Women's Health Outcomes in U.S. Hospitals

A HealthGrades Study

June 2005

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Introduction

Heart disease and stroke are the first and third leading causes of death among American women.[1] Overall, cardiovascular disease (CVD), which includes heart disease and stroke, claims the lives of more than 500,000 women each year in the United States; this equates to approximately 40 percent of all female deaths, and more than all types of cancers combined.[2] Despite these statistics, only a mere 13 percent of American women believed that CVD was their greatest health threat until most recently.[2]

This significant underestimation of women's perceived CVD risk is due in part to a slow, but changing cultural attitude about CVD. From the 1950s to mid-1960s, information in the lay press largely focused on how women could take care of their husbands' hearts.[3] From the mid-1960s to the 1970s, this information focused on CVD prevention, but was also aimed towards men.[3] Fortunately, a recent study by Mosca et al. showed that awareness and knowledge about CVD as their leading health threat has increased to almost 50 percent in 2003 among American women.[4] This same study identified that women obtain most of their information about CVD, not from their physician, but from the mass media. Only 24 percent of women cited healthcare providers as their source of information, compared with 45 percent for magazines, 34 percent for television, and 27 percent for newspapers. In spite of these statistics, the authors also identified that nearly all women surveyed indicated that they would be comfortable discussing preventive and treatment options about their health with their physician, but only a minority had ever done so.[4]

Women Receive Suboptimal Cardiovascular Disease (CVD) Preventive Care and Treatment

To compound to the effects of the gap in CVD awareness among women and providers, numerous studies have demonstrated that women receive suboptimal CVD preventive care and treatment, which may contribute to worse outcomes compared with men.[5-8] This may be related to women's self-perceived lower risk, but Mosca et al. found that an astonishingly few physicians, less than 1 in 5, knew that more women died of CVD each year than men.[9] This study also identified that physicians tended to designate women as lower risk than men who had identical CVD risk profiles. Physicians in this study also did not rate themselves as very effective in their ability to help patients prevent CVD and manage risk factors.[9]

Identifying Outcome Trends and the Best Performing Hospitals

Given the significant gap in awareness and outcomes, access to information regarding CVD outcomes is critical in raising awareness through transparency. The aim of this study was to:

- Identify the Best performing U.S. hospitals in women's health from 2001 through 2003.
- Examine outcome trends for the inhospital treatment of heart disease and stroke in women from 2001 through 2003.

Assessing Women's Health Outcomes Performance

In order to assess comparative outcomes by hospital, risk-adjusted inhospital mortality was calculated for every hospital discharge related to cardiovascular disease from 17 states from 2001 through 2003. These 17 states represented 57.9 percent of the U.S. population (based on 2002 census). In this study, cardiovascular disease includes:

- Coronary artery bypass graft (CABG) surgery
- Valve replacement surgery
- Percutaneous coronary interventions (PCI)
- Acute myocardial infarction (AMI)
- Heart failure (HF)
- Stroke

The 17 states evaluated were:

- Arizona
- California
- Florida
- Iowa
- Maine
- Maryland
- Massachusetts
- Nevada
- New Jersey
- New York
- North Carolina
- Pennsylvania
- Texas
- Utah
- Virginia
- Washington
- Wisconsin

In order for a hospital to be evaluated for overall Women's Health outcomes, the hospital had to have all of the following:

- An open heart program in 2003
- At least 30 female discharges over the 3 years for at least four of the five cardiac disease cohorts and also at least 30 female stroke discharges
- Transferred out less than 14.3 percent of stroke patients to another acute care hospital (implying that these transfer hospitals probably have onsite neurosurgical services).

Full details on the risk-adjustment and overall Women's Health outcomes performance assessment can be found in the *Methodology* section of this study.

