
TECHNICAL APPENDIX FOR

PENNSYLVANIA'S GUIDE TO

CORONARY ARTERY

BYPASS GRAFT SURGERY

1994-1995

*Information about Hospitals,
Cardiac Surgeons, and Health Plans.*



*Pennsylvania Health Care
Cost Containment Council*

May 1998

Pennsylvania Health Care Cost Containment Council

225 Market Street, Suite 400, Harrisburg, PA 17101

Phone (717) 232-6787, Fax (717) 232-3821, Web <http://www.phc4.org>

Council Members

Chair—**Daniel Tunnell** (Pennsylvania Gas Association - Business)

Vice Chair—**Jack Steinberg** (Philadelphia Federation of Teachers - Labor)

Treasurer—**William Lehr, Jr.** (Hershey Foods, Inc. / Retired - Business)

Patricia W. Barnes (Quantel Associates - Labor)

Leonard A. Boreski (Pennsylvania Chamber of Business and Industry - Business)

Darrell L. DeMoss (Cigna Property and Casualty - Commercial Insurers)

Randall N. DiPalo (Local 520 Plumbers and Pipefitters Union - Labor)

Richard Dreyfuss (Hershey Foods Corporation - Business)

Thomas F. Duzak (Steelworkers Health and Welfare Fund - Labor)

James R. Godfrey (Healthguard - Managed Care)

Daniel Hoffmann (Secretary of Health - Administration)

Feather Houstoun (Secretary of Public Welfare - Administration)

Janet Kail (AFSCME Council 13 - Labor)

M. Diane Koken (Insurance Commissioner - Administration)

Mary Ellen McMillen (Independence Blue Cross - Blue Cross/Blue Shield)

Richard A. Reif (Doylestown Hospital - Hospitals)

Richard M. Ross, Jr. (Business)

Carl A. Sirio, MD (Physicians)

Karen White (PACE - Consumers)

David Wilderman (AFL-CIO - Labor)

Clifford L. Jones—Executive Director

Acknowledgments

The Council would like to thank the following Technical Advisory Group members for their dedicated assistance in creating this report.

Chair—**David B. Nash, M.D., M.B.A.**, Thomas Jefferson University Hospital

J. Marvin Bentley, Ph.D., Penn State University

David B. Campbell, M.D., Penn State Geisinger Health System—Cardiac Surgeon Advisor

Paul N. Casale, M.D., The Heart Group—Cardiologist Advisor

Donald E. Fetterolf, M.D., M.B.A., Keystone Health Plan West

James Grana, Ph.D., US Quality Algorithms/AETNA US Healthcare

George Green, M.D., Abington Medical Specialists

Sheryl F. Kelsey, Ph.D., University of Pittsburgh

Judith R. Lave, Ph.D., University of Pittsburgh

The Council would also like to thank the Joint Committee of the Hospital Association of Pennsylvania, the Pennsylvania Medical Society, and the Pennsylvania Osteopathic Medical Association for their selfless assistance and support throughout this process. Finally, we want to acknowledge the many hospital staff, physicians, and payers who checked and rechecked their data. Without their efforts, this report would not have been possible.

Foreword

The Pennsylvania Health Care Cost Containment Council has prepared its fifth *Guide to Coronary Artery Bypass Graft Surgery*. The report provides information on patients treated for CABG surgery in Pennsylvania hospitals in 1994 and 1995. The *Guide* builds upon past Council CABG reports by including, for the first time, information about CABG patients belonging to specific health plans and programs.

Pennsylvania's health care system is changing dramatically. With the growth of managed care and the emergence of highly organized health systems, it is increasingly important to examine the interrelationships of hospitals, physicians and payors. The first report of its kind to include hospital, physician and specific health plan information in one report, *Pennsylvania's Guide to Coronary Artery Bypass Graft Surgery* sets the stage for more comprehensive public reporting of health plan data in future reports.

It is important to note that the data reflected in this report covers the period 1994-1995, therefore it has limitations. The health care delivery system has changed dramatically since that time and the same categories today may show different results. Additionally, although a high volume, high cost procedure, CABG surgery generally represents a small portion of the overall health care utilization of health insurance plan enrollees. Therefore, the data in this report should not be the only factor in any health care decision, particularly with regard to choosing a health plan. It is, however, a start in helping the public examine the changing nature of our health care delivery system.

Several supplementary documents have been prepared pertaining to the *Guide*. Most of the data contained in the *Guide* have been displayed in a series of graphs. This *Technical Appendix* provides the actual numbers, in tables, that form the foundation for the graphs. The *Appendix* also contains a list of the significant risk factors used to adjust the mortality and length of stay statistics. Finally, it contains the length of stay data according to each cardiac surgeon.

Other publications related to this project include: *Health Plan, Hospital and Physician Comments*, as well as *Research Methods and Results*. These free documents are available to the public upon request and can be obtained by contacting the Council.

