary shifts or improvements that may come back down to baseline levels in the longer term if changes are not sustained. When planning to reassess culture, it is also very important to obtain high survey response rates. Otherwise, it will not be clear whether changes in survey results over time are due to true changes in attitudes or are the result of surveying different staff each time.

Step # 7: Share What Works

In Step #6, you tracked measures to identify which changes result in improvement. Once your medical office has found effective ways to address a particular area, the changes can be implemented on a broader scale to other departments within the medical offices and to other medical offices. Be sure to share your successes with outside medical offices and health care systems as well.

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Notes: Description of Data Cleaning and Calculations

This section provides additional detail about how various statistics presented in this report were calculated.

Data Cleaning

Each participating medical office was asked to submit cleaned, individual-level survey data. As an additional check, once the data were submitted, response frequencies were automatically run on each medical office's data to find out-of-range values, missing variables, or other data anomalies. When data problems were found, data submitters were required to make corrections and resubmit their data. Each submitter was shown a copy of their data frequencies to verify that the data set received was correct. Missing responses and "Does Not Apply" or "Don't Know" responses are not part of the results.

Response Rates

As part of the data submission process, medical offices were asked to provide their response rate numerator and denominator. Response rates were calculated using the formula below.

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

Numerator = Number of complete, returned surveys. The numerator equals the number of individual survey records submitted to the database. It excludes surveys that were returned blank on all nondemographic survey items but includes surveys where at least one nondemographic survey item was answered.

Denominator = The total number of surveys distributed minus ineligibles. Ineligibles include deceased individuals or those who were no longer employed at the medical office during data collection.

As a data cleaning step, we examined whether any individual survey records submitted to the database were missing responses on all of the nondemographic survey items (indicating that the respondent did not answer any of the main survey questions). Records where all nondemographic survey items were missing were excluded from the medical office's numerator. Medical offices were included in the database only if they had a numerator of at least 5 after this data cleaning step.

Response Categories

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 10 patient safety culture composites, consisting of 12 items, use the frequency response option (*Communication Openness, Patient Care Tracking/Follow-up, and Communication About Error*).

The 13 noncomposite items use 6-point frequency response categories. The nine Patient Safety and Quality Issues items use a frequency scale ranging from “Not in the past 12 months” to “Daily” (Not in the past 12 months, Once or twice in the past 12 months, Several times in the past 12 months, Monthly, Weekly, Daily). The four Information Exchange With Other Settings items use similar response options ranging from “No problems in the past 12 months” to “Problems daily” (No problems in the past 12 months, Problems Once or twice in the past 12 months, Problems several times in the past 12 months, Problems monthly, Problems weekly, Problems daily).

Item-Level Percent Positive Response

Both positively worded items (such as “Staff support one another in this medical office”) 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** with 5-point response scales, percent positive response is the combined percentage of respondents within a medical office 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 “We have enough staff to handle our patient load,” if 50 percent of respondents within a medical office responded *Strongly agree* and 25 percent responded *Agree*, the item-level percent positive response for that medical office would be $50\% + 25\% = 75\%$ positive.

- **For negatively worded items**, percent positive response is the combined percentage of respondents within a medical office 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 “Mistakes happen more than they should in this office,” if 60 percent of respondents within a medical office responded *Strongly disagree* and 20 percent responded *Disagree*, the item-level percent positive response would be 80 percent (i.e., 80 percent of respondents do not believe mistakes happen more than they should in this office).

Percent positive scores for the Patient Safety and Quality Issues items, as well as the Information Exchange With Other Settings items, were calculated differently than the other survey items. The percent positive score for these 13 items are the sum of the three response options that represent the smallest frequency of occurrence. For Patient Safety Quality Issues items these are not in the past 12 months, once or twice in the past 12 months, and several times in the past 12 months. For Information Exchange With Other Settings items, the three responses are no problems in the past 12 months, problems once or twice in the past 12 months, and problems several times in the past 12 months.

Composite-Level Percent Positive Response

The survey’s 51 items measure 10 areas or composites of patient safety culture, information exchange with other settings, and patient safety and quality issues. The 10 patient safety culture composites include three or four survey items. Composite scores were calculated for each medical office by averaging the percent positive response on the items within a composite. For example, for a three-item composite, if the item-level percent positive responses were 50 percent, 55 percent, and 60 percent, the medical office’s composite-level percent positive response would be the average of these three percentages, or 55 percent positive.

Item and Composite Percent Positive Scores

To calculate your medical office’s composite score, average the percentage of positive response to each item in the composite. Here is an example of computing a composite score for *Staff Training*:

1. This composite has three items. Two are positively worded (items #C4 and #C7) and one is negatively worded (item #C10). 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 1).

Table 1. 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 C4 - positively worded "This office trains staff when new processes are put into place"	110	NA*	240	110/240=46%
Item C7 - positively worded "This office makes sure staff get the on-the-job training they need"	140	NA*	250	140/250= 56%
Item C10R - negatively worded "Staff in this office are asked to do tasks they haven't been trained to do"	NA*	125	260	125/260=48%
*NA = Not applicable	Composite Score % Positive = (46% + 56% + 48%) / 3 = 50%			

This example includes three items, with percent positive response scores of 46 percent, 56 percent, and 48 percent. Averaging these item-level percent positive scores results in a composite score of .50 or 50 percent on Staff Training. 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 medical office’s percent positive response for each of the 10 patient safety culture composites, you can compare your results with the composite-level results from the 934 database medical offices.

Percentiles

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 medical offices, from lowest to highest. The next step is to multiply the number of medical offices (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 934 (the total number of medical offices) by .10 (10th percentile). The product of n x 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 medical office in the jth position plus the percent positive value of the medical office 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 medical office 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 medical offices (using fake data shown in Table 2). First, the percent positive scores are sorted from low to high on Composite “A.”

Table 2. Data Table for Example of How To Compute Percentiles

Medical Office	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

1. For the 10th percentile, we would first multiply the number of medical offices by .10:

$$(n \times p = 12 \times .10 = 1.2).$$

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 medical office in the $j^{\text{th}} + 1$ position:
 - a. “j” equals 1.
 - b. The 10th percentile equals the value for the medical office in the 2nd position = 48%.

50th percentile

1. For the 50th percentile, we would first multiply the number of medical offices by .50:
 $(n \times p = 12 \times .50 = 6.0)$.
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 medical office in the j^{th} position plus the percent positive value of the medical office in the $j^{\text{th}} + 1$ position, divided by 2:
 - a. “j” equals 6.
The 50th percentile equals the average of the medical offices in the 6th and 7th positions
 $(64\% + 66\%) / 2 = 65\%$.