



*The Ideal Hospital Project's*  
**Work Environment Survey 2006-2007**  
**Annual Report**

**July 2007**

## A Letter to the Reader

As Co-Chairs of the Work Environment Workgroup of the Gulf Coast Health Services Steering Committee (GCHSSC), we are delighted to present this Annual Report showing the Houston-Galveston region's processes and outcomes over four years of working to improve hospital work environments through the Ideal Hospital Project.\*

The Annual Report features data from a diverse array of hospitals in the region, including all types of missions (general acute care, specialty, academic medical centers, LTACs, etc.), ownership (not-for-profit, government, investor-owned) and sizes—hospitals less than 50 beds to over 1000 beds. Over the four years of the project, we have found that the data provide a useful snapshot of work environment indicators in Gulf Coast hospitals. We have not found that outcome patterns follow any specific hospital characteristic (size, ownership or mission).

At Texas Children's Hospital, we have found this report to be a relevant measure of our hospital's performance and a useful management tool for comparing ourselves to regional norms. We use the data to assist in decision-making from the unit level to the Board room and in presenting our hospital to external accreditation and certification agencies such as the Joint Commission for Accreditation of Health Care Organizations and the American Nurses Credentialing Center (Magnet status). Having regional information at our fingertips on key work environment measures helps us describe our hospital's performance and compare it to regional norms. These data are particularly useful in response to JCAHO standards for Leadership, Organizational Performance, and Human Resources, as well as the community participation standard required for Magnet certification.

More importantly, by participating in the Ideal Hospital Project, we contribute to a major regional effort to influence positive changes in our community's healthcare work environment. We face a future that predicts a major shortage of nurses. Part of the solution to this issue is improved retention of nurses already in the workforce. As we consider innovations in our own hospital that improve safety, satisfaction and performance, it is very helpful to have information available that measures not only our individual progress but also our region's progress using benchmarks such as nurse turnover, satisfaction, average tenure, and average age, in addition to examining staffing strategies through benchmarks on agency and overtime utilization, staffing mix, and hours per patient day.

We believe that innovative action is needed now to ensure a long-term supply of qualified, compassionate, and satisfied nurses for hospitals in our region. We hope this report helps you take the actions necessary to attract and retain employees for your hospitals.



Mark A. Wallace  
President & Chief Executive Officer  
Texas Children's Hospital



Susan M. Distefano  
Senior Vice President  
Texas Children's Hospital

\* Collection of this data through work environment surveys has been funded by a grant from the Division of Nursing, Bureau of Health Professions, Health Resources Services Administration under the Nurse Education, Practice and Retention program.

## Table of Contents

Introduction .....	4
General Turnover Rate .....	6
Voluntary Turnover Rate .....	8
Retention Rates .....	9
Vacancy Rates – Budgeted Positions .....	10
Vacant Budgeted Positions Compared to Headcount .....	11
Demographics	
Ethnicity .....	12
Gender .....	13
Average Age.....	14
Tenure.....	15
Specialty Certification & Education Level .....	16
Staffing Mix .....	17
Patient Care Nursing Hours Per Patient Day .....	18
Agency & Overtime Utilization.....	19
Workers’ Compensation & Lost Time Injuries.....	20
Operating Margin .....	21
Patient Outcomes.....	22
Patient Satisfaction.....	23
Nursing Staff Satisfaction .....	25
Performance Appraisal.....	27
Appendices	
Table 1: Comparison of Hospitals and Hospital Beds in the Region to Participants in the Work Environment Survey 2006-2007.....	30
Table 2: Work Environment Workgroup Members.....	31
Table 3: Specification of Work Environment Survey Measures .....	33
Table 4: Work Environment Survey Measures’ Medians and Ranges.....	42

## Introduction to the Work Environment Survey 2006

For the past four years, the Gulf Coast Health Services Steering Committee (GCHSSC) Work Environment Workgroup (WEW) has invited all hospitals in the region to participate in the Work Environment Survey.<sup>1</sup> Participation increased over the first two years of the survey. Hospital participation dropped in 2005 due to the tremendous stress on regional hospitals from hurricanes Katrina and Rita. However, participation did rebound in 2006 with 48 of the 119 hospitals (40.3%) in the region participating in survey.

	2003	2004	2005	2006
Number of Hospitals Participating	45	49	43	48
Number of Hospitals in Region	91	95	101	119

A diverse cross-section of hospitals participate in the survey: investor-owned, non-for-profit and governmental; urban and rural; general acute care, long-term acute care, and specialty; large and small, with bed sizes ranging from less than 100 to over 1000 beds. Five Magnet hospitals (Magnet designation by the American Nursing Credentialing Center) have participated in the survey since its inception. Eleven of the twelve Texas Medical Center hospitals participated in 2006. Forty percent (40%) of area hospitals participated in 2006 including nearly 60% of the hospital beds in the region. Over the four years of the survey, the number of beds represented by the respondents has ranged from 60% to 71% of the total hospital beds in the region. In 2006, almost 46% of Disproportionate Share Hospitals participated, accounting for 73% of those beds in the region. Appendix Table 1 shows a comparison of participating hospitals in 2006 compared to the total hospitals in the region. The full list of participating hospitals can be found in the *Supplement to the Annual Report* (see the *Supplement* at [www.gchssc.com](http://www.gchssc.com), under the Publications tab).

The data reported in this survey are not broken down by ownership category, location, mission, or bed size. The number of hospitals reporting on each measure each year is too small to conduct statistical analyses of differences due to these characteristics. Yearly data do not reveal whether outcome patterns are related to any specific hospital characteristic. A proposal for a more rigorous examination of all five years of data has been submitted but funding information has not yet been received.

A WEW (see Appendix Table 2 for a list of members) survey taskforce develops the survey measures each year. This volunteer group includes human resources and nursing executives from regional hospitals as well as academicians and consultants. Members have significant experience in hospital administration, hospital outcomes measurement, benchmarking, and survey design. The WEW survey taskforce reviews the survey each year and recommends changes based on the importance and/or reliability of the data requested and the ability or willingness of hospitals to provide the data in the manner requested. Only a few survey questions are changed each year so the survey remains consistent for comparisons across years. The complete 2006 Work Environment Survey is shown in the *Supplement to the Annual Report* (see the *Supplement* at [www.gchssc.com](http://www.gchssc.com), under the Publications tab).

All 119 hospitals in the Gulf Coast Region were invited to participate in the project in 2006. Invitations were sent to Chief Executive Officers, Chief Nursing Officers, and Chief Human Resources Officers in the fall of 2006. If interested, executives responded by fax or email and designated survey contact

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<sup>1</sup> The history of the Ideal Hospital Project is described in the *Supplement to the Annual Report*.

persons. The Work Environment Survey was available on-line, using the Gulf Coast Health Services Steering Committee website ([www.gchssc.com](http://www.gchssc.com)). Hospitals agreeing to participate in the survey were assigned a unique identification code in order for them to enter data confidentially.

Because the availability of data varies in each participating hospital, each hospital may report data for some measures but not others. We have chosen to report all valid data for each reported measure. For example, we are reporting all voluntary turnover data, even if general turnover data were not reported by the same hospital or vice versa.

Since data are collected from a diverse array of hospitals, there is large variation within each category of measurement. For this reason, medians are used to report the regional values. A median is the exact middle value in a set of values and represents the mid-point of the reporting hospitals, meaning that 50% of hospitals reported a value greater than the median and 50% reported a value less than the median value. We also report the range of values to represent the breadth between the highest and lowest reported measures.

The benefit of using medians as compared to means (averages) is that medians are not distorted by dramatically outlying values. For example, if five hospitals reported the following turnover rates for nurses, 3%, 5%, 10%, 12%, and 60%, the median or middle turnover rate is 10%. The mean or average turnover rate is 18%, a calculation that is highly affected by the 60% turnover rate in the sample. The 10% median is closer to the true representative turnover rate. Medians are most useful measures of central tendency when the data samples are likely to have unusually high or low values (as our diverse array of hospitals may report) or when the goal is to forecast the future rates that hospitals are likely to experience in a year. By using medians and ranges as a basis for comparison, hospitals can compare their own performance data to the regional normative midpoints and the ranges of the sample. Medians and ranges for each measure are reported in Appendix Table 4.

## General Turnover Rates Decrease

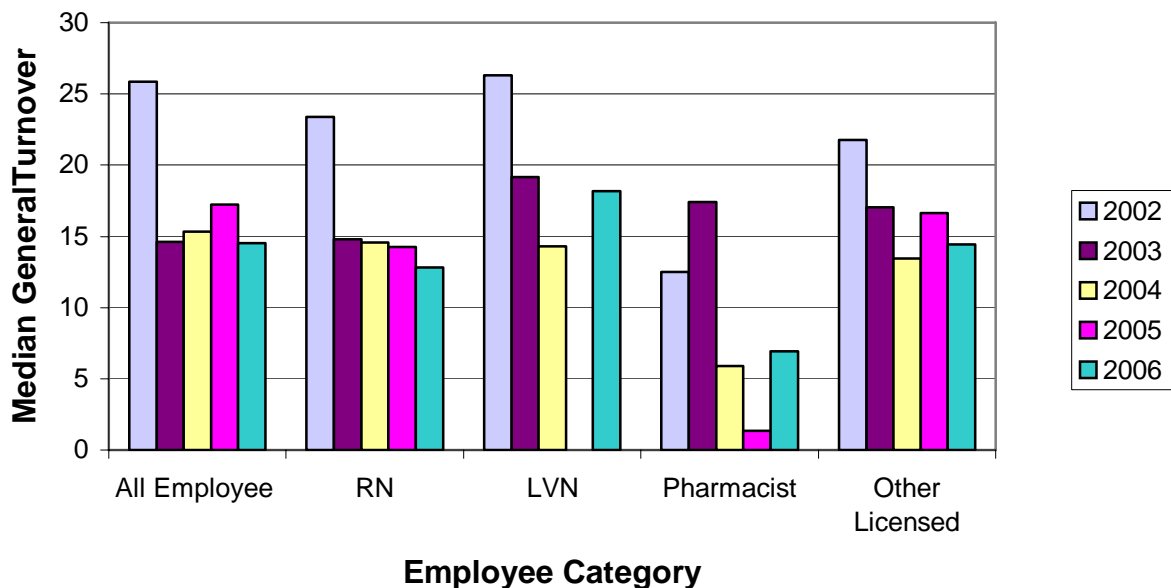
Annual general turnover data for full-time employees were collected in the survey (see specification of measures in Appendix Table 3). Since data on general turnover rates were collected by the GCHSSC in 2002 prior to the start of the Ideal Hospital Project, these values are also displayed. See Appendix Table 4 for the number of reporting hospitals, medians and ranges.

Median general turnover rates generally have decreased for all employee categories since 2002. RNs display the most consistent decrease in median general turnover. For the categories of all employees, pharmacists, and other licensed providers, the median general turnover rates have decreased unevenly over time.

The LVN median general turnover rate is missing for 2005 because the WEW substituted Nurse Practitioner/Physician Assistant (NP/PA) data collection for LVN data collection that year. The LVN measure was reinstated in 2006, so the 2006 general turnover rate is shown. Median LVN general turnover decreased the first few years but increased in 2006 and is the highest general turnover rate among all employee categories.

Median general turnover among NP/PAs was zero in both years measured - 2005 and 2006. This means that at least half of hospitals retained incumbent NP/PA employees (experiencing no NP/PA terminations) compared to hospitals that experienced changes in their NP/PA positions. Because the NP/PA median general turnover was zero, the data are not displayed.

**General Turnover Rates  
Reported by Hospitals in the Gulf Coast Region in 2006**



## **General Turnover Rates *continued***

The Gulf Coast hospitals responding to the 2006 Work Environment Survey fared better than other groups reporting turnover. The national average turnover rate for RNs in 2000 was 21.3% with larger hospitals reporting lower average rates (17.1%) and specialty hospitals showing higher rates (25.2%).<sup>2</sup> In Texas, a 2006 statewide assessment of hospital turnover rates showed an increase from 15.3% in 2004 to 18.2% in 2006. The LVN turnover rate was 24.4% and the certified nursing assistant turnover rate was 43.2%. Furthermore, 36% of the hospitals reported a 10% or greater turnover rate for RNs and a 73% turnover rate for LVNs in the past year.<sup>3</sup>

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<sup>2</sup> AONE. (2002). *Acute Care Hospital Survey of RN Turnover and Vacancy Rates in 2000*. Created by The HSM Group, LTD., for the American Organization of Nurse Executives. Accessed on 7/12/2007 at <http://www.wha.org/workForce/pdf/aone-surveysrnavacancy.pdf>.