**Pennsylvania Health Care
Cost Containment Council**
225 Market Street, Suite 400
Harrisburg, PA 17101

Phone: (717) 232-6787
Fax: (717) 232-3821
<http://www.phc4.org>

May 1998

Contents

- Percent of Health Plan CABG Cases by Hospital 1
 - TABLE 1: Percent of Health Plan CABG Cases, by Hospital 2
- Risk-Adjusted In-hospital Mortality Outcomes 7
 - TABLE 2: Health Plans 8
(see FIGURE 1 in the Guide)
 - TABLE 3: Hospitals 9
(see FIGURES 2A-2C in the Guide)
 - TABLE 4A: Cardiac Surgeons in Western PA 10
(see FIGURE 3A in the Guide)
 - TABLE 4B: Cardiac Surgeons in Central and Northeastern PA 14
(see FIGURE 3B in the Guide)
 - TABLE 4C: Cardiac Surgeons in Southeastern PA 16
(see FIGURE 3C in the Guide)
- Risk-Adjusted (Post-Surgical) Length of Stay 19
 - TABLE 5: Health Plans 20
(see FIGURE 4 in the Guide)
 - TABLE 6: Hospitals 21
(see FIGURES 5A-5C in the Guide)
 - TABLE 7A: Cardiac Surgeons in Western PA 22
 - TABLE 7B: Cardiac Surgeons in Central and Northeastern PA 26
 - TABLE 7C: Cardiac Surgeons in Southeastern PA 28
- Hospital Average Charges 31
 - TABLE 8: Hospitals 32
(see FIGURE 6 in the Guide)
- Volume of Procedures 33
 - TABLE 9: Number of CABG and Total Open Heart Procedures, by Hospital 34
(see FIGURES 7A-7B in the Guide)
- Risk Factors 35
 - Risk Factors for In-hospital Mortality 36
 - Risk Factors for In-hospital (Post-Surgical) Length of Stay 37

Percent of Health Plan CABG Cases by Hospital

TABLE 1: Percent of Health Plan CABG Cases, by Hospital, 1994-1995

	# CASES	%		# CASES	%
MEDICARE - FEE FOR SERVICE	19,657	100%	U.S. HEALTHCARE	466	100%
Allegheny General Hospital	1,077	5.5%	Hahnemann University Hospital	133	28.5%
Shadyside Hospital	1,059	5.4%	Presbyterian Med Ctr Univ of PA Hlth System ...	46	9.9%
Western Pennsylvania Hospital	1,029	5.2%	Albert Einstein Medical Center	37	7.9%
Mercy Hospital of Pittsburgh	1,024	5.2%	Lankenau Hospital	34	7.3%
Lehigh Valley Hospital	870	4.4%	Temple University Hospital	32	6.9%
Lankenau Hospital	826	4.2%	Western Pennsylvania Hospital	25	5.4%
Hahnemann University Hospital	802	4.1%	Bryn Mawr Hospital	19	4.1%
Saint Francis Medical Center	671	3.4%	Saint Francis Medical Center	16	3.4%
Polyclinic Medical Center	660	3.4%	Graduate Hospital	15	3.2%
York Hospital	617	3.1%	St. Luke's Hospital of Bethlehem	15	3.2%
Reading Hospital and Medical Center	591	3.0%	Other hospitals	94	20.2%
Lancaster General Hospital	575	2.9%			
Albert Einstein Medical Center	564	2.9%			
Altoona Hospital	542	2.8%			
Saint Vincent Health Center	533	2.7%	MEDICAID - FEE FOR SERVICE	1,236	100%
Wilkes-Barre General Hospital /WVHCS	533	2.7%	Allegheny General Hospital	65	5.3%
Conemaugh Valley Memorial Hospital	516	2.6%	Mercy Hospital of Pittsburgh	65	5.3%
Harrisburg Hospital	510	2.6%	Albert Einstein Medical Center	62	5.0%
Mercy Hospital /Scranton	486	2.5%	Wilkes-Barre General Hospital /WVHCS	55	4.4%
St. Luke's Hospital of Bethlehem	483	2.5%	Shadyside Hospital	54	4.4%
Hamot Medical Center	437	2.2%	Western Pennsylvania Hospital	52	4.2%
Bryn Mawr Hospital	362	1.8%	Hahnemann University Hospital	50	4.0%
Other hospitals	4,890	24.9%	Altoona Hospital	41	3.3%
			York Hospital	41	3.3%
			Conemaugh Valley Memorial Hospital	40	3.2%
			Lankenau Hospital	39	3.2%
			Lehigh Valley Hospital	39	3.2%
			Hamot Medical Center	38	3.1%
MEDICARE HMO CONTRACTS			Saint Francis Medical Center	36	2.9%
GEISINGER HEALTH PLAN - CENTRAL	50	100%	Polyclinic Medical Center	35	2.8%
Geisinger Medical Center /Danville	50	100%	Saint Francis Central Hospital	33	2.7%
GREATER ATLANTIC HEALTH SERVICE	43	100%	Temple University Hospital	33	2.7%
Graduate Hospital	32	74.4%	Lancaster General Hospital	32	2.6%
Crozer-Chester Medical Center	7	16.3%	Mercy Hospital/Scranton	31	2.5%
Other hospitals	4	9.3%	University of Pittsburgh Medical Center	31	2.5%
KEYSTONE EAST	217	100%	Episcopal Hospital	28	2.3%
Hahnemann University Hospital	51	23.5%	Geisinger Medical Center /Danville	26	2.1%
Albert Einstein Medical Center	31	14.3%	Saint Vincent Health Center	26	2.1%
Lankenau Hospital	24	11.1%	Other hospitals	284	23.0%
Presbyterian Med Ctr Univ of PA Hlth System ...	21	9.7%			
Temple University Hospital	17	7.8%			
Bryn Mawr Hospital	16	7.4%	FEE FOR SERVICE PLANS		
Crozer-Chester Medical Center	12	5.5%	BLUE CROSS OF NORTHEAST PA	696	100%
Other hospitals	45	20.7%	Wilkes-Barre General Hospital /WVHCS	204	29.3%
KEYSTONE WEST	48	100%	Mercy Hospital /Scranton	178	25.6%
Shadyside Hospital	10	20.8%	Lehigh Valley Hospital	78	11.2%
Allegheny General Hospital	7	14.6%	Robert Packer Hospital	55	7.9%
Medical Center, Beaver, PA, Inc	6	12.5%	St. Luke's Hospital of Bethlehem	54	7.8%
University of Pittsburgh Medical Center	6	12.5%	Williamsport Hospital & Med Center	54	7.8%
Western Pennsylvania Hospital	6	12.5%	Other hospitals	73	10.5%
Mercy Hospital of Pittsburgh	5	10.4%			
Washington Hospital	5	10.4%			
Other hospitals	3	6.3%			