Summary of Findings

In our study, we found:

- Cardiac and stroke risk-adjusted inhospital mortality rates for women improved approximately 11 percent from 2001 through 2003 and these improvements were across Best, Average, and Poor performing hospitals.
    - The greatest improvement was seen in coronary artery bypass graft (CABG) surgery (16.44%).
    - The least improvement was seen in stroke (3.35%).
- Best hospitals showed a significantly lower risk-adjusted mortality across the cardiovascular disease cohorts studied and these hospitals improved at a rate, on average, which was more than two times higher than the Poor performing hospitals' improvement rate from 2001 through 2003.
    - Best performing hospitals' overall average improvement rate was approximately 12.7 percent during this time period compared to an overall average improvement rate of approximately 5.7 percent among Poor performing hospitals.
    - The widest improvement gap between Best and Poor performing hospitals was seen in heart failure. Best performing hospitals saw an average of about 23.7 percent improvement while Poor performing hospitals saw an improvement of only 4.28 percent from 2001 through 2003.
    - Best performing hospitals also had consistently better risk-adjusted outcomes across cardiac and stroke cohorts studied as compared to Poor performing hospitals for each of the years 2001, 2002 and 2003.
- Within the 17 states studied, women admitted with cardiovascular disease to Best performing hospitals had, overall, a risk-adjusted mortality rate that was 39 percent lower than the risk-adjusted mortality rate at Poor performing hospitals.
- The greatest differences in cardiac and stroke outcomes between Best and Poor performing hospitals was seen in percutaneous coronary interventions (PCI), heart failure, and coronary artery bypass graft (CABG) surgery. Notably, women admitted for cardiovascular diseases at Best performing hospitals had, on average, lower risk of mortality of 42.75 percent, 43.63 percent, and 46.44 percent, respectively.
- The 17 states studied varied widely in their overall cardiac and stroke outcomes performance for women. Florida, Arizona, Maine, Maryland, Pennsylvania, and Washington had the best results with mortality rates well below the predicted level. In contrast, the three Worst performing states determined by the study were North Carolina, Texas, and New York.
    - Women in Arizona hospitals (Best performing state) studied had an approximate 21 percent lower risk of mortality compared to North Carolina (Worst performing state).

Methodology

To help consumers evaluate and compare hospital performance for Women's Health, HealthGrades analyzed patient outcome data for virtually every hospital in 17 states. The state data contained inpatient records for all patients. The HealthGrades ratings are available on the Internet at www.healthgrades.com.

Data Acquisition

HealthGrades purchased the initial patient-level data from each individual state. The data represent three years of discharges. These data were chosen because they represent all discharges for the associated states. The 17 states were as follows:

- Arizona
- California
- Florida
- Iowa
- Maine
- Maryland
- Massachusetts
- Nevada
- New Jersey
- New York
- North Carolina
- Pennsylvania
- Texas
- Utah
- Virginia
- Washington
- Wisconsin

Methodology for Women's Health

The Women's Health ratings were based upon outcomes in Cardiac/Stroke Mortality Outcomes for Women and Maternity Care. (Maternity Care methodology can be found at www.HealthGrades.com.) Hospitals had to have an overall rating from each area to be considered; however, this particular study focused on our findings specific to cardiac and stroke mortality outcomes in women only. (Maternity Care-related outcomes research will be published in August of 2005.)

Methodology for Cardiac and Stroke Mortality Ratings for Women

HealthGrades analyzed the following six procedures/diagnoses (cohorts) for each hospital's female patients:

- Coronary bypass surgery (Coronary artery bypass graft surgery–CABG)
- Valve replacement surgery
- Interventional procedures (PTCA/angioplasty, stent, atherectomy)
- Heart attack (Acute myocardial infarction–AMI)
- Heart failure
- Stroke

The list of ICD-9 codes, that were included for each cardiac/stroke cohort, can be found in Appendix A.

Data Analysis

For each patient cohort, HealthGrades developed a list of specific procedures (e.g., quadruple bypass surgery), a list of risk factors, and a list of post-surgical complications. These latter two lists were developed in two steps:

1. HealthGrades identified all diagnoses occurring in more than one percent of the patients for the current analysis.

2. HealthGrades used a team of clinical and coding experts to identify the complications from the list created in Step One.