<sup>3</sup> Texas Center for Nursing Workforce Studies. (2006). *Texas Hospital Nurse Staffing Survey, 2006*. Texas Department of State Health Services.

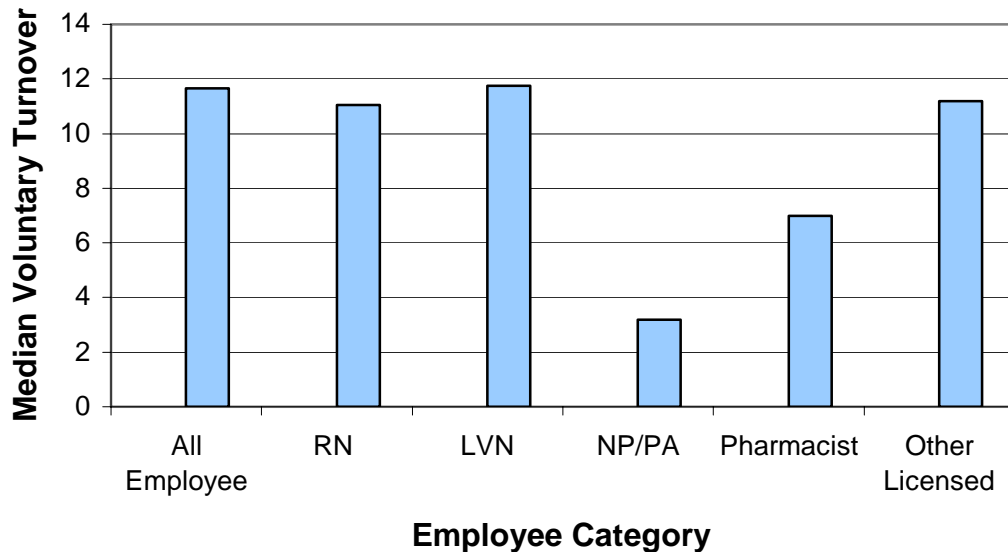
## Voluntary Turnover Rates Are Reported

In 2006, for the first time in the project's history, hospitals reported voluntary turnover for full-time employees that occurred between October 1, 2005 and September 30, 2006. In general, voluntary turnover is a measure of the percentage of all employees voluntarily leaving each hospital and is not due to personal physical/health conditions, relocation, retirement, layoff, performance problems, or temporary status as specified by National Quality Forum standards (see specification of measures Appendix Table 3). See Appendix Table 4 for the number of reporting hospitals, medians, and ranges.

Voluntary and general turnover are not directly comparable measures because some hospitals did not report data on both measures. We chose to include data on either measure when submitted by a hospital because it creates a better picture of the regional turnover on each measure. Because of this, the reader should not interpret voluntary turnover as a subset of general turnover.

For the categories of all employees, RNs, LVNs, and other licensed providers, the 2006 median voluntary turnover rates are near 11%. The median voluntary turnover rate of NP/PAs is slightly over 3%. The median voluntary turnover rate for pharmacists was nearly 7%.

**Voluntary Turnover Rates  
Reported by Hospitals in the Gulf Coast Region in 2006**



## Retention Rates Increase

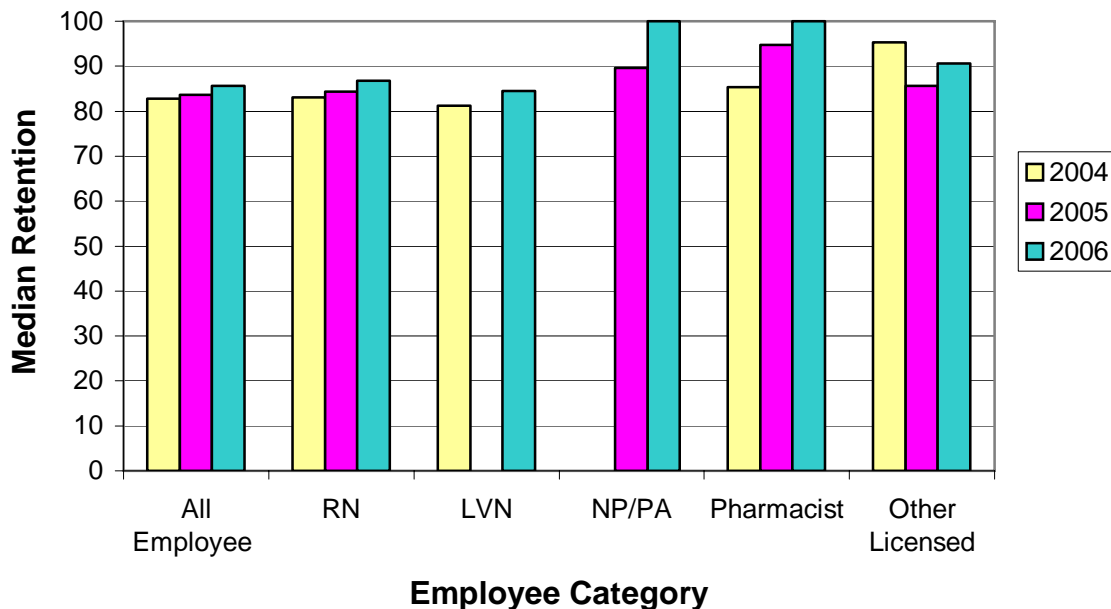
Annual retention rate data for full-time employees were collected in the survey (see specification of measures in Appendix Table 3). Data are not available for 2003 because the data submitted on retention were not reliable. See Appendix Table 4 for the number of reporting hospitals, medians, and ranges.

General turnover and retention rates are not directly comparable measures because some hospitals did not report data on both measures. We chose to include data on either measure when submitted by a given hospital because it creates a better picture of the regional turnover on each measure.

Median retention rates generally have increased since 2004 for all employee categories except other licensed providers. The RN median retention rates display a consistent pattern of slight increases. The LVN median retention rate is missing for 2005 because the WEW substituted new NP/PA data collection for LVN data collection that year. The LVN retention measure was reinstated in 2006, and the median LVN retention rate has increased slightly since 2004. The NP/PA median retention rate increased from approximately 90% in 2005 to 100% in 2006, meaning that at least half of the hospitals reporting this data had 100% retention of those employees.

All employee median retention rate displays a consistent pattern of slight increases. The pharmacist median retention rate experienced larger increases, rising to 100% in 2006.

**Retention Rates  
Reported by Hospitals in the Gulf Coast Region  
2006**



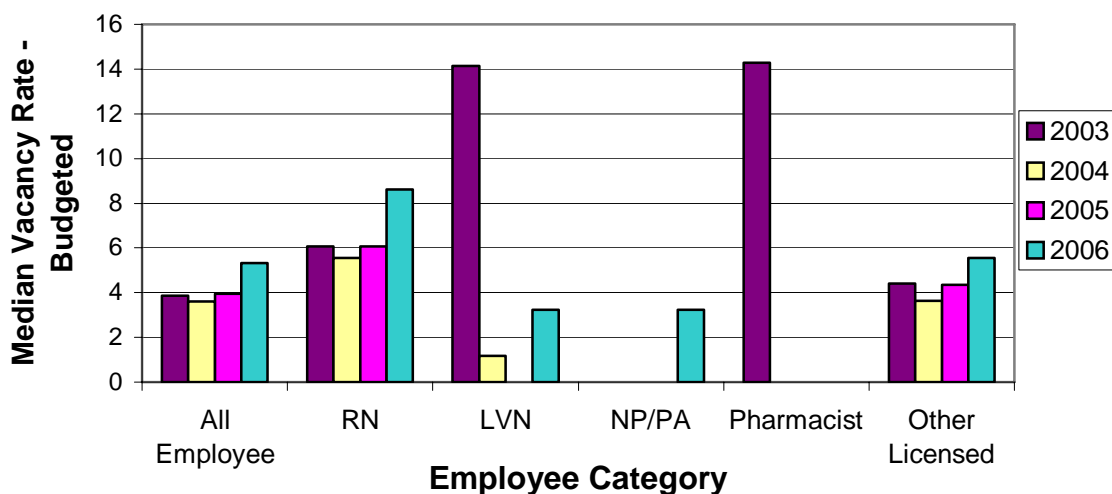
## Vacancy Rates --- Vacancies Compared to Budgeted Positions

Annual vacancy rate data for full-time employees were collected in the survey (see specification of measures in Appendix Table 3). The WEW believes that valuable information is gained from examining the number of vacancies two different ways: (1) comparing the number of vacancies to the number of budgeted positions (called vacancy rate) shows the percentage of anticipated, budgeted positions that are currently unfilled, and (2) comparing the number of vacancies to headcount (called vacancy/headcount ratio) shows the ratio between current employees and vacant positions. For example, in 2006, there is a median vacancy rate of 8.6% of budgeted RN positions. In the same year, there is a median of 10% of the RN working headcount that is vacant.

This section highlights the vacancy rates when comparing the number of vacancies to the number of budgeted positions. See Appendix Table 4 for the number of reporting hospitals, medians and ranges. Median vacancy rates and median general turnover are not directly comparable measures for several reasons. First, some hospitals did not report data on both measures. We chose to include data on either measure when submitted by a given hospital because it creates a better picture of the regional perspective on each measure. Also, hospitals with low turnover may have high vacancy rates due to adding more new positions than those that are affected by turnover. Because of this, the reader should not interpret vacancy rates and turnover rates as interchangeable. Note that the LVN median vacancy rate is missing in 2005 because the WEW substituted NP/PA data collection for LVN data collection that year. The LVN measure was reinstated in 2006 and is shown.

In 2006, RNs had a vacancy positions rate over eight percent, while other employee categories had rates less than six percent. The vacancy rate for pharmacists in the reporting hospitals has remained at zero since 2004. The vacancy rate of NP/PAs rose from 0 to 3% from 2005 to 2006. (The zero vacancy rates for pharmacists and NP/PAs do not display on the graph.) At the beginning of the project in 2003, the median vacancy rate for both pharmacists and LVNs was slightly more than 14%, more than double the rates for all other employee categories that year. In 2004, vacancy rates for all employee categories were more similar, under 6%.

**Vacancy Rates --- Budgeted Positions  
Reported by Hospitals in the Gulf Coast Region in 2006**



## Vacant Budgeted Positions Compared to Headcount

Annual vacancy related data for full-time employees were collected (see specification of measures in Appendix Table 3). This section discusses the number of vacant budgeted positions compared to the headcounts in each hospital. Since vacancy data compared to headcounts were collected in 2002 prior to the start of the Ideal Hospital Project, these values are included. See Appendix Table 4 for the number of reporting hospitals, medians and ranges.

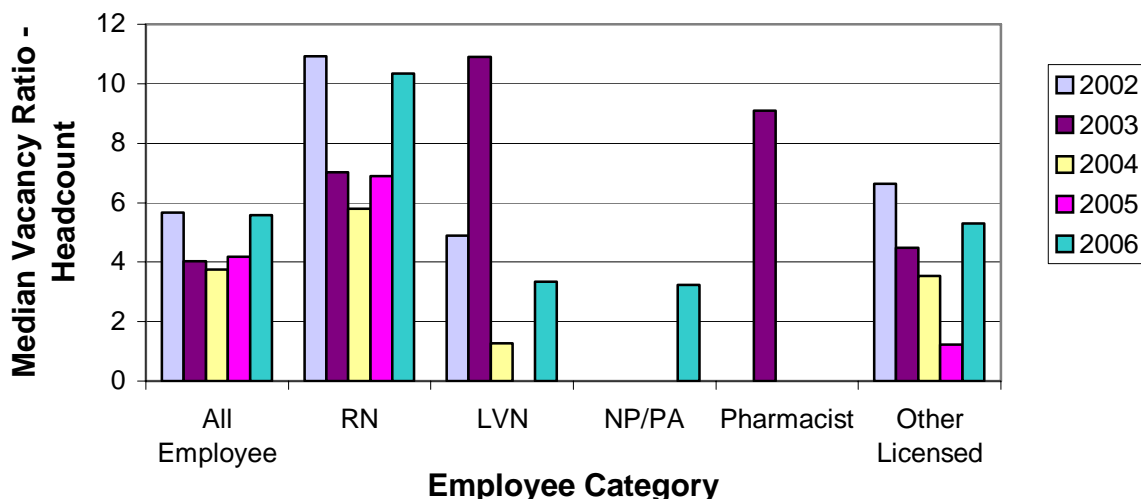
As noted, despite assumptions to the contrary, vacancy ratios and general turnover are not directly comparable measures and should not be interpreted as interchangeable. Also as noted previously, the LVN median vacancy ratio using headcount is missing for 2005 because the WEW substituted NP/PA data collection for LVN data collection that year. The LVN measure was reinstated in 2006 and is shown.