* Percentages may not add to 100% due to rounding

TABLE 1: Percent of Health Plan CABG Cases, by Hospital, 1994-1995

	# CASES	%		# CASES	%
BLUE CROSS OF WESTERN PA	2,748	100%	CIGNA	99	100%
Allegheny General Hospital	390	14.2%	Lehigh Valley Hospital	26	26.3%
Shadyside Hospital	363	13.2%	Hahnemann University Hospital	10	10.1%
Mercy Hospital of Pittsburgh	317	11.5%	Graduate Hospital	9	9.1%
Western Pennsylvania Hospital	300	10.9%	Lankenau Hospital	8	8.1%
Hamot Medical Center	210	7.6%	Harrisburg Hospital	7	7.1%
Saint Francis Medical Center	202	7.4%	Temple University Hospital	6	6.1%
Saint Vincent Health Center	196	7.1%	Allegheny General Hospital	5	5.1%
Conemaugh Valley Memorial Hospital	192	7.0%	Penn State University Hospital /Hershey	4	4.0%
Other Hospitals	578	21.0%	Shadyside Hospital	4	4.0%
			Thomas Jefferson Univ Hospital	4	4.0%
			Other hospitals	16	16.2%
CAPITAL BLUE CROSS	1,974	100%	EDUCATORS MUTUAL	36	100%
Polyclinic Medical Center	279	14.1%	Lancaster General Hospital	21	58.3%
Harrisburg Hospital	252	12.8%	York Hospital	8	22.2%
Lehigh Valley Hospital	240	12.2%	Other hospitals	7	19.4%
Reading Hospital and Medical Center	225	11.4%			
York Hospital	196	9.9%	GUARDIAN LIFE	30	100%
St. Luke's Hospital of Bethlehem	123	6.2%	Lehigh Valley Hospital	5	16.7%
Penn State University Hospital /Hershey	81	4.1%	Robert Packer Hospital	5	16.7%
Lancaster General Hospital	77	3.9%	Hospital of the University of PA	4	13.3%
Geisinger Medical Center /Danville	69	3.5%	Allegheny General Hospital	2	6.7%
Other hospitals	432	21.9%	Hamot Medical Center	2	6.7%
			University of Pittsburgh Medical Center	2	6.7%
			Other hospitals	10	33.3%
INDEPENDENCE BLUE CROSS	1,256	100%	JOHN HANCOCK	48	100%
Hahnemann University Hospital	246	19.6%	York Hospital	20	41.7%
Lankenau Hospital	214	17.0%	Hamot Medical Center	5	10.4%
Albert Einstein Medical Center	128	10.2%	Lehigh Valley Hospital	3	6.3%
Presbyterian Med Ctr Univ of PA Hlth Sys	102	8.1%	Western Pennsylvania Hospital	3	6.3%
Bryn Mawr Hospital	88	7.0%	Albert Einstein Medical Center	2	4.2%
Temple University Hospital	84	6.7%	Bryn Mawr Hospital	2	4.2%
Thomas Jefferson Univ Hospital	81	6.4%	Mercy Hospital /Scranton	2	4.2%
Other hospitals	313	24.9%	St. Luke's Hospital of Bethlehem	2	4.2%
			Temple University Hospital	2	4.2%
			Other hospitals	7	14.6%
AETNA	353	100%	METROPOLITAN	177	100%
Lehigh Valley Hospital	31	8.8%	York Hospital	25	14.1%
Hahnemann University Hospital	26	7.4%	Allegheny General Hospital	19	10.7%
Shadyside Hospital	23	6.5%	Hahnemann University Hospital	14	7.9%
Lankenau Hospital	19	5.4%	Lehigh Valley Hospital	13	7.3%
Presbyterian Med Ctr Univ of PA Hlth System ...	17	4.8%	Robert Packer Hospital	12	6.8%
Western Pennsylvania Hospital	16	4.5%	Shadyside Hospital	12	6.8%
Allegheny General Hospital	15	4.2%	Western Pennsylvania Hospital	10	5.6%
Temple University Hospital	15	4.2%	Mercy Hospital of Pittsburgh	9	5.1%
York Hospital	15	4.2%	Temple University Hospital	7	4.0%
Altoona Hospital	14	4.0%	Hamot Medical Center	6	3.4%
Harrisburg Hospital	13	3.7%	Lankenau Hospital	4	2.3%
Lancaster General Hospital	13	3.7%	Thomas Jefferson Univ Hospital	4	2.3%
Hamot Medical Center	11	3.1%	Wilkes-Barre General Hospital /WVHCS	4	2.3%
Pennsylvania Hospital	10	2.8%	Other hospitals	38	21.5%
Wilkes-Barre General Hospital /WVHCS	10	2.8%			
Robert Packer Hospital	9	2.5%			
Washington Hospital	9	2.5%			
Other hospitals	87	24.6%			