3. Some diagnosis codes were merged together (e.g., primary and secondary pulmonary hypertension) to minimize the impact of coding differences. Outcomes were binary, with patients recorded as either alive or expired. A list of the codes used to identify patients in the six cohorts can be found in Appendix A.

Risk-Adjustment Methodology

The purpose of risk adjustment is to obtain fair statistical comparisons between disparate populations or groups. Significant differences in demographic and clinical risk factors are found among patients treated in different hospitals. Risk adjustment of the data is needed to make accurate and valid comparisons of clinical outcomes at different hospitals.

Fair and valid comparisons between hospital providers can be made only to the extent that the risk adjustment methodology considers important differences in patient demographic and clinical characteristics. The risk adjustment methodology used by HealthGrades defines risk factors as those clinical and demographic variables that influence patient outcomes in significant and systematic ways. Risk factors may include age, specific procedure performed, and comorbid conditions such as hypertension, chronic renal failure, congestive heart failure, and diabetes.

Risk-adjusted mortality, for this study, is defined as the national average mortality times the observed mortality divided by the expected mortality. The appendices present the results in terms of observed mortality divided by expected mortality.

Statistical Models for Predicting Mortality

1. Unique logistic regression models were developed for each patient cohort.

2. Comorbid diagnoses (e.g., hypertension, chronic renal failure, anemia, diabetes), demographic characteristics (e.g., age), and specific procedures (for procedure-based cohorts) were classified as possible risk factors. HealthGrades used logistic regression to determine which of these were actually risk factors and to what extent they were correlated with mortality. If any of these comorbid diagnoses, demographic characteristics or procedures had a positive odds ratio and was also statistically significant in explaining variation, they were retained in the model and defined as risk factors. Complications were not counted as risk factors as they were considered a result of care received during the admission.

3. The statistical models were checked for validity and finalized. All of the models were highly significant, with p values not greater than 0.0001. These cohort specific models were then used to estimate the probability of death for each patient in the cohort.

4. Patients were then aggregated for each hospital to obtain the predicted outcome for each hospital.

Assignment of Performance for Cardiac and Stroke Outcomes in Women

For each hospital, the actual mortality was summed for all of the six patient cohorts and the predicted mortality (risk-adjusted) was summed for all of the six patient cohorts. The predicted mortality rate was compared to the actual mortality rate for each hospital and a z-score was calculated. Percentile scores were calculated based on the z-score.

The following rating system was applied to the comparison of the actual mortality for all six patient cohorts and the predicted mortality rate for all six patient cohorts.

- Best performing – Top 15% of z-scores. Performance was better than predicted, and the difference was statistically significant.
- Average performing – Middle 70% of z-scores. Performance was not significantly different from what was predicted for most of these hospitals.
- Poor performing– Bottom 15% of z-scores. Performance was worse than predicted and the difference was statistically significant.

Findings

Using 17 states of all-payer hospital discharge data, we were able to identify important trends in Women's Health specific to cardiovascular disease (heart disease and stroke). Our study identified that aggregated cardiac and stroke risk-adjusted inhospital mortality rates improved approximately 11 percent from 2001 through 2003 with the greatest improvement noted in coronary artery bypass graft (CABG) surgery. (See Appendix B.) These improvements are likely attributable to both advances in treatment of heart disease and the quality improvements made by hospitals during this same time.

However, although these 17 states' hospitals saw an average overall improvement of 11 percent, some hospitals had consistently better outcomes and improved at a greater rate than other hospitals. For example,

- Best performing hospitals had approximately 46 percent lower observed-to-expected inhospital CABG mortality ratio compared to Poor performing hospitals. (See Appendix C.)
- Best performing hospitals improved at a rate, on average, which was more than two times higher than the Poor performing hospitals' improvement rate (12.7% vs. 5.7%. See Appendix B.)