In 2006, RNs had a vacancy/headcount ratio over 10%, nearly double or triple the vacancy/headcount ratios for all other employee categories this year. In 2002, the vacancy/headcount ratio for RNs was 11%, nearly double the rates for the other categories that year. During the three-year period from 2003-2005, RN vacancy ratios to headcount varied between 6% and 7% before spiking again to its current level over 10%.

Pharmacist and LVN vacancy/headcount ratios are at low levels in 2006. Pharmacists have remained at zero vacancy/headcount ratios since 2004, after a 9% spike in 2003 (2005 and 2006 zero vacancy/headcount ratios are not shown in the graph). In 2006, LVNs have a 3% vacancy/headcount ratio, a slight increase from 2004, but much lower than their all-time spike of nearly 11% in 2003.

Although the NP/PA vacancy/headcount ratio data have only been collected for two years, that rate has increased from zero to 3% in 2006 (the 2005 zero ratio is not shown on the graph). The 2006 vacancy/headcount ratio of 5.6% for all employees is near the 2002 level, having dipped lower in the intervening years. After four years of decreases, the vacancy/headcount ratio for other licensed providers increased to 5.3% in 2006, approaching the 2002 high of 6.6%.

**Vacant Budgeted Positions Compared to Headcount  
Reported by Hospitals in the Gulf Coast Region in 2006**



## Demographics Show Subtle Changes

### *Ethnicity*

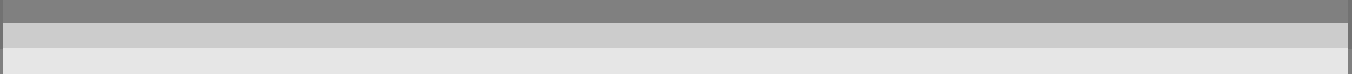
Ethnicity information was collected for RNs, LVNs, and all employees in participating hospitals as of September 30, 2006. Of the 48 hospitals, 46 submitted RN information, 44 submitted LVN information, and 47 submitted all employee information.

In 2006, hospitals showed similar proportions of white and minority employees among the three categories as were reported in the past years (RN: 46% white and 51% minority; LVN: 38% white and 59% minority; and all employee: 39% white and 60% minority). There were slight changes in proportions among minorities for RNs from 2005 to 2006 (a decrease from 5% to 0% of Pacific Islander RNs, and an increase from 20% to 25% of Asian RNs). A high proportion of employees in all categories were designated as having ethnicity information not available (3% of RNs and LVNs; 1.2% of all employees).

**Ethnic Distribution of Employees  
Reported by Hospitals in the Gulf Coast Region 2006**

	Hospital Population	Percentage of Total Hospital Population
<b>RNs</b>		
White	7,219	46.0
Total Minorities	7,980	51.0
Black	2,876	18.4
Hispanic	1,114	7.1
American Indian	68	.4
Asian	3,922	25.1
Pacific Islander	0	0
Information Not Available	462	3.0
<b>LVNs</b>		
White	618	38.2
Total Minorities	953	58.8
Black	617	38.1
Hispanic	210	12.9
American Indian	7	.4
Asian	118	7.3
Pacific Islander	1	.1
Information Not Available	49	3.0
<b>All Employees</b>		
White	23,220	39.1
Total Minorities	35,489	59.7
Black	17,352	29.2
Hispanic	8,516	14.3
American Indian	231	.4
Asian	9,310	15.7
Pacific Islander	80	.1
Information Not Available	749	1.2

### *Gender*



Gender information showed no real changes in the proportion of females to males in RN, LVN, and all employee categories in 2006 compared to past years. Approximately 91% of RNs and LVNs are female, while approximately 77% of all employees are females. Of the 48 hospitals, 44 submitted RN information, 43 submitted LVN information, and 45 submitted all employee information. Detailed information about gender data can be found in the *Supplement to the Annual Report* (see the *Supplement* at [www.gchssc.com](http://www.gchssc.com), under the Publications tab).

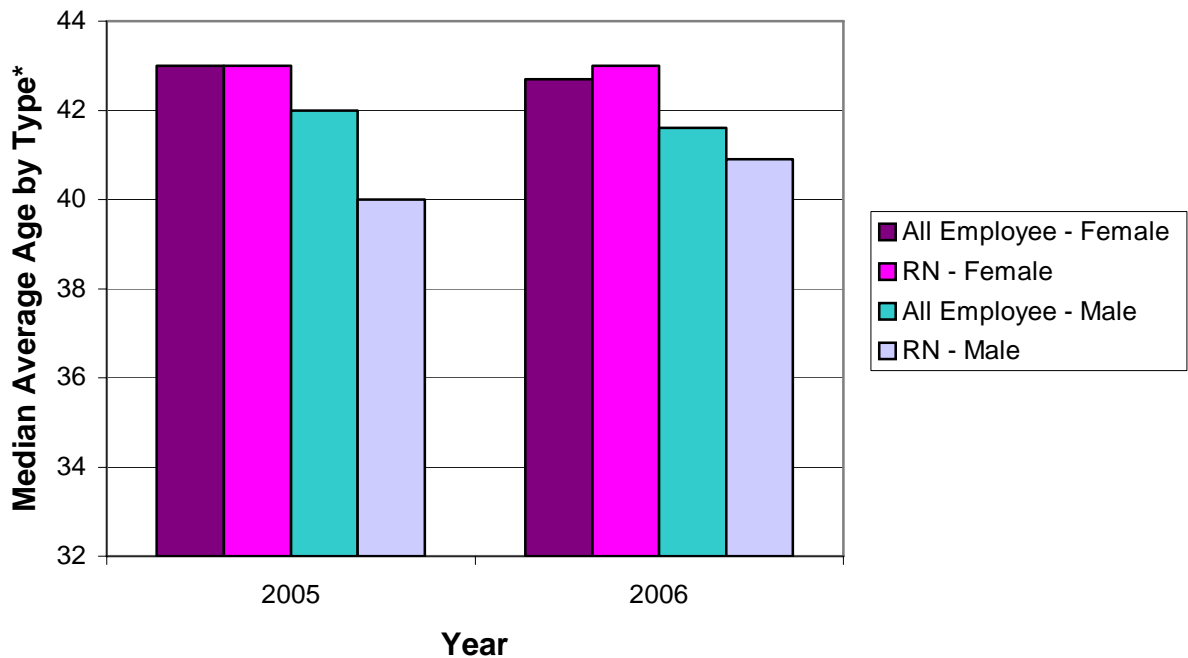
## Demographics *continued*

### *Average Ages Are in the Low 40s*

Hospitals reported the average ages of employees in certain job categories. Data were collected for all employees and RNs, female and male (see specification of measures in Appendix Table 3). Average age was defined as the average of the ages of all employees in that category (e.g., the average age of all female RNs). See Appendix Table 4 for the number of reporting hospitals, medians and ranges.

The medians of average ages for females were stable at 43 years across both employee categories and years. In 2006, the median of average ages for males was slightly lower for RNs (41 years) than for all employees (41.6 years) and was lower than the average age for females. In general, the medians for average age were high, between 40 and 43 for both employee categories and sexes.

**Average Ages of Employees  
Reported by Hospitals in the Gulf Coast Region  
2006**



\*Categories of types of employees are: RN and all employees, by female and male.

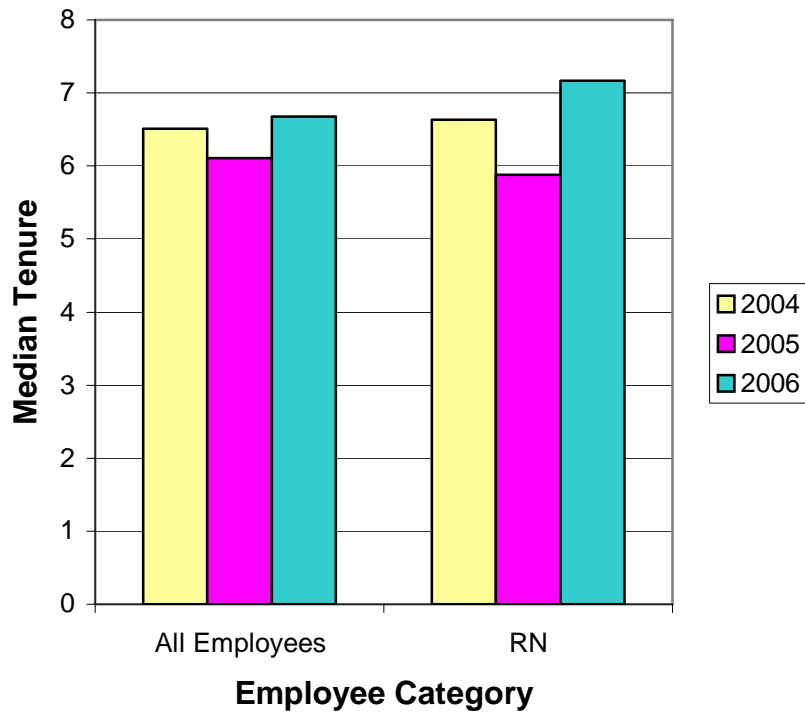
## Demographics *continued*

### *Tenure Has Increased Slightly*

Years of service data were collected in the survey so that tenure (average years of service per employee) could be calculated for all employees and RNs as of a specified date (see specification of measures in Appendix Table 3). See Appendix Table 4 for the number of reporting hospitals, medians and ranges.

Median tenure is similar for all employees and RNs, with RN median tenure slightly higher. Median tenure has been relatively stable over the last three years. However, from 2005 to 2006, the average tenure increased from almost six years to over seven years for RNs.

**Tenure of Employees by Category  
Reported by Hospitals in the Gulf Coast Region  
2006**



## Demographics *continued*

### *Specialty Certification and Education Levels Vary Among Hospitals*

For the first time in Work Environment Survey history, data on the percentages of specialty nurses and terminal degrees were collected for full-time and part-time employed RNs as of September 30, 2006 (see specification of measures in Appendix Table 3). For most of these categories, only half of the participating hospitals provided this information. See Appendix Table 4 for the number of reporting hospitals.

The low median percentage of nurses per hospital for Clinical Nurse Specialists, Nurse Practitioners, and Physician Assistants indicates that most hospitals do not have many nurses with those specialty certifications. However, the wide ranges indicate that some hospitals have a large percentage of nurses in those specialties, especially Physician Assistants, and other hospitals have few or none at all. The category of nurses certified in any specialty has the highest median percentage indicating that more hospitals have RNs in that category than in other specialty areas. However, the range varies from none to 35%.

The percentages related to education levels of nurses per hospital show that the vast majority of nurses have associates or bachelors degrees. The median percentage of MSN prepared nurses in hospitals is 5%, although the range varies from 0% to 11% MSN prepared nurses. As expected, the percentage of PhD prepared nurses is very small, with a median of zero.