* Percentages may not add to 100% due to rounding

TABLE 1: Percent of Health Plan CABG Cases, by Hospital, 1994-1995

	# CASES	%		# CASES	%
PROVIDENT	42	100%	LICENSED HMO PLANS - PRIVATE MARKET ONLY		
Lancaster General Hospital	9	21.4%	AETNA CENTRAL & EASTERN PA	83	100%
Shadyside Hospital	6	14.3%	Hospital of the University of PA	20	24.1%
Lehigh Valley Hospital	4	9.5%	Polyclinic Medical Center	12	14.5%
Bryn Mawr Hospital	3	7.1%	Bryn Mawr Hospital	9	10.8%
Saint Francis Medical Center	3	7.1%	Crozer-Chester Medical Center	9	10.8%
Western Pennsylvania Hospital	3	7.1%	Lankenau Hospital	7	8.4%
York Hospital	3	7.1%	Hahnemann University Hospital	6	7.2%
Allegheny General Hospital	2	4.8%	Other hospitals	20	24.1%
Hospital of the University of PA	2	4.8%			
Other hospitals	7	16.7%	AETNA WESTERN PA	31	100%
PRUDENTIAL	225	100%	Mercy Hospital of Pittsburgh	10	32.3%
Presby Med Ctr Univ of PA Hlth Sys	48	21.3%	Western Pennsylvania Hospital	10	32.3%
Reading Hospital and Medical Center	17	7.6%	Shadyside Hospital	4	12.9%
Harrisburg Hospital	13	5.8%	Other hospitals	7	22.6%
Shadyside Hospital	13	5.8%			
York Hospital	11	4.9%	CENTRAL MEDICAL	90	100%
Lehigh Valley Hospital	10	4.4%	Saint Francis Medical Center	56	62.2%
Lankenau Hospital	9	4.0%	Saint Francis Central Hospital	34	37.8%
Hahnemann University Hospital	8	3.6%			
Penn State University Hospital/Hershey	8	3.6%	CIGNA HEALTHCARE OF PA	48	100%
Lancaster General Hospital	7	3.1%	York Hospital	16	33.3%
Medical College Hosp /Main Campus	7	3.1%	Crozer-Chester Medical Center	9	18.8%
Western Pennsylvania Hospital	7	3.1%	Thomas Jefferson Univ Hospital	6	12.5%
Albert Einstein Medical Center	5	2.2%	Western Pennsylvania Hospital	5	10.4%
Allegheny General Hospital	5	2.2%	Albert Einstein Medical Center	4	8.3%
Altoona Hospital	5	2.2%	Mercy Hospital of Pittsburgh	4	8.3%
Mercy Hospital of Pittsburgh	5	2.2%	Other hospitals	4	8.3%
Pennsylvania Hospital	5	2.2%			
St. Luke's Hospital of Bethlehem	5	2.2%	GEISINGER HEALTH PLAN	183	100%
Thomas Jefferson Univ Hospital	5	2.2%	Geisinger Medical Center /Danville	183	100%
Other hospitals	32	14.2%			
TRAVELERS	147	100%	GREATER ATLANTIC HEALTH SERVICE	36	100%
Mercy Hospital of Pittsburgh	17	11.6%	Graduate Hospital	22	61.1%
Hamot Medical Center	12	8.2%	Albert Einstein Medical Center	5	13.9%
Medical Center, Beaver, PA, Inc	10	6.8%	Other hospitals	9	25.0%
Harrisburg Hospital	9	6.1%			
Hahnemann University Hospital	8	5.4%	HEALTHAMERICA PA	388	100%
Allegheny General Hospital	7	4.8%	Western Pennsylvania Hospital	157	40.5%
Lancaster General Hospital	7	4.8%	York Hospital	43	11.1%
Lankenau Hospital	7	4.8%	Harrisburg Hospital	41	10.6%
Lehigh Valley Hospital	7	4.8%	Medical Center, Beaver, PA, Inc	26	6.7%
Western Pennsylvania Hospital	7	4.8%	Polyclinic Medical Center	26	6.7%
Altoona Hospital	6	4.1%	Other hospitals	95	24.5%
Thomas Jefferson Univ Hospital	5	3.4%			
Saint Francis Medical Center	4	2.7%	HEALTHGUARD OF LANCASTER	59	100%
Saint Joseph Hospital, Inc. /Lancaster	4	2.7%	Lancaster General Hospital	39	66.1%
Bryn Mawr Hospital	3	2.0%	Saint Joseph Hospital, Inc. /Lancaster	20	33.9%
Conemaugh Valley Memorial Hospital	3	2.0%			
Mercy Hospital /Scranton	3	2.0%	HMO OF NORTHEASTERN PA	85	100%
Robert Packer Hospital	3	2.0%	Wilkes-Barre General Hospital /WVHCS	45	52.9%
Wilkes-Barre General Hospital /WVHCS	3	2.0%	Mercy Hospital /Scranton	29	34.1%
Other hospitals	22	15.0%	Other hospitals	11	12.9%