We identified that Best performing hospitals, on average, had an associated 39 percent relative inhospital decrease in risk-adjusted mortality across cardiac and stroke cohorts as compared to Poor performing hospitals. (See Appendix C.) Stated more simply, women at Best performing hospitals had a 39 percent

lower risk of dying from CABG, valve replacement surgery, AMI, PCI, heart failure, and stroke. (Results for each patient group are in Appendix B.)

These differences in outcomes were also noted across the 17 states studied. For example, a woman admitted with cardiovascular disease at an Arizona hospital had an approximate 21 percent lower risk of mortality compared to North Carolina even after adjusting for patient age and comorbidites. This finding supports the larger percentage of Best performing hospitals in Arizona (5 out of 11) compared to North Carolina (none out of 21). (See Appendix D.)

Interpretation of Results

Improved Awareness Still Needed

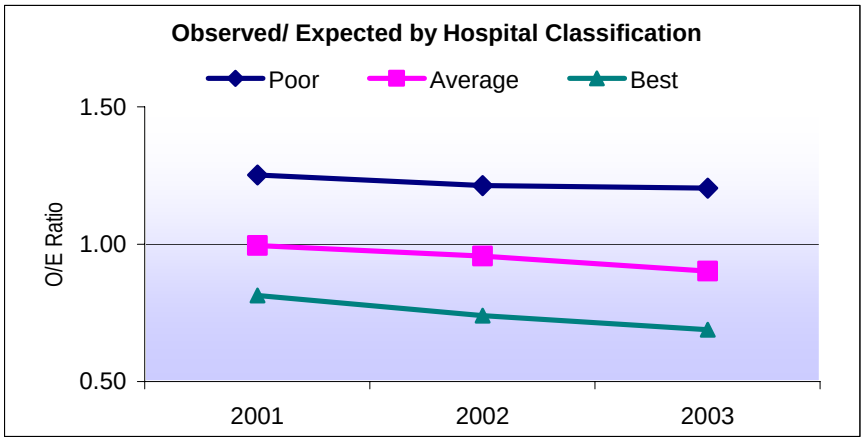
In studying these cardiovascular disease cohorts for the female population from 17 states' all-payer data, we found that significant improvements have been made over the last three years, which validates the efforts by the American Heart Association and others to increase women's awareness of their lifetime cardiovascular disease risk. However, despite these concerted efforts, still fewer than 50 percent of American women know that heart disease is their leading killer.[4] It is possible through further increases in awareness among women and providers we can reduce the almost 500,000 women who die of cardiovascular disease each year—nearly one death every minute.

A 46% Difference Between Best and Poor Performing Hospitals

Although we found an average of an 11 percent improvement across the six cardiovascular areas studied, similar to numerous other studies, the degree of outcomes improvement is not uniform across hospitals or regions (See Figure 1 and Appendix D.). In addition, our findings of widely varying risk-adjusted inhospital mortality between Best, Average and Poor performing hospitals among 17 states validates that "not all hospitals are alike" with regards to women's cardiovascular care and outcomes. Our study finds that these variations in outcomes can be as large as 46 percent between the Best and Poor performing hospitals. These highly variable outcomes differences, in combination with the existing low cardiovascular disease awareness and the disparity between the treatment and outcomes among men and women, underscore the need for women to:

- Be armed with information to make more informed decisions, and
- Seek out those hospitals that have excellent women's health programs.

Figure 1. Overall CVD Outcomes Performance by Hospital Classification from 2001 through 2003 (Observed Inhospital Mortality-to-Expected Inhospital Mortality Ratio—Ratios <1.0 indicate good performance.)



Assigning Correct Risk Level for Women and Focusing on Education

Although we did not study the reasons for these outcomes differences between hospitals or regions, it is possible that Best performing hospitals have done a better job of recognizing and assigning the correct risk level in women and focusing on educating women in their communities about cardiovascular disease as compared to Poor performing hospitals. The study by Mosca et al. conclude that recommendations for CVD prevention were driven by risk level assignment and generally, women were more likely than men to be erroneously assigned to a lower-risk category.[9] Also, other studies have consistently demonstrated that even when CVD is recognized, women receive less treatment and interventions than their male counterparts. For example, Shulman et al. found that gender independently influenced how physicians managed chest pain and who receives a cardiac catheterization, even after adjustment for several potential confounding factors, such as age, comorbidities, etc. These two studies validate the disparate evaluation and treatment of high risk women with CVD as compared to their male counterparts. This differential evaluation and treatment between women and men and to which the degree of difference is present likely also contributes to the highly variable outcomes across the hospitals and regions we studied.