#### **Specialty Certification and Education Levels of RNs Reported by Hospitals in the Gulf Coast Region 2006**

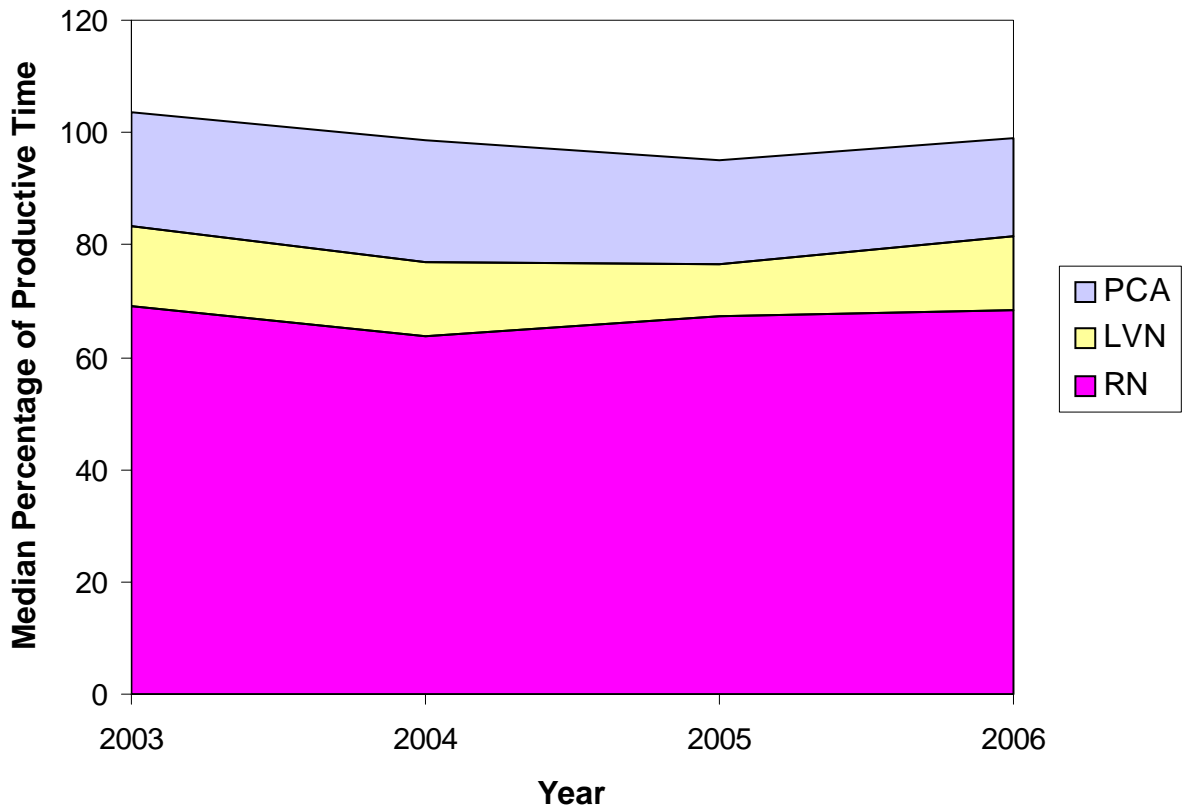
	<b>Median (Percentage of Nurses per Hospital)</b>	<b>Range (Percentage of Nurses per Hospital)</b>
<b>Specialty RNs</b>		
<b>Clinical Nurse Specialist</b>	<b>0%</b>	<b>0 - 3%</b>
<b>Nurse Practitioner</b>	<b>1%</b>	<b>0 - 8%</b>
<b>Physician Assistant</b>	<b>0%</b>	<b>0 - 22%</b>
<b>Certified in Any Specialty</b>	<b>16.5%</b>	<b>0 - 35%</b>
<b>Education Level in Nursing</b>		
<b>Associates Degree (ADN)</b>	<b>45.5%</b>	<b>0 - 89%</b>
<b>Bachelors Degree (BSN)</b>	<b>49%</b>	<b>12 - 100%</b>
<b>Masters Degree (MSN)</b>	<b>5%</b>	<b>0 - 11%</b>
<b>PhD</b>	<b>0%</b>	<b>0 - 1%</b>

## RNs Still Dominate Staffing Mix

Annual staffing mix data were collected as the percentage of productive nursing time worked by nursing staff in each nursing category: RNs, LVNs, and Patient Care Assistants (see specification of measures in Appendix Table 3). See Appendix Table 4 for the number of reporting hospitals, medians and ranges.

In general, RNs consistently provide the majority percentage of productive time and LVNs the least percentage of productive time. Patient Care Assistants provide a percentage of time that is somewhat larger than LVNs, but that percentage has constantly decreased since 2004. Ranges for each nursing category show that there is considerable variation among hospitals in terms of staffing plans.

**Staffing Mix by Productive Time  
Reported by Hospitals in the Gulf Coast Region  
2006**

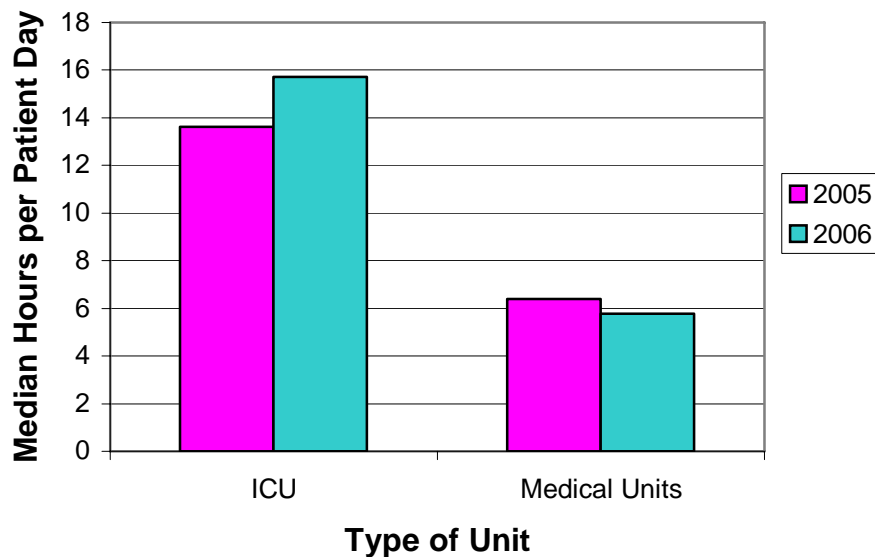


## Patient Care Nursing Hours per Patient Day

Annual patient care nursing hours per patient day (HPPD) were collected in the survey for both ICU and medical units (see specification of measures in Appendix Table 3). These are direct hours of nursing care that are patient-related, including nursing activities that occur away from the patient (e.g., care coordination, documentation time, treatment planning). However, they do not include indirect hours, nonproductive time, or all paid hours (e.g., it does not include vacation, sick time, orientation, education leave, or committee time if another staff member replaces the nurse). Data on HPPD have been collected only in 2005 and 2006. See Appendix Table 4 for the number of reporting hospitals, medians and ranges.

Median HPPD have increased slightly since 2005 for ICUs and decreased slightly for medical units. As expected, the median HPPD in ICUs is two to three times greater than the median in medical units. Appendix Table 4 reveals that the ranges on these hours are very large. The range for ICU varies from 7.2 to 20.3 HPPD, while the range on medical units varies from 3.23 to 16.9 HPPD.

**Nursing Hours Per Patient Day by ICU and Medical Units  
Reported by Hospitals in the Gulf Coast Region  
2006**

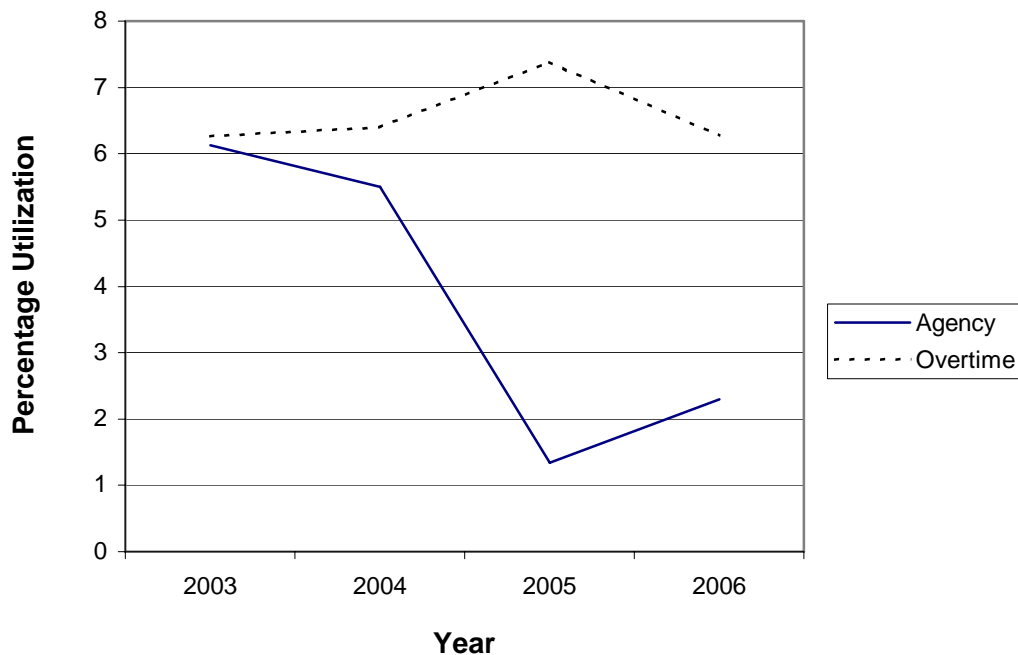


## Agency and Overtime Utilization Move in Opposing Directions

Agency and overtime utilization data were collected in the survey on an annualized basis. Each hospital reported these data as percentages of productive time for all RNs (see specification of measures in Appendix Table 3). See Appendix Table 4 for the number of reporting hospitals, medians and ranges.

Over the four years of data collection, agency use has fallen by nearly two-thirds, although it increased slightly from 2005 to 2006. In contrast, overtime use increased slightly for two years, but has decreased in 2006 to near 2003 levels. The 2006 median for agency use (2% of productive hours) is much smaller than the 2006 median for overtime use (6% of productive hours). In 2003, over 12.3% of RN productive time was accounted for by agency and overtime use. Now these staffing methods account for only 8.5% of productive time, suggesting that other strategies are being used to solve staffing issues. Appendix Table 4 shows that the ranges for agency and overtime utilization are very wide, indicating that there are substantial differences in hospitals' decisions to use these staffing strategies.

**Agency and Overtime Utilization as a Percent of Productive Time  
Reported by Hospitals in the Gulf Coast Region  
2006**



## Workers' Compensation and Lost Time Injuries

For the first time in Work Environment Survey history, annual measures of workers' injuries were collected. Measures included OSHA back injuries per hours worked, compensation claims per hours worked, injury-caused paid days off per payroll days, injury-caused unpaid days off per payroll days, and needlestick injuries per hours worked (see specification of measures in Appendix Table 3). Data are reported as the rate per 10,000 units. Less than half of the hospitals provided this information.

The median percentage of these employee injuries is extremely low, as expected. The ranges are extremely large. Appendix Table 4 shows the number of hospitals reporting data for each measure.

### Workers' Compensation and Lost Time Injuries Reported by Hospitals in the Gulf Coast Region 2006\*

	Median	Range
<b>OSHA Reportable Back Injuries per Hours Worked</b>		
Nurses	.135	0 – 10,000
All Employees	7.15	0 – 90,000
<b>Workers' Compensation Claims per Hours Worked</b>		
Nurses	.365	0 – 80,000
All Employees	.84	0 – 70,000
<b>Workers' Compensation Claims with Paid Days Off per Payroll Days</b>		
Nurses	6.04667	0 – 11,000
All Employees	383.561	0 – 118,000
<b>Unpaid Days Off Due to Injury per Payroll Days</b>		
Nurses	0	0 – 1,800
All Employees	0	0 – 2,100
<b>Nurses' Needlestick Injuries per Hours Worked</b>	.32627	0 – 20,000

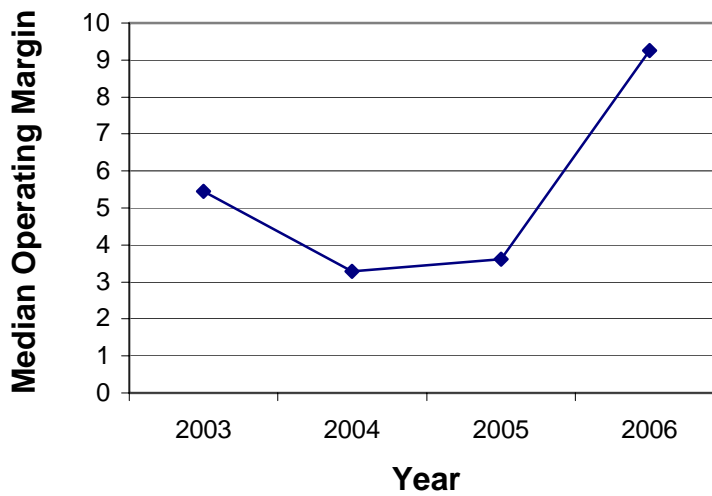
\* Data reported as rate per 10,000 units.