* Percentages may not add to 100% due to rounding

TABLE 1: Percent of Health Plan CABG Cases, by Hospital, 1994-1995

	# CASES	%		# CASES	%
KEYSTONE CENTRAL	152	100%	PRUDENTIAL HEALTH CARE PLAN	83	100%
York Hospital	60	39.5%	Lehigh Valley Hospital	28	33.7%
Harrisburg Hospital	23	15.1%	Temple University Hospital	21	25.3%
Lehigh Valley Hospital	20	13.2%	Hospital of the University of PA	11	13.3%
Polyclinic Medical Center	16	10.5%	Bryn Mawr Hospital	8	9.6%
Other hospitals	33	21.7%	Other hospitals	15	18.1%
KEYSTONE EAST	365	100%	U.S. HEALTHCARE	844	100%
Hahnemann University Hospital	94	25.8%	Hahnemann University Hospital	227	26.9%
Lankenau Hospital	51	14.0%	Presbyterian Med Ctr Univ of PA Hlth Sys	81	9.6%
Albert Einstein Medical Center	41	11.2%	Lankenau Hospital	74	8.8%
Crozer-Chester Medical Center	41	11.2%	Albert Einstein Medical Center	72	8.5%
Bryn Mawr Hospital	27	7.4%	Temple University Hospital	69	8.2%
Presbyterian Med Ctr Univ of PA Hlth Sys	24	6.6%	Graduate Hospital	41	4.9%
Other hospitals	87	23.8%	Bryn Mawr Hospital	32	3.8%
KEYSTONE WEST	219	100%	Medical College Hosp /Main Campus	27	3.2%
Shadyside Hospital	62	28.3%	Thomas Jefferson Univ Hospital	27	3.2%
Mercy Hospital of Pittsburgh	46	21.0%	Other hospitals	194	23.0%
Saint Francis Medical Center	31	14.2%			
Western Pennsylvania Hospital	22	10.0%			
Allegheny General Hospital	17	7.8%			
Other hospitals	41	18.7%			