Further Intervention is Needed

In conclusion, our data suggest that further education and intervention is needed to improve cardiovascular inhospital mortality outcomes among women in the United States. Previous studies have identified that increasing awareness among women and providers could have a significant impact on improving survival from the #1 and #3 killers in American women (heart disease and stroke, respectively). Consequently, we encourage women to ask and know about their cardiovascular risk and for providers to assess and understand how they might improve the management of CVD in women. We believe there is also a significant opportunity for healthcare providers to take the lead as the primary source of information for the women in their community as healthcare consumerism continues to increase.

Limitations of the Risk-adjustment Models for Women's Health Performance Assessment

It must be understood that while these models may be valuable in identifying hospital groups that perform better than others, one should recognize that these models are limited by the following factors:

- Cases may have been coded incorrectly or incompletely by the hospital.
- The models can only account for risk factors that are coded into the billing data – if a particular risk factor was not coded into the billing data, such as a patient's socioeconomic status and health behavior, then it was not accounted for with these models.

Although Health Grades, Inc. has taken steps to carefully compile these data using its proprietary methodology, no techniques are infallible, and therefore some information may be missing, outdated, or incorrect.

Although the 17 states we studied represented a large percentage of all U.S. hospital discharges from 2001-2003, our findings may not be generalizable to the entire United States or to states that we did not study.

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Appendix A. Patient Cohorts and Related ICD-9-CM Codes

Patient Definitions	ICD-9-CM Procedure/Diagnosis Codes and Criteria
Women's Cardiac and Stroke Mortality	
Coronary Bypass Surgery	Procedure Codes: 36.10 through 36.16 or 36.19, excluding patients with procedure codes like 35.2*, like 35.1*, like 37.5*, or 38.12; excluding patients with diagnosis code 414.06 or 414.07
Valve Replacement Surgery	Procedure Codes: 35.20 through 35.28, excluding patients with procedure codes like 35.1*, like 37.5*, 35.33, 38.12; excluding patients with diagnosis codes 441.2, 414.06, 414.07
Interventional Cardiology Procedures	Procedure Codes: 36.01, 36.02, 36.05, 36.06, 36.07, 36.09, excluding patients with procedure codes like 37.5*; excluding patients with diagnosis codes 414.06, 414.07
Acute Myocardial Infarction (Heart Attack)	Principal Diagnoses: 410.00 through 410.91 (where fifth digit is one), excluding patients with procedure codes like 37.5*; excluding patients with diagnosis codes 414.06, 414.07
Heart Failure	Principal Diagnoses: 428.0 through 428.9, 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, excluding patients with procedure codes like 37.5*; excluding patients with diagnosis codes 414.06, 414.07
Stroke	Principal Diagnoses: 430, 431, 432.0, 432.1, 432.9, 433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91, 436, excluding patients with procedure codes like 37.5*

Appendix B. Cardiovascular Disease Outcomes Performance by Year (2001-2003)