## Operating Margin Increases

Annual operating margin data were collected in the survey. Each hospital reported their operating margin for their most recent year-end data (see specification of measures in Appendix Table 3). See Appendix Table 4 for the number of reporting hospitals, medians and ranges.

Approximately half of hospitals reported their operating margin, a similar reporting percentage as in other years. After two years of median operating margins less than 5%, the 2006 median operating margin more than doubled to 9.3%. This is nearly twice the previous 2003 high of 5.5%. However, Appendix Table 4 shows that there was an incredibly wide range of performance reported, with operating margins varying from -13.5% to 37.2%.

**Operating Margin  
Reported by Gulf Coast Hospitals  
2006**



## Patient Outcome Data Are Widely Variable

Annual data on a variety of patient outcomes measures were collected in the survey. Over the years of the survey, more measures have been added. Measures include medication errors per number of medication doses, ICU central line infections per number of ICU central line days, hospital acquired ventilator pneumonias per number of ventilator days, number of post-operative wound infections per number of surgical cases, number of inpatient falls per number of inpatient days, and number of inpatient falls with injuries per number of inpatient days (see specification of measures in Appendix Table 3). Data are reported as the rate per 10,000 units. More than half of the hospitals provided this information (see Appendix Table 4 for the number of reporting hospitals).

The median rates/percentages of patient injuries are extremely low, as expected. For measures collected for more than one year, the 2006 data are the smallest values in a series of decreases from the earliest year data were collected. Note that the 2006 measures' ranges are very wide.

### Patient Outcome Measures Reported by Hospitals in the Gulf Coast Region 2006\*

	<b>Range 2006</b>	<b>Median 2006</b>	<b>Median 2005</b>	<b>Median 2004</b>	<b>Median 2003</b>
<b>Medication Errors per Medication Doses</b>	.01 – 700	5.2	20	5	600
<b>ICU Central Line Infections per ICU Central Line Days</b>	0 – 165,000	97	64	6,000	12,800
<b>Hospital Acquired Ventilator Pneumonias per Ventilator Days</b>	0 – 70,000	20	107	390	NA
<b>Post- Op Wound Infections per Surgical Cases</b>	0 – 261,000	2,350	2,700	5,000	NA
<b>Inpatient Falls per Inpatient Days</b>	2.319 – 39,000	100	NA	NA	NA
<b>Inpatient Falls with Injuries per Inpatient Days</b>	0 – 257,200	9.5	NA	NA	NA

\* Data reported as rate per 10,000.

NA = Data not available for those years

## Patient Satisfaction Continues to be High

Hospitals reported patient satisfaction data for the most recent period they had available at the time of the survey, which could be for a quarter or a year. Measures included the percentage of patients reporting the highest level of overall satisfaction with the most recent hospital encounter, the percentage of patients reporting the highest level of satisfaction with nursing care, and the average patient satisfaction rating. Satisfaction with nursing care was not measured in 2003, but was added by the WEW in 2004 (see specification of measures in Appendix Table 3).

The measure of percentage of patients reporting the highest level of overall satisfaction is the percent of all scores that were the highest possible rating (e.g. the percent of 5's received from patients on a 5-point scale). The average overall patient satisfaction score is the average of all responses –including all scores from highest to lowest. In order to compare average patient satisfaction ratings among hospitals using different measures, information was collected on the rating scales used and reported values were converted to the most commonly used scale, a five-point scale. See Appendix Table 4 for the number of reporting hospitals, medians and ranges. More than half of the hospitals provided patient satisfaction data.

The 2006 median value for overall satisfaction is high (71%). Ratings of overall satisfaction have increased over the last four years, while ratings of satisfaction with nursing care have shown little change. Unlike other years, in 2006 there is nearly a 10% gap between ratings of overall satisfaction and ratings of satisfaction with nursing care. Appendix Table 4 shows that hospitals reported a wide range of satisfaction ratings.

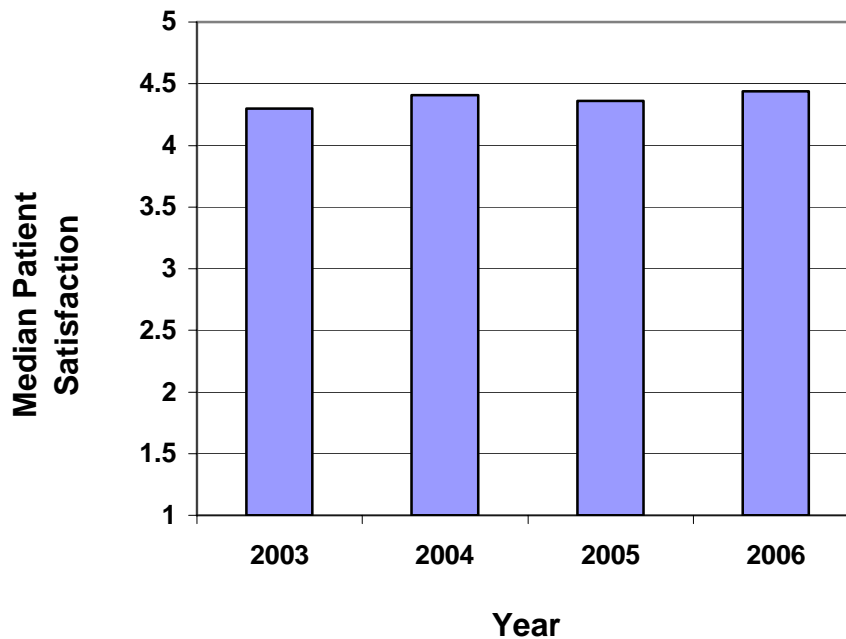
**Percentage of Patients Reporting the Highest Level of Satisfaction  
Reported by Hospitals in the Gulf Coast Region  
2006**



## Patient Satisfaction *continued*

The median values for average overall patient satisfaction ratings are also high and have increased slightly over the last four years. (The measurements recorded on the chart below are the median scores from reporting hospitals' annual average overall patient satisfaction ratings from 2003 to 2006). However, further examination of Appendix Table 4 shows a fairly wide range from 2.6 to 4.8. This range indicates that all hospitals are not maintaining high patient overall satisfaction.

**Average Overall Patient Satisfaction Ratings  
Reported by Hospitals in the Gulf Coast Region  
2006**



## Nursing Staff Satisfaction is Generally Positive

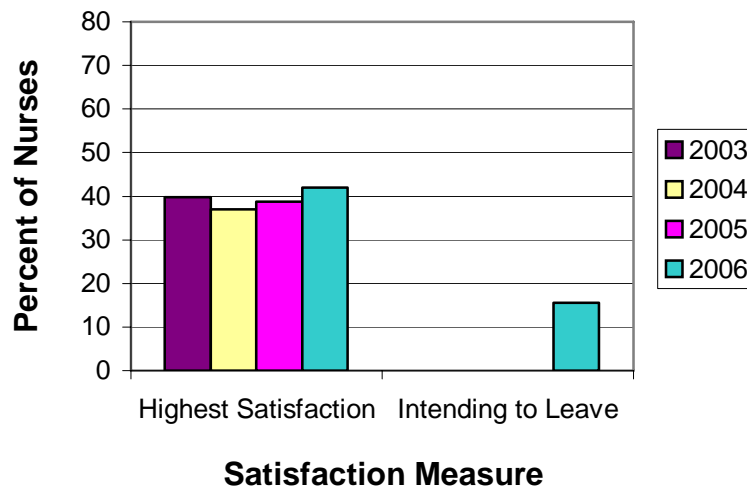
Hospitals reported annual nursing staff satisfaction data for the most recent period they had available at the time of the survey. Hospitals were asked to report data if they already had these measures on their current employee opinion surveys. They were not asked to have staff complete special opinion surveys. These types of questions are common to many pre-packaged or custom surveys, however the actual wording of the question may have differed among hospitals. Therefore, these data should be interpreted as a generalized indicator of nurse satisfaction.

Measures included the percentage of nursing staff reporting the highest level of overall satisfaction, the percentage of nursing staff intending to leave the hospitals during the next year, the average nurse job satisfaction rating, the average nurse satisfaction with their supervisor, and the average nurse satisfaction with physician working relationships (see specification of measures in Appendix Table 3). Three of these measures are new to the survey in 2006: average nurse satisfaction with their supervisor, average satisfaction with physician relationships, and percentage intending to leave the hospital. In order to compare average nurse satisfaction ratings among hospitals using different measures, information was collected on the rating scales used and reported values were converted to the most commonly used scale, a five-point scale. See Appendix Table 4 for the number of reporting hospitals, medians and ranges. More than half of the hospitals provided nurse satisfaction data on most of the measures.

A fairly high median percentage of nurses selected the highest rating possible in overall job satisfaction in all four years, culminating in a high of 42% in 2006. Appendix Table 4 shows the range of ratings for different hospitals, which extends from .5% to 85%.

A median of 15% of nurses indicated that they intended to leave their hospital with in the next year. The range on this question was very wide, from 3.3% to 25%.

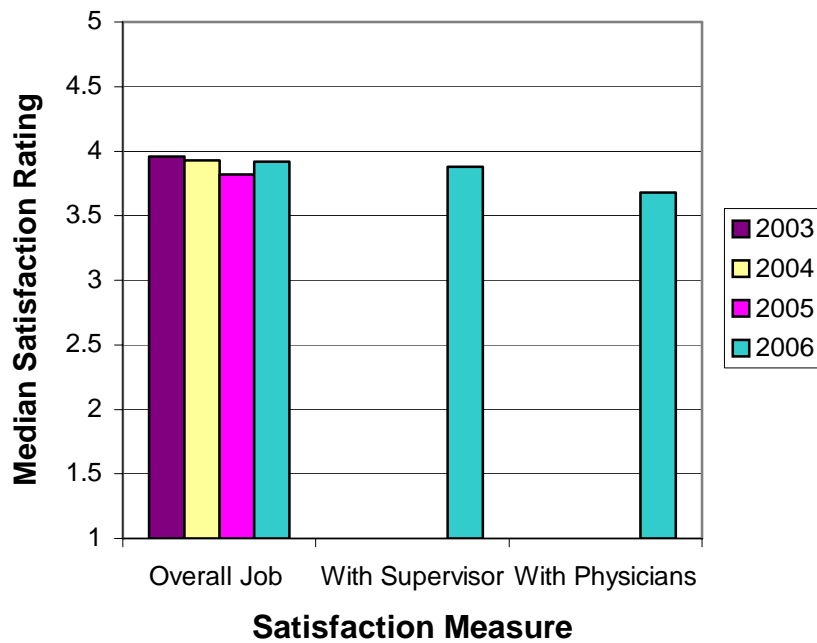
**Percentage of Nursing Staff Indicating Highest Satisfaction or Intention to Leave  
Reported by Hospitals in the Gulf Coast Region  
2006**



## Nursing Staff Satisfaction *continued*

Median average satisfaction ratings were above the mid-point for nurses in all years on all measures. The new measures of satisfaction with supervisor and physicians had median values within .5 of a scale point of overall job satisfaction in 2006.

**Average Nurse Satisfaction with Overall Job, Supervisor\*, and Physician Relationships\*  
Reported by Hospitals in the Gulf Coast Region  
2006**



\* New measures collected for the first time in 2006.