Risk-Adjusted In-hospital Mortality Outcomes

Health Plans

Hospitals

Cardiac Surgeons

TABLE 2: Actual to Expected Mortality, by Health Plan, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
MEDICARE PLANS			
<i>Medicare Fee for Service</i>	19,657	4.1%	3.8% - 4.3%
<i>Medicare HMO Contracts</i>			
Geisinger Health Plan - Central	50	0.0%	0.0% - 6.0%
Greater Atlantic Health Service	43	7.0%	0.0% - 7.0%
Keystone East	217	3.7%	2.3% - 6.9%
Keystone West	48	2.1%	0.0% - 8.3%
U.S. Healthcare	466	4.7%	2.8% - 5.8%
MEDICAID PLANS			
<i>Medicaid Fee for Service</i>	1,236	2.6%	1.4% - 2.8%
<i>Medicaid HMO Contracts</i> — There were 9 HMO plans that were the primary payor for Medicaid CABG cases in 1994-95; none had 30 or more cases and so are not reported.			
FEE FOR SERVICE			
<i>Blue Cross Insurers</i>			
Blue Cross of Northeast PA	696	1.3%	1.0% - 2.7%
Blue Cross of Western PA	2,748	1.7%	1.2% - 2.1%
Capital Blue Cross	1,974	1.3%	1.0% - 2.0%
Independence Blue Cross	1,256	1.7%	1.2% - 2.5%
<i>Commercial Insurers</i>			
Aetna	353	1.4%	0.3% - 2.5%
CIGNA	99	1.0%	0.0% - 3.0%
Educators Mutual	36	0.0%	0.0% - 2.8%
Guardian Life	30	0.0%	0.0% - 3.3%
John Hancock	48	2.1%	0.0% - 6.3%
Metropolitan	177	0.6%	0.0% - 2.8%
Provident	42	0.0%	0.0% - 4.8%
Prudential	225	1.3%	0.4% - 3.1%
Travelers	147	1.4%	0.0% - 2.7%
LICENSED HMOS			
Aetna Central & Eastern PA	83	2.4%	0.0% - 3.6%
Aetna Western PA	31	0.0%	0.0% - 3.2%
Central Medical	90	1.1%	0.0% - 3.3%
CIGNA Healthcare of PA	48	4.2%	0.0% - 4.2%
Geisinger Health Plan	183	0.5%	0.0% - 2.7%
* Greater Atlantic Health Service	36	8.3%	0.0% - 5.6%
HealthAmerica PA	388	0.5%	0.5% - 2.6%
HealthGuard of Lancaster	59	1.7%	0.0% - 1.7%
HMO of Northeastern PA	85	2.4%	0.0% - 3.5%
Keystone Central	152	0.7%	0.0% - 3.3%
Keystone East	365	2.7%	0.8% - 3.3%
Keystone West	219	1.4%	0.0% - 2.7%
Prudential Health Care Plan	83	1.2%	0.0% - 3.6%
U.S. Healthcare	844	1.8%	0.8% - 2.4%
STATEWIDE TOTAL	38,577	3.1%	

KEY	
* Actual Mortality significantly higher than Expected	° Actual Mortality significantly lower than Expected

TABLE 3: Actual to Expected Mortality, by Hospital, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
WESTERN PENNSYLVANIA			
Allegheny General Hospital	1,897	3.2%	2.7% - 4.2%
* Hamot Medical Center	1,041	3.7%	1.6% - 3.4%
Medical Center, Beaver, PA, Inc	345	1.4%	0.6% - 3.2%
Mercy Hospital of Pittsburgh	1,655	2.5%	2.1% - 3.6%
Saint Francis Central Hospital	624	2.2%	1.4% - 3.7%
Saint Francis Medical Center	1,210	2.7%	2.5% - 4.4%
Saint Vincent Health Center	896	3.8%	2.2% - 4.4%
Shadyside Hospital	2,034	2.5%	2.2% - 3.5%
University of Pittsburgh Medical Center	615	5.5%	2.8% - 5.5%
Washington Hospital	447	2.5%	1.1% - 3.8%
Western Pennsylvania Hospital	1,854	3.3%	2.0% - 3.3%
Westmoreland Regional Hospital	370	4.3%	1.9% - 4.9%
CENTRAL & NORTHEASTERN PENNSYLVANIA			
Altoona Hospital	853	1.4%	1.4% - 3.3%
Conemaugh Valley Memorial Hospital	831	1.8%	1.8% - 3.7%
Geisinger Medical Center /Danville	816	1.7%	1.7% - 3.7%
Harrisburg Hospital	1,028	3.7%	1.8% - 3.7%
Lancaster General Hospital	1,018	3.0%	2.4% - 4.3%
Mercy Hospital /Scranton	842	2.9%	2.1% - 4.3%
Penn State University Hospital /Hershey	472	1.7%	1.3% - 3.6%
Polyclinic Medical Center	1,188	3.6%	2.2% - 4.0%
Robert Packer Hospital	587	2.9%	1.5% - 3.7%
Saint Joseph Hospital, Inc. /Lancaster	242	3.7%	1.2% - 5.0%
Wilkes-Barre General Hospital /WVHCS	1,007	2.2%	1.8% - 3.6%
Williamsport Hospital & Medical Center	331	3.0%	0.6% - 3.3%
York Hospital	1,300	1.6%	1.5% - 3.1%
SOUTHEASTERN PENNSYLVANIA			
* Albert Einstein Medical Center	1,043	5.4%	3.1% - 5.2%
o Bryn Mawr Hospital	690	1.4%	1.7% - 4.1%
Crozer-Chester Medical Center	386	2.3%	1.8% - 4.9%
Easton Hospital	262	2.7%	1.1% - 5.0%
* Episcopal Hospital	322	5.3%	1.6% - 4.7%
* Graduate Hospital	540	6.1%	2.2% - 5.0%
Hahnemann University Hospital	2,331	4.6%	3.4% - 4.9%
Hospital of the University of PA	714	4.2%	2.5% - 4.9%
Lankenau Hospital	1,502	3.1%	2.6% - 4.3%
o Lehigh Valley Hospital	1,657	2.3%	2.4% - 3.9%
Medical College Hospital /Main Clinical	501	3.4%	1.6% - 4.2%
Pennsylvania Hospital	331	2.7%	1.5% - 4.8%
o Presbyterian Medical Ctr Univ of PA Hlth System	1,101	2.3%	2.4% - 4.3%
Reading Hospital and Medical Center	1,026	3.2%	1.8% - 3.6%
Saint Joseph Medical Center /Reading	368	2.4%	1.1% - 3.8%
St. Luke's Hospital of Bethlehem	879	3.3%	1.9% - 3.9%
Temple University Hospital	777	4.5%	3.0% - 5.4%
Thomas Jefferson University Hospital	644	3.1%	2.2% - 4.5%
STATEWIDE TOTAL	38,577	3.1%	