Women's Health Outcomes Performance	Year	Observed Inhospital Mortality Rate	Expected Inhospital Mortality Rate	Observed-to-Expected Ratio	95% CI for Ratio	Relative Improvement from 2001
Coronary Artery Bypass Surgery (Average relative improvement of 16.44% from 2001 through 2003)						
Best	2001	0.03	0.03	0.86	(0.754-0.968)	
	2002	0.03	0.04	0.77	(0.665-0.875)	
	2003	0.03	0.04	0.67	(0.562-0.778)	22.17%
Average	2001	0.03	0.03	1.05	(0.985-1.107)	
	2002	0.03	0.03	1.04	(0.976-1.097)	
	2003	0.03	0.03	0.87	(0.810-0.935)	16.62%
Poor	2001	0.05	0.03	1.55	(1.415-1.694)	
	2002	0.04	0.03	1.28	(1.138-1.420)	
	2003	0.05	0.03	1.48	(1.321-1.635)	4.92%
Valve Replacement Surgery (Average relative improvement of 8.76% from 2001 through 2003)						
Best	2001	0.07	0.08	0.79	(0.676-0.897)	
	2002	0.07	0.09	0.79	(0.690-0.898)	
	2003	0.08	0.09	0.87	(0.766-0.983)	-11.15%
Average	2001	0.08	0.08	1.06	(1.004-1.125)	
	2002	0.08	0.08	1.02	(0.963-1.081)	
	2003	0.08	0.08	0.94	(0.881-0.998)	11.71%
Poor	2001	0.11	0.07	1.45	(1.284-1.610)	
	2002	0.10	0.08	1.24	(1.086-1.389)	
	2003	0.09	0.07	1.24	(1.072-1.403)	14.47%
Acute Myocardial Infarction (Average relative improvement of 11.75% from 2001 through 2003)						
Best	2001	0.09	0.11	0.76	(0.729-0.801)	
	2002	0.08	0.11	0.73	(0.697-0.768)	
	2003	0.07	0.11	0.66	(0.625-0.696)	13.65%
Average	2001	0.10	0.11	0.97	(0.947-0.987)	
	2002	0.09	0.11	0.90	(0.877-0.917)	
	2003	0.09	0.11	0.85	(0.827-0.867)	12.38%
Poor	2001	0.12	0.11	1.14	(1.096-1.187)	
	2002	0.11	0.10	1.11	(1.062-1.153)	
	2003	0.11	0.11	1.06	(1.019-1.107)	6.90%

continued

Appendix B. Cardiovascular Disease Outcomes Performance by Year (2001-2003) (continued)

Women's Health Outcomes Performance	Year	Observed Inhospital Mortality Rate	Expected Inhospital Mortality Rate	Observed-to-Expected Ratio	95% CI for Ratio	Relative Improvement from 2001
Percutaneous Coronary Interventions (Angioplasty/Stent) (Average relative improvement of 13.01% from 2001 through 2003)						
Best	2001	0.02	0.02	0.85	(0.766-0.935)	
	2002	0.01	0.02	0.76	(0.687-0.839)	
	2003	0.01	0.02	0.72	(0.647-0.797)	15.11%
Average	2001	0.02	0.02	1.10	(1.050-1.145)	
	2002	0.02	0.02	0.99	(0.947-1.037)	
	2003	0.02	0.02	0.94	(0.898-0.986)	14.16%
Poor	2001	0.02	0.02	1.41	(1.295-1.530)	
	2002	0.02	0.02	1.29	(1.172-1.398)	
	2003	0.02	0.02	1.36	(1.251-1.467)	3.78%
Heart Failure (Average relative improvement of 13.31% from 2001 through 2003)						
Best	2001	0.04	0.05	0.84	(0.788-0.890)	
	2002	0.04	0.05	0.72	(0.674-0.771)	
	2003	0.03	0.05	0.64	(0.594-0.687)	23.66%
Average	2001	0.04	0.04	1.03	(0.998-1.054)	
	2002	0.04	0.05	0.97	(0.940-0.994)	
	2003	0.04	0.05	0.90	(0.869-0.921)	12.73%
Poor	2001	0.05	0.04	1.32	(1.261-1.385)	
	2002	0.05	0.04	1.29	(1.227-1.349)	
	2003	0.06	0.04	1.27	(1.208-1.325)	4.28%
Stroke (Average relative improvement of 3.35% from 2001 through 2003)						
Best	2001	0.11	0.13	0.83	(0.795-0.872)	
	2002	0.10	0.13	0.74	(0.703-0.778)	
	2003	0.10	0.14	0.73	(0.688-0.763)	12.93%
Average	2001	0.13	0.13	0.97	(0.947-0.986)	
	2002	0.13	0.13	0.98	(0.959-0.998)	
	2003	0.13	0.14	0.95	(0.928-0.967)	1.91%
Poor	2001	0.16	0.13	1.23	(1.183-1.267)	
	2002	0.16	0.13	1.23	(1.192-1.276)	
	2003	0.17	0.14	1.23	(1.187-1.270)	-0.27%
Average Improvement from 2001 through 2003					All	11.10%
					Best	12.73%
					Average	11.58%
					Poor	5.68%