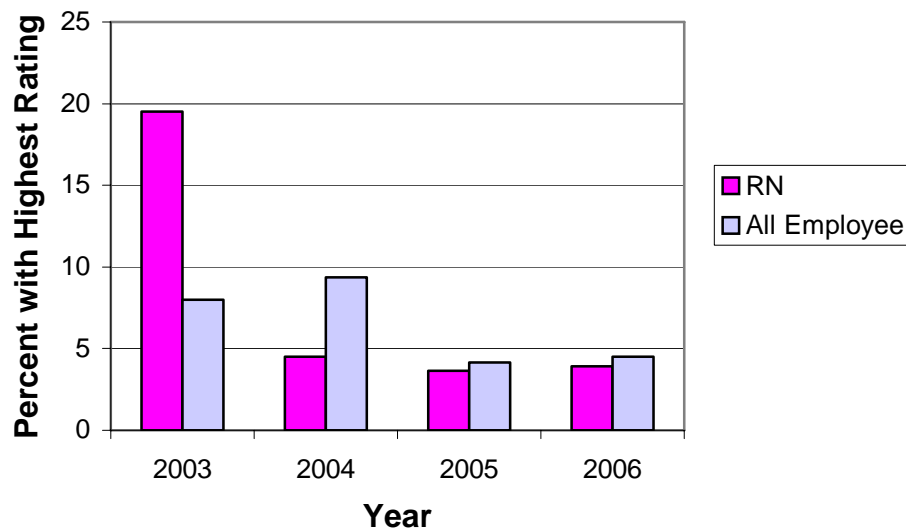
## Performance Appraisal Ratings Show Differences

Hospitals reported annual performance appraisal data for the most recent period they had available at the time of the survey. Performance appraisal systems, including the types of criteria assessed and rating systems, vary greatly among hospitals. They also differ in terms of severity or leniency in applying the rating system. Leadership in some hospitals supports many employees achieving very high ratings, while others believe that high ratings are for only the very highest achievers. Therefore, this data should be interpreted as a generalized indicator of nurse performance.

Measures included the percentage of nursing staff earning the highest possible overall performance appraisal rating, the percentage of all employees earning the highest possible overall performance appraisal rating, the average nurse performance appraisal rating, and the average all employee performance appraisal rating (see specification of measures in Appendix Table 3). In order to compare average performance appraisal ratings among hospitals using different measures, information was collected on the rating scales used and reported values were converted to the most commonly used scale, a five-point scale. See Appendix Table 4 for the number of reporting hospitals, medians and ranges. Eighty percent of the hospitals provided performance appraisal data on most of the measures.

The median percentage of RNs who have received the highest possible performance appraisal ratings decreased from a high 19% in 2003 to values less than 5% in the last three years. Similarly, the median percentage of all employees that received the highest possible performance appraisal ratings have decreased from values near 10% in 2003 and 2004, to values less than 5% in 2005 and 2006.

**Percentage of RNs and All Employees  
Earning the Highest Possible Overall Performance Appraisal Ratings  
Reported by Hospitals in the Gulf Coast Region  
2006**

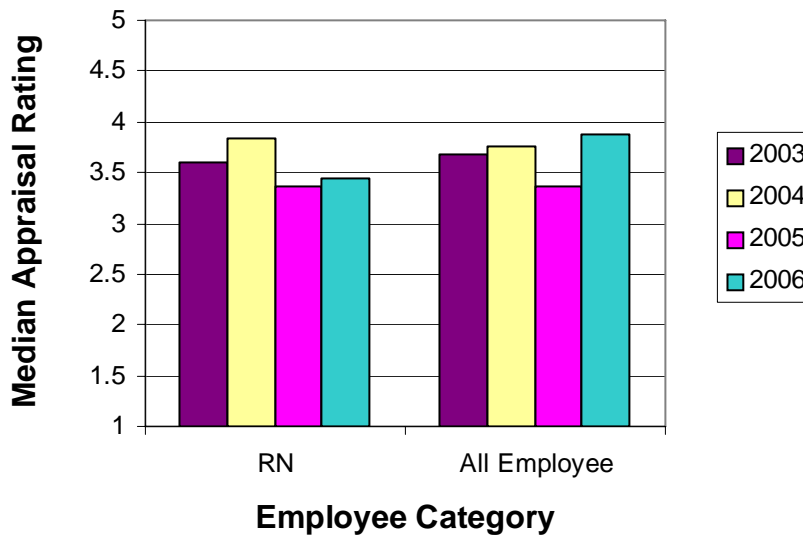


## Performance Appraisal *continued*

We have no explanation for the wide and precipitous change in the percentage of nurses and of all employees receiving the highest possible score on performance evaluations. The change is worth noting but should be interpreted cautiously. Appendix Table 4 shows a wide range for these ratings.

Median average performance appraisal ratings were above mid-point (3 on a 5 point scale) for nurses and all employees in all years. These measurements have not changed dramatically during the last four years. Appendix Table 4 shows a wide range for these ratings.

**Average Performance Appraisal Ratings  
Reported by Hospitals in the Gulf Coast Region  
2006**





## **Appendices**

**Table 1**  
**Comparison of Hospitals and Hospital Beds in the Region to**  
**Participants in the Work Environment Survey 2006-2007**

	<b>All Hospitals in Region</b>	<b>Participating Hospitals</b>	<b>Participants as Percentage of Region</b>
<b>Number of Beds</b>			
<b>Total</b>	20,569	12,334	59.9
<b>Disproportionate Share</b>	5,562	4,061	73.0
<b>Bed Size Distribution</b>			
<b>1-49</b>	35	11	31.4
<b>50-99</b>	30	7	23.3
<b>100-149</b>	16	6	37.5
<b>150-249</b>	14	7	50.0
<b>250-500</b>	12	9	75.0
<b>500 +</b>	12	8	66.7
<b>Number of Hospitals</b>			
<b>Non-Disproportionate Share Hospitals</b>	95	37	38.9
<b>Disproportionate Share Hospitals</b>	24	11	45.8
<b>Hospital Service Distribution</b>			
<b>General</b>	69	33	47.8
<b>LTAC</b>	24	5	20.8
<b>Cancer</b>	1	1	100.0
<b>OB GYN</b>	1	1	100.0
<b>Pediatric</b>	5	4	80.0
<b>Psychiatric</b>	7	0	0.0
<b>Rehabilitation</b>	5	3	60.0
<b>Specialty Surgery</b>	7	1	14.3
<b>Hospital Ownership Types</b>			
<b>Corporation</b>	23	9	39.1
<b>Government</b>	16	12	75.0
<b>Non-Profit/Christian</b>	9	6	66.7
<b>Non-Profit/ Non-Christian</b>	21	13	61.9
<b>Partnership</b>	50	8	16.0

**Table 2**  
**Work Environment Workgroup Members**

Name	Title	Affiliation
Co-Chair: Mark Wallace	Chief Executive Officer	Texas Children's Hospital
Co-Chair: Susan M. Distefano	Senior Vice President and Chief Nursing Officer	Texas Children's Hospital
Barbara Hayley	Chief Executive Officer	Hayley Ranch Consulting
Barbara Summers	Vice President and Chief Nursing Officer	UT MD Anderson Cancer Center
Cathy Moniaci	Chief Nursing Officer	Shriners Hospitals for Children- Houston
Cheryl C. Day	Director of Women's, Infants', Children's and Behavioral Medicine	University of Texas Medical Branch
Debbie Mahannah	Assistant Vice President for Human Resources	St. Luke's Episcopal Hospital
Elaine J. Barber	Senior Vice President	Greater Houston Partnership
Gerald Goodman	Associate Professor, Health Care Administration	Texas Woman's University
Heather Carson	HR Generalist	Memorial Hermann Health System/TIRR
Janet Matthews	Administrator of Women's and Children's Services & Interim CNE	St. Joseph Medical Center
Johnie Leonard	Director, Emergency Department	The Methodist Hospital
Julie Detomo	Chief Nursing Officer	Oak Bend Medical Center
K.Lynn Wieck	Jacqueline M Braithwaite Professor CEO	UT Tyler College of Nursing, Management Solutions for Healthcare
Kathryn Stream	Senior Vice President	Texas Medical Center

Kathy Shingleton	Vice President of Human Resources and Employee Services	University of Texas Medical Branch
Larry Livengood	Area Director of Human Resources	Kindred Hospitals - South Texas
Lauren Rykert	Sr. Vice President, Human Resources	The Methodist Hospital
Pam Rhodes	Chief Human Resources Officer	CHRISTUS Health Gulf Coast Region
Rachel Caillouet	Vice President, Human Resources	Baylor College of Medicine
Scott Doak	Chief Human Resources Officer	Spring Branch Medical Center
Shibu Varghese	Vice President, Human Resources	HCA Gulf Coast Division
Tabitha Rice	Assistant Vice President	Texas Children's Hospital
Trudi Stafford	Chief Patient Care Officer	Memorial Hermann Southeast
Viola Hebert	Director of Nursing Programs and Workforce Development	Harris County Hospital District
Carole Hackett	Vice President, Human Resources	The Methodist Hospital
Mary Koch	Health Services Industry Liaison	The WorkSource
Marilyn Stadler	Employer Services Manager	The WorkSource
Donde Batten	Consultant	Batten Consulting

**Table 3**  
**Specifications of Work Environment Survey Measures**

<b>Measure</b>	<b>Measure Formula and Guidelines</b>	<b>Source of Measure</b>
<p>General Turnover Rate for Full-Time Employees</p>	<p>Hospitals report annual turnover data for actions taking place between 10/01/05 and 9/30/06. Hospitals report data only for hospital employees, full-time, not including research entities, academic organizations, or other subsidiary organizations. They exclude contract or agency staff members not on the hospital’s payroll. Hospitals report headcounts at the beginning and end of the year, rather than FTEs. “Headcount” refers to the number of individuals (full-time) on the hospital’s payroll. “Terminations” refers to the number of individuals (full-time) deleted from the hospital’s payroll for any reason (voluntary or involuntary) including transfers to another hospital within a multi-hospital system. The turnover formula is: (the number of terminations) divided by the average of (headcount the previous year + headcount the current year).</p>	<p>Saratoga</p>
<p>Voluntary Turnover Rate for Full-Time Employees</p>	<p>Hospitals report annual voluntary turnover data for actions taking place between 10/01/05 and 9/30/06. Hospitals report data only for hospital employees, full-time, not including research entities, academic organizations, or other subsidiary organizations. They exclude contract or agency staff members not on the hospital’s payroll. Hospitals report headcounts at the beginning and end of the year, rather than FTEs. “Headcount” refers to the number of individuals (full-time) on the hospital’s payroll. “Terminations” refers to the number of individuals (full-time) deleted from the hospital’s payroll for any reason (voluntary or involuntary) including transfers to another hospital within a multi-hospital system. Voluntary turnover excludes separation due to death, illness, pregnancy, relocation, retirement, performance or discipline, cutbacks due to mergers, cyclical layoffs, permanent reductions in force, per diem, consultants, temporary or agency status, and students in training. The turnover formula is: (the number of terminations) divided by the average of</p>	<p>Saratoga calculations, NQF exclusions</p>

Measure	Measure Formula and Guidelines	Source of Measure
	(headcount the previous year + headcount the current year).	
Retention Rate for Full-Time Employees	Hospitals report annual retention data for an annual period beginning 10/01/05 and ending 9/30/06. Hospitals report data only for hospital employees, full-time, not including research entities, academic organizations, or other subsidiary organizations. They exclude contract or agency staff members not on the hospital's payroll. Hospitals report headcounts at the beginning and end of the year, rather than FTEs. "Headcount" refers to the number of individuals (full-time) on the hospital's payroll. "Total Employees" includes all full-time staff that work in the hospital. Hospitals report the total number of employees on staff in each job category for the time period beginning 10/01/05. Hospitals report the total number from that specific group who remain on staff at the end of the time period ending 9/30/06. For example, a hospital reports 100 nurses on staff as of October 1, 2005. Of these nurses, 80 remain on staff on September 30, 2006.	Saratoga
Vacancy Rate for Full-Time Employees – Using Budgeted Positions	Hospitals report vacancy data for 9/30/06. Hospitals report data only for hospital employees, full-time, not including research entities, academic organizations, or other subsidiary organizations. They exclude contract or agency staff members not on the hospital's payroll. Hospitals report the number of budgeted positions and the number of vacancies in budgeted positions as of 9/30/06. The vacancy rate formula is: (the number of vacancies in budgeted positions) divided by (the number of budgeted positions).	Bureau of Labor Statistics
Vacancy Rate for Full-Time Employees – Using Headcount	Hospitals report vacancy data for 9/30/06. Hospitals report data only for hospital employees, full-time, not including research entities, academic organizations, or other subsidiary organizations. They exclude contract or agency staff members not on the hospital's payroll. Hospitals report headcount (not FTEs) on 9/30/06 and the number of vacancies in budgeted positions as of 9/30/06. "Headcount" refers to the number of individuals (full-time) on the hospital's payroll. The vacancy rate formula is: (the number of vacancies in budgeted	Bureau of Labor Statistics