KEY

* Actual Mortality significantly higher than Expected

o Actual Mortality significantly lower than Expected

TABLE 4A: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
WESTERN PENNSYLVANIA			
Allegheny General Hospital	1,897	3.2%	2.7% - 4.2%
Benckart, Daniel H. ²	251	2.4%	1.6% - 6.0%
Burkholder, John A. ²	256	4.3%	2.0% - 5.9%
* Liebler, George A. ²	240	5.0%	1.3% - 4.6%
Magovern, George J., Jr. ²	227	2.6%	1.3% - 4.8%
Magovern, George J., Sr.	9		
Magovern, James A. ²	249	3.6%	1.6% - 5.6%
Maher, Thomas D., Jr. ³	54	1.9%	0.0% - 7.4%
Marrone, Gary C. ²	110	2.7%	0.9% - 6.4%
Park, Sang B. ³	38	0.0%	0.0% - 7.9%
Savage, Edward B. ²	209	3.8%	1.4% - 5.7%
Szydlowski, Gary W. ²	81	1.2%	1.2% - 7.4%
Wiechmann, Robert J. ²	173	1.7%	1.2% - 5.2%
* Hamot Medical Center	1,041	3.7%	1.6% - 3.4%
* D'Angelo, George J.	248	6.0%	0.8% - 4.4%
Kish, George F.	78	2.6%	0.0% - 3.8%
Michalak, Dennis M.	239	2.1%	0.8% - 3.8%
O'Connor, James V.	41	2.4%	0.0% - 7.3%
Sardesai, Prabhaker G.	86	5.8%	0.0% - 5.8%
Tan, Wilfredo S.	349	3.2%	1.1% - 3.7%
Medical Center, Beaver, PA, Inc	345	1.4%	0.6% - 3.2%
Benckart, Daniel H. ²	6		
Burkholder, John A. ²	5		
Liebler, George A. ²	7		
Magovern, George J., Jr. ²	54	0.0%	0.0% - 3.7%
Magovern, James A. ²	7		
Savage, Edward B. ²	38	2.6%	0.0% - 5.3%
Szydlowski, Gary W. ²	140	2.1%	0.0% - 3.6%
Wiechmann, Robert J. ²	88	1.1%	0.0% - 3.4%
Mercy Hospital of Pittsburgh	1,655	2.5%	2.1% - 3.6%
Darrell, John C. ³	252	1.6%	0.8% - 4.4%
Davliakos, George P. ³	159	3.1%	0.6% - 5.0%
DiMarco, Ross F., Jr. ³	329	3.0%	1.5% - 4.9%
Grant, Kathleen J. ³	164	1.2%	0.6% - 4.9%
Manzetti, Gene W.	3		
Pellegrini, Ronald V. ⁴	299	2.0%	1.0% - 4.3%
Sortino, Antonio ³	120	5.0%	0.0% - 5.0%
Wei, Lawrence M. ⁴	141	4.3%	0.7% - 5.7%
Woelfel, George F., Jr. ³	188	1.1%	0.5% - 3.7%
Saint Francis Central Hospital	624	2.2%	1.4% - 3.7%
Darrell, John C. ³	23		
Davliakos, George P. ³	2		

KEY	
* Actual Mortality significantly higher than Expected	° Actual Mortality significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