Appendix C. Differences in Cardiovascular Inhospital Mortality Outcomes by Performance Category for 3 Years Combined (2001-2003)

Women's Health Outcomes Performance	Observed Inhospital Mortality Rate	Expected Inhospital Mortality Rate	Observed-to-Expected Ratio	95% CI	Relative Mortality Risk Reduction Associated with Best Performing to Poor Performing Women's Health Hospitals
Coronary Artery Bypass Graft Surgery					
Best	0.03	0.04	0.77	(0.708-0.831)	46.44%
Average	0.03	0.03	0.99	(0.952-1.023)	
Poor	0.04	0.03	1.44	(1.353-1.520)	
Valve Replacement Surgery					
Best	0.07	0.09	0.82	(0.756-0.880)	37.33%
Average	0.08	0.08	1.01	(0.974-1.042)	
Poor	0.10	0.08	1.31	(1.213-1.398)	
Aucte Myocardial Infarction					
Best	0.08	0.11	0.72	(0.698-0.739)	34.89%
Average	0.09	0.11	0.90	(0.891-0.915)	
Poor	0.12	0.10	1.10	(1.077-1.130)	
Percutaneous Coronary Interventions (Angioplasty/Stent)					
Best	0.01	0.02	0.77	(0.729-0.819)	42.75%
Average	0.02	0.02	1.01	(0.980-1.033)	
Poor	0.02	0.02	1.35	(1.287-1.416)	
Heart Failure					
Best	0.04	0.05	0.73	(0.700-0.756)	43.63%
Average	0.04	0.05	0.96	(0.944-0.975)	
Poor	0.06	0.04	1.29	(1.256-1.326)	
Stroke					
Best	0.10	0.13	0.77	(0.744-0.788)	37.66%
Average	0.13	0.13	0.96	(0.953-0.975)	
Poor	0.16	0.13	1.23	(1.205-1.253)	

Appendix D. Cardiovascular Outcomes Performance by State Studied for 3 Years Combined (2001-2003)

State	Number of Hospitals Evaluated per State	Number of Best Performing Hospitals per State	Inhospital Observed Mortality Rate	Inhospital Expected Mortality Rate	Observed-to-Expected Ratio	Z-score (most negative is best performance)	*p* value (2-tailed)
AZ	11	5	0.05	0.06	0.82	-8.949	0.00
CA	107	17	0.07	0.07	0.93	-10.573	0.00
FL	58	19	0.06	0.07	0.88	-16.770	0.00
IA	12	2	0.06	0.06	0.95	-2.434	0.01
MA	12	1	0.06	0.06	0.95	-3.444	0.00
MD	9	3	0.05	0.05	0.87	-6.908	0.00
ME	2	1	0.05	0.06	0.81	-5.850	0.00
NC	21	0	0.06	0.06	1.04	3.177	0.00
NJ	17	2	0.06	0.06	0.96	-2.638	0.01
NV	8	0	0.07	0.07	0.97	-1.456	0.15
NY	35	0	0.06	0.06	1.02	1.997	0.05
PA	60	16	0.06	0.07	0.89	-13.759	0.00
TX	97	6	0.06	0.06	1.03	4.130	0.00
UT	7	0	0.06	0.07	0.95	-1.600	0.11
VA	18	1	0.06	0.06	0.96	-3.042	0.00
WA	17	3	0.06	0.07	0.89	-6.520	0.00
WI	24	1	0.06	0.06	0.98	-1.045	0.30