Measure	Measure Formula and Guidelines	Source of Measure
Ethnicity	positions) divided by the headcount. Hospitals report ethnicity data for full-time and part-time employees as of 9/30/06. They do not include employees in research entities, academic organizations, or other subsidiary organizations. All requested information is for headcount, not FTEs.	Bureau of Labor Statistics
Gender	Hospitals report gender data for full-time and part-time employees as of 9/30/06. They do not include employees in research entities, academic organizations, or other subsidiary organizations. All requested information is for headcount, not FTEs.	Bureau of Labor Statistics
Average Age	Hospitals report gender data for full-time and part-time employees as of 9/30/06. They do not include employees in research entities, academic organizations, or other subsidiary organizations. All requested information is for headcount, not FTEs. "Average Age" means the average of the ages of all employees in that category. For example, the average age of all female RNs may be 42.5 years.	Bureau of Labor Statistics
Tenure	Hospitals report years of service and headcount for employees as of 9/30/06. Hospitals report data only for hospital employees, not including research entities, academic organizations, or other subsidiary organizations. They exclude contract or agency staff members not on the hospital's payroll. Hospitals report headcounts rather than FTEs. "Headcount" refers to the number of individuals on the hospital's payroll. The tenure formula is: (the number of years of service) divided by the headcount.	Bureau of Labor Statistics
Percentage of Nurses with Specialty Certification	Hospitals report data as of 9/30/06. They report data only for hospital employees, full-time and part-time, and do not include employees of research entities, academic organizations, or other subsidiary organizations. Hospitals do not include contract or agency staff not on the hospital's payroll. Hospitals report headcount, not FTEs. "Headcount" refers to the number of individuals on the hospital's payroll. The formula for percentage of RNs in each specialty is: (the number of nurses in a given specialty) divided by the total number of RNs.	Texas Board of Nurse Examiners
Percentage of Nurses at Education Level	Hospitals report data as of 9/30/06. They report data only for hospital employees, full-time and	Texas Board of Nurse Examiners

Measure	Measure Formula and Guidelines	Source of Measure
	part-time, and do not include employees of research entities, academic organizations, or other subsidiary organizations. Hospitals do not include contract or agency staff not on the hospital's payroll. Hospitals report headcount, not FTEs. "Headcount" refers to the number of individuals on the hospital's payroll. The formula for percentage of RNs at each education level is: (the number of nurses in a given level) divided by the total number of RNs.	
Staffing Mix	Staffing mix is calculated by dividing the number of hours of productive time for each group of employees (RN, LVN, Patient Care Assistant) by the sum of productive hours for these three employee groups. Hospitals include all staff (employed, contract, and traveler), with direct patient care responsibilities. Hospitals report annual data, measured between specified dates, including the number of hours of RN productive time, the number of hours of LVN productive time, the number of hours of Patient Care Assistant (PCA) productive time, and the number of total hours of RN/LVN/PCA productive time. PCAs are unlicensed assistive personnel.	American Nurses Association - National Database of Nursing Quality Indicators
Nursing Hours Per Patient Day for ICU and Medical Units	Hospitals report data as of 9/30/06. Only productive hours are used; productive hours are direct hours of nursing care that are patient-related, including nurse activities that occur away from the patient (e.g., care coordination, documentation time, treatment planning). They do not include indirect hours, nonproductive time, or all paid hours (e.g., sick time, vacation, orientation, education leave). They also do not include committee time if the staff person is replaced by another direct provider. The formula for HPPD is: the total number of direct nursing care hours divided by the patient census for the same 24 hours.	American Nurses Credentialing Center, Magnet Quality Indicator, American Nurses Association's <i>Scope and Standards for Nurse Administrators</i> (2003)
Agency Utilization	Agency usage is calculated by dividing the total RN agency hours worked (including contract and traveler RNs) by the number of productive hours employed RNs worked (all RN hours including contract and traveler RNs). Data is measured annually between 10/01/05 and 9/30/06.	American Nurses Association - National Database of Nursing Quality Indicators
Overtime Utilization	Overtime usage is calculated by dividing the total productive RN overtime hours worked	Department of Labor

Measure	Measure Formula and Guidelines	Source of Measure
	(including contract and traveler RNs) by the number of productive hours employed RNs worked (all RN hours including contract and traveler RNs). Data is measured annually between 10/01/05 and 9/30/06.	
Percentage of OSHA Reportable Back Injuries	Hospitals use a prescribed formula to calculate the percentage of annual reported back injuries for data collected between 10/01/05 and 9/30/06. The formula is: number of OSHA reportable back injuries divided by the number of hours worked.	Department of Labor
Percentage of Workers' Compensation Claims	Hospitals use a prescribed formula to calculate the percentage of annual workers' compensation claims for data collected between 10/01/05 and 9/30/06. The formula is: number of workers' compensation claims divided by the number of hours worked. Figures are calculated for all claims and for claims with paid days off due to injury.	Department of Labor
Percentage of Unpaid Days Off Due to Injury	Hospitals use a prescribed formula to calculate the percentage of annual unpaid days off due to injury for data collected between 10/01/05 and 9/30/06. The formula is: number of unpaid days off due to injury divided by the number of total payroll days.	Department of Labor
Percentage of Needlestick Injuries	Hospitals use a prescribed formula to calculate the percentage of annual nurse needlestick injuries for data collected between 10/01/05 and 9/30/06. The formula is: number of needlestick injuries divided by the total number of hours worked.	Centers of Disease Control and Prevention
Operating Margin	Hospitals report their operating margins for the previous year-end data. Hospitals either use the most recent year-end of December 31 or August 31, depending whether they are using a calendar or academic cycle. Revenue is defined as exclusive of investment, interest, and other non-patient care income. The formula for operating margin is: (net revenue minus expenses) divided by net revenue.	Hospitals use a variety of accounting methods to accrue this data
Medication Error Rate	Hospitals use a prescribed formula to calculate medication error rate for data collected between 10/01/05 and 9/30/06. The formula is the total number of medication errors divided by the total number of medication doses. Totals include all patients.	JCAHO Comprehensive Accreditation Manual for Hospitals, 2005
ICU Central Line	Hospitals use a prescribed formula to calculate	Centers for Disease Control

<b>Measure</b>	<b>Measure Formula and Guidelines</b>	<b>Source of Measure and Prevention</b>
Catheter- Associated Blood Stream Infection Rate	the annual ICU central line infection rate for data collected between 10/01/05 and 9/30/06. The formula is the total number of ICU central line infections divided by the total number of ICU of central line days. Totals include all ICU patients.	Centers for Disease Control and Prevention
Ventilator-Associated Pneumonia Rate	Hospitals use a prescribed formula to calculate the annual ventilator pneumonia rate for data collected between 10/01/05 and 9/30/06. The formula is the total number of hospital-acquired ventilator pneumonias divided by the total number of ventilator days. Totals include all patients.	Centers for Disease Control and Prevention
Surgical Site Infection Rate	Hospitals use a prescribed formula to calculate the annual surgical site infection rate for data collected between 10/01/05 and 9/30/06. The formula is the total number of post-op wound infections divided by the total number of surgical cases. Totals include all post-op patients.	Centers for Disease Control and Prevention
Falls Prevalence Rate	Hospitals use a prescribed formula to calculate the annual falls prevalence for data collected between 10/01/05 and 9/30/06. The formula is the total number of inpatient falls divided by the total number of inpatient days. Totals include all patients.	American Nurses Association - National Database of Nursing Quality Indicators
Falls Prevalence with Injuries Rate	Hospitals use a prescribed formula to calculate the annual falls with injuries for data collected between 10/01/05 and 9/30/06. The formula is the total number of inpatient falls with injuries divided by the total number of inpatient days. Totals include all patients.	American Nurses Association - National Database of Nursing Quality Indicators
Percentage of Patients Reporting the Highest Level of Overall Satisfaction	Hospitals report patient satisfaction data for the most recent period available. They report the percentage of patients reporting the highest level of overall satisfaction with the most recent hospital encounter on the patient satisfaction survey. All hospitals report data in which the final collection occurs in the current year. The majority of hospitals report data collected for 9-12 months.	Hospitals use a variety of proprietary instruments by firms such as Press Ganey
Percentage of Patients Reporting the Highest Level of Satisfaction with Nursing Care	Hospitals report patient satisfaction data for the most recent period available. They report the percentage of patients reporting the highest level of satisfaction with nursing care on the most recent hospital encounter on the patient satisfaction survey. All hospitals report data in which the final collection occurs in the current year. The majority of hospitals report data	Hospitals use a variety of proprietary instruments by firms such as Press Ganey

Measure	Measure Formula and Guidelines	Source of Measure
Average Patient Satisfaction Rating	<p>collected for 9-12 months.</p> <p>Hospitals report patient satisfaction data for the most recent period available. They report the average patient satisfaction rating, the rating scale used in the patient satisfaction survey, the scale descriptor, and the period covered by the most recent patient satisfaction survey. Different rating scales are used among hospitals. In order to provide comparisons, most rating scales are converted from other scales (three-point, four-point, six-point or seven-point scales are used in the region) to a five-point scale. In the conversion, 1 is the lowest rating and 5 is the highest rating. All hospitals report data in which the final collection occurs in the current year. The majority of hospitals report data collected for 9-12 months.</p>	Hospitals use a variety of proprietary instruments by firms such as Press Ganey
Percentage of Nurses Reporting the Highest Level of Job Satisfaction	Hospitals report nurse satisfaction data for the most recent period available and provide the dates of service covered by that survey. They report the percentage of nursing staff reporting the highest level of job satisfaction possible on the patient satisfaction survey. Nearly all hospitals report data in which the final collection occurred in the current year; if not there may be a one-year lag.	Hospitals use a variety of proprietary instruments by firms such as Press Ganey
Nurse Turnover Intention Rate	Hospitals report data for the most recent period available and provide the dates of service covered by that survey. Ideally, hospitals report data collected over a calendar year. If data for nurses only is not available, hospitals are asked to report data for the organization group that best reflected the nurses' opinions. Hospitals report the percentage of nurses rating regarding a positive intention to leave the hospital in the next year, the rating scale used in the employee survey and its descriptors, and the period covered by the survey. The formula is: number of RNs giving a positive response to intent to leave the hospital during the next year divided by the number of RNs. Nearly all hospitals report data in which the final collection occurred in the current year; if not there may be a one-year lag.	Hospitals use a variety of proprietary instruments by firms such as Press Ganey
Average RN Overall Job Satisfaction Rating	Hospitals report data for the most recent period available and provide the dates of service covered by that survey. If data for RNs only is	Hospitals use a variety of proprietary instruments by firms such as Press Ganey

Measure	Measure Formula and Guidelines	Source of Measure
	<p>not available, hospitals are asked to report data for the organization group that best reflected the nurses' opinions. Hospitals report the average nurse job satisfaction rating, the rating scale used in the employee satisfaction survey and its descriptors, and the period covered by the survey. Different rating scales are used among hospitals. In order to provide comparisons, most rating scales were converted from other scales (three-point, four-point, six-point or seven-point scales are used in the region) to a five-point scale. In the conversion, 1 is the lowest rating and 5 is the highest rating. Nearly all hospitals report data in which the final collection occurred in the current year; if not there may be a one-year lag.</p>	
<p>Average RN Satisfaction with Supervisor Rating</p>	<p>Hospitals report data for the most recent period available and provide the dates of service covered by that survey. If data for RNs only is not available, hospitals are asked to report data for the organization group that best reflected the nurses' opinions. Hospitals report the average nurse satisfaction with supervisor rating, the rating scale used in the employee satisfaction survey and its descriptors, and the period covered by the survey. Different rating scales are used among hospitals. In order to provide comparisons, most rating scales were converted from other scales (three-point, four-point, six-point or seven-point scales are used in the region) to a five-point scale. In the conversion, 1 is the lowest rating and 5 is the highest rating. Nearly all hospitals report data in which the final collection occurred in the current year; if not there may be a one-year lag.</p>	<p>Hospitals use a variety of proprietary instruments by firms such as Press Ganey</p>
<p>Average RN Satisfaction with Physician Working Relationships Rating</p>	<p>Hospitals report data for the most recent period available and provide the dates of service covered by that survey. If data for RNs only is not available, hospitals are asked to report data for the organization group that best reflected the nurses' opinions. Hospitals report the average nurse rating of satisfaction with working relationships with physicians, the rating scale used in the employee satisfaction survey and its descriptors, and the period covered by the survey. Different rating scales are used among hospitals. In order to provide comparisons, most</p>	<p>Hospitals use a variety of proprietary instruments by firms such as Press Ganey</p>

<b>Measure</b>	<b>Measure Formula and Guidelines</b>	<b>Source of Measure</b>
	rating scales were converted from other scales (three-point, four-point, six-point or seven-point scales are used in the region) to a five-point scale. In the conversion, 1 is the lowest rating and 5 is the highest rating. Nearly all hospitals report data in which the final collection occurred in the current year; if not there may be a one-year lag.	
Percentage of Employees Earning the Highest Possible Overall Performance Rating	Hospitals report performance appraisal data for the most recent period available and provide the dates of service covered by that survey. They report the percentage of employees earning the highest possible overall performance rating. Nearly all hospitals report data in which the final collection occurred in the current year; if not there may be a one- year lag.	Each hospital's individual performance evaluation rating system
Average Employee Performance Evaluation Rating	Average performance appraisal ratings are submitted using each hospital's rating scale. Different rating scales are used among hospitals. In order to provide comparisons, most rating scales are converted from other scales (three-point, four-point, six-point or seven-point scales are used in the region) to a five-point scale. In the conversion, 1 is the lowest rating and 5 is the highest rating. All hospitals report data that was collected during the previous 12 months. All hospitals report at least 11 months of data.	Each hospital's individual performance evaluation rating system

**Table 4**  
**Work Environment Survey Measures'**  
**Medians and Ranges**

Measure	Number Reporting 2006	Range 2006	Median 2006	Median 2005	Median 2004	Median 2003	Median 2002
<b>General Turnover (%)</b>							
All Employees	41	0 – 29.91	14.52	17.22	15.35	14.61	25.88
RN	40	0 – 40.00	12.80	14.26	14.56	14.78	23.38
LVN	39	0 – 133.33	18.18	NA	14.29	19.14	26.32
NP/PA	18	0 – 200.00	0.00	0.00	NA	NA	NA
Pharmacist	30	0 – 100.00	6.93	1.37	5.88	17.39	12.50
Other Licensed Staff	19	.40 – 42.86	14.43	16.62	13.44	17.06	21.76
<b>Voluntary Turnover (%)</b>							
All Employees	37	2.93 – 21.71	11.66	NA	NA	NA	NA
RN	38	0 – 29.36	11.05	NA	NA	NA	NA
LVN	37	0 – 66.67	11.76	NA	NA	NA	NA
NP/PA	18	0 – 200.00	3.18	NA	NA	NA	NA
Pharmacist	28	0 – 100.00	6.99	NA	NA	NA	NA
Other Licensed Staff	19	0 – 20.00	11.18	NA	NA	NA	NA
<b>Retention (%)</b>							
All Employees	33	.92 – 100.00	85.63	83.58	82.85	NA	NA
RN	34	63.96 – 100.00	86.79	84.38	83.02	NA	NA
LVN	36	0 – 100.00	84.52	NA	81.25	NA	NA
NP/PA	17	0 – 100.00	100.00	89.66	NA	NA	NA
Pharmacist	29	0 – 100.00	100.00	98.74	85.33	NA	NA
Other Licensed Staff	16	42.86 – 100.00	90.61	85.57	95.35	NA	NA
<b>Vacancy – Budgeted (%)</b>							
All Employees	32	0 – 16.86	5.31	3.96	3.61	3.87	NA
RN	34	0 – 48.78	8.61	6.07	5.55	6.08	NA
LVN	33	0 – 55.00	3.23	NA	1.18	14.15	NA
NP/PA	15	0 – 50.00	3.23	0.00	NA	NA	NA
Pharmacist	28	0 – 100.00	0.00	0.00	0.00	14.29	NA
Other Licensed Staff	28	0 – 100.00	5.55	4.36	3.63	4.41	NA
<b>Vacancy – Headcount (%)</b>							
All Employees	33	0 – 19.86	5.59	4.17	3.75	4.02	5.67
RN	35	0 – 100.00	10.34	6.90	5.79	7.02	10.93
LVN	33	0 – 78.57	3.33	NA	1.28	10.91	4.88
NP/PA	15	0 – 50.00	3.23	0.00	NA	NA	NA
Pharmacist	28	0 – 100.00	0.00	0.00	0.00	9.09	0.00
Other Licensed Staff	18	0 – 100.00	5.29	1.23	3.54	4.48	6.64

Measure	Number Reporting 2006	Range 2006	Median 2006	Median 2005	Median 2004	Median 2003	Median 2002
<b>Average Age</b>							
All Employees							
Female	41	36 – 50	42.7	43	NA	NA	NA
Male	40	35 – 52	41.6	42	NA	NA	NA
RN							
Female	41	34 – 51.9	43	43	NA	NA	NA
Male	37	33 – 45.6	40.92	40	NA	NA	NA
<b>Tenure</b>							
All Employee	33	1.16 – 11.00	7.17	6.11	6.51	NA	NA
RN	31	1.03 – 12.90	6.68	5.88	6.63	NA	NA
<b>RN Specialties (%)</b>							
Clinical Nurse Spec.	26	0 – 3.0	0	NA	NA	NA	NA
Nurse Practitioner	28	0 – 8.0	1.0	NA	NA	NA	NA
Physician Assistant	26	0 – 22.0	0	NA	NA	NA	NA
Certified - Specialty	12	0 – 35.0	16.5	NA	NA	NA	NA
<b>RN Education (%)</b>							
ADN	20	0 – 89.0	45.5	NA	NA	NA	NA
BSN	19	12.0 – 100.0	49.0	NA	NA	NA	NA
MSN	15	0 – 11.0	5.0	NA	NA	NA	NA
PhD	15	0 – 1.0	0	NA	NA	NA	NA
<b>Staffing Mix (%)</b>							
RN	28	32.03 – 83.7	68.43	67.41	63.66	68.92	NA
LVN	28	0 – 37.63	13.21	9.26	13.08	14.43	NA
Patient Care Asst.	28	0 – 63.16	17.27	18.50	21.84	20.31	NA
<b>Hours Per Patient Day</b>							
ICU	22	7.2 – 20.3	15.71	13.61	NA	NA	NA
Medical Units	27	3.23 – 16.9	5.78	6.39	NA	NA	NA
<b>Agency Utilization</b>	25	0 – 15.8	2.30	1.34	5.50	6.13	NA
<b>Overtime Utilization</b>	25	1.02 – 16.67	6.27	7.38	6.40	6.26	NA
<b>Workers' Compensation / Lost Time *</b>							
OSHA Back Injuries <sup>4</sup>							
RN	15	0 – 10,000	.135	NA	NA	NA	NA
All Employee	24	0 – 90,000	7.15	NA	NA	NA	NA
Workers' Comp. Claims <sup>5</sup>							
RN	15	0 – 80,000	.365	NA	NA	NA	NA
All Employee	21	0 – 70,000	.84	NA	NA	NA	NA
Workers' Comp.							

<sup>4</sup> OSHA Reportable Back Injuries per Hours Worked

<sup>5</sup> Workers' Compensation Claims per Hours Worked

Measure	Number Reporting 2006	Range 2006	Median 2006	Median 2005	Median 2004	Median 2003	Median 2002
Claims w/Pay <sup>6</sup>							
RN	14	0 – 11,000	6.04667	NA	NA	NA	NA
All Employee	20	0 – 118,000	383.561	NA	NA	NA	NA
Unpaid Days Off Due to Injury <sup>7</sup>							
RN	16	0 – 1,800	0	NA	NA	NA	NA
All Employee	15	0 – 2,100	0	NA	NA	NA	NA
Needlestick Injuries <sup>8</sup>							
RN	18	0 – 20,000	.32627	NA	NA	NA	NA
<b>Operating Margin (%)</b>	26	-13.46 – 37.23	9.62	3.62	3.28	5.45	NA
<b>Patient Outcomes*</b>							
Medication Error <sup>9</sup>	27	.01 – 700	5.2	20	5	600	NA
ICU Infection <sup>10</sup>	25	0 – 165,000	97	64	6,000	12,800	NA
Ventilator Pneumonia <sup>11</sup>	27	0 – 70,000	20	107	390	NA	NA
Wound Infection <sup>12</sup>	26	0 – 261,000	2,350	2,700	5,000	NA	NA
Falls <sup>13</sup>	30	2,319 – 39,000	100	NA	NA	NA	NA
Falls w/Injuries <sup>14</sup>	28	0 – 257,200	9.5	NA	NA	NA	NA
<b>Patient Satisfaction</b>							
% Highest Overall	28	35.0 – 99.0	71.55	62.00	62.50	56.85	NA
% Highest w/Nursing	25	15.0 – 99.0	63.60	60.29	62.65	NA	NA
Average Sat. Rating	29	2.63 – 4.80	4.44	4.36	4.41	4.30	NA
<b>Nurse Staff Satisfaction</b>							
% Highest Overall	25	.5 – 84.62	42.00	38.80	37.00	39.80	NA
% Intent to Leave	18	3.3 – 26.0	15.50	NA	NA	NA	NA
Average Job Sat. Rtg	27	2.5 – 4.45	3.92	3.82	3.93	3.96	NA
Average Sat w/Supv	24	2.5 – 4.38	3.88	NA	NA	NA	NA
Average Sat w/Phys	18	2.0 – 3.99	3.68	NA	NA	NA	NA
<b>Performance Appraisal</b>							
% Highest Overall							
RN	39	0 – 90.0	3.91	3.64	4.49	19.50	NA

<sup>6</sup> Workers' Compensation Claims with Paid Days Off per Payroll Days

<sup>7</sup> Unpaid Days off Due to Injury per Payroll Days

<sup>8</sup> Nurses' Needlestick Injuries per Hours Worked

<sup>9</sup> Medication Errors per Medication Doses

<sup>10</sup> ICU Central Line Infections per ICU Central Line Days

<sup>11</sup> Hospital Acquired Ventilator Pneumonias per Ventilator Days

<sup>12</sup> Post-Op Wound Infections per Surgical Cases

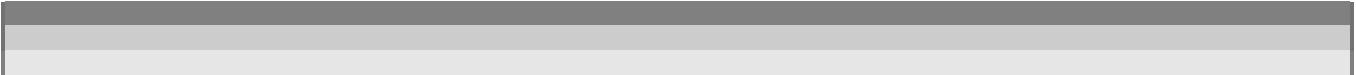
<sup>13</sup> Inpatient Falls per Inpatient Days

<sup>14</sup> Inpatient Falls with Injuries per Inpatient Days

<b>Measure</b>	<b>Number Reporting 2006</b>	<b>Range 2006</b>	<b>Median 2006</b>	<b>Median 2005</b>	<b>Median 2004</b>	<b>Median 2003</b>	<b>Median 2002</b>
All Employee	38	0 – 90.0	4.50	4.14	9.38	8.00	NA
Average Rating							
RN	39	2.11 – 4.92	3.45	3.37	3.83	3.60	NA
All Employee	37	1.25 – 4.88	3.88	3.37	3.75	3.68	NA

NA = Data not available for those years.

\* Data reported as rate per 10,000 units.



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Donde Batten, Ph.D., consultant

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