TABLE 4A: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
Saint Francis Central Hospital <i>continued</i>	624	2.2%	1.4% - 3.7%
DiMarco, Ross F., Jr. ³	3		
Grant, Kathleen J. ³	4		
Maier, Thomas D., Jr. ³	102	2.0%	0.0% - 5.9%
Navid, Forozan ²	14		
Park, Sang B. ³	11		
Pellegrini, Ronald V. ⁴	8		
Ruiz, Victor ²	21		
Sortino, Antonio ³	14		
Wei, Lawrence M. ⁴	27		
Woelfel, George F., Jr. ³	296	0.7%	0.7% - 3.4%
Yoon, Pyongsoo D. ²	99	4.0%	0.0% - 6.1%
Saint Francis Medical Center	1,210	2.7%	2.5% - 4.4%
Agster, Bruce E.	53	1.9%	0.0% - 7.5%
Barmada, Bicher ²	33	3.0%	0.0% - 9.1%
Bennett, Robert D. ³	5		
Culig, Michael H. ³	1		
Di Marco, David B. ²	42	4.8%	0.0% - 7.1%
Gardner, Robert S. ³	8		
* Haan, Constance K. ²	49	6.1%	0.0% - 4.1%
Klay, John Whitaker ³	30	6.7%	0.0% - 6.7%
Lerberg, David B. ³	1		
Lima, Claudio A. B. ³	1		
Machiraju, Venkat Ratnam ³	4		
Maier, Thomas D., Jr. ³	211	3.3%	1.4% - 5.7%
Navid, Forozan ²	65	3.1%	0.0% - 6.2%
Palanisamy, Subramaniam ²	86	3.5%	0.0% - 5.8%
o Park, Sang B. ³	267	0.7%	1.5% - 5.2%
Rahbar, Ahmad	15		
Ruiz, Victor ²	135	0.0%	0.0% - 4.4%
Senan, Pushpendra ²	119	5.0%	1.7% - 7.6%
Shackelford, Howard	1		
Stept, Larry L. ³	53	3.8%	0.0% - 9.4%
Yoon, Pyongsoo D. ²	31	6.5%	0.0% - 9.7%
Saint Vincent Health Center	896	3.8%	2.2% - 4.4%
Comp, Scott J.	63	7.9%	0.0% - 7.9%
Fitzgibbon, Leo	60	3.3%	0.0% - 6.7%
George, Jacob	242	5.0%	1.2% - 5.4%
Long, Richard W.	283	2.8%	1.1% - 4.6%
Lyons, Gary W.	6		
Pett, Stephen D.	242	2.9%	1.2% - 5.0%
Shadyside Hospital	2,034	2.5%	2.2% - 3.5%
Bennett, Robert D. ³	181	2.2%	1.1% - 5.0%
Chen, Robert F. ²	18		
Culig, Michael H. ³	235	2.1%	1.3% - 5.1%
Gardner, Robert S. ³	8		

KEY

* Actual Mortality significantly higher than Expected

o Actual Mortality significantly lower than Expected

^{2,3,4} Number of Hospitals where Surgeon Performed CABG

TABLE 4A: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
Shadyside Hospital <i>continued</i>	2,034	2.5%	2.2% - 3.5%
* Hong-Barco, Pablo	115	7.0%	0.0% - 5.2%
Klay, John Whitaker ³	54	5.6%	0.0% - 5.6%
Lerberg, David B. ³	142	0.0%	0.0% - 3.5%
Lima, Claudio A. B. ³	253	1.2%	1.2% - 5.1%
Lolley, David M. ²	1		
Machiraju, Venkat Ratnam ³	393	2.8%	1.5% - 4.3%
Samadani, Siroos R. ²	261	3.8%	1.5% - 5.0%
Santos, Arthur M.	1		
Stept, Larry L. ³	59	3.4%	0.0% - 6.8%
Sullivan, Lawrence X., Jr. ²	313	1.3%	0.6% - 3.5%
University of Pittsburgh Medical Center	615	5.5%	2.8% - 5.5%
Armitage, John M.	29		
Griffith, Bartley P.	178	3.9%	1.1% - 5.1%
* Hardesty, Robert L. ²	31	9.7%	0.0% - 6.5%
* Hattler, Brack G. ²	125	10.4%	2.4% - 9.6%
Kormos, Robert	82	4.9%	1.2% - 8.5%
Pellegrini, Ronald V. ⁴	46	6.5%	0.0% - 6.5%
Pham, Si	15		
Wei, Lawrence M. ⁴	109	0.9%	0.9% - 6.4%
Washington Hospital	447	2.5%	1.1% - 3.8%
Darrell, John C. ³	68	2.9%	0.0% - 5.9%
Davliakos, George P. ³	25		
DiMarco, Ross F., Jr. ³	10		
Grant, Kathleen J. ³	29		
Pellegrini, Ronald V. ⁴	21		
Sortino, Antonio ³	228	1.3%	0.9% - 4.4%
Wei, Lawrence M. ⁴	65	0.0%	0.0% - 4.6%
Woelfel, George F., Jr. ³	1		
Western Pennsylvania Hospital	1,854	3.3%	2.0% - 3.3%
Barmada, Bicher ²	3		
Bennett, Robert D. ³	212	1.9%	0.5% - 4.2%
Chen, Robert F. ²	5		
Culig, Michael H. ³	237	3.0%	0.8% - 4.6%
Di Marco, David B. ²	43	4.7%	0.0% - 7.0%
Gardner, Robert S. ³	17		
Haan, Constance K. ²	3		
Klay, John Whitaker ³	152	0.7%	0.7% - 5.9%
* Lerberg, David B. ³	195	5.1%	0.5% - 4.1%
Lima, Claudio A. B. ³	186	1.6%	0.5% - 4.3%
Lolley, David M. ²	129	4.7%	0.8% - 5.4%
Machiraju, Venkat Ratnam ³	111	4.5%	0.0% - 5.4%
Marrone, Gary C. ²	85	3.5%	0.0% - 5.9%
Palanisamy, Subramaniam ²	33	3.0%	0.0% - 6.1%
Rea, Franco R.	1		
* Robinson, John N.	71	5.6%	0.0% - 4.2%

KEY

* Actual Mortality significantly higher than Expected

o Actual Mortality significantly lower than Expected

^{2,3,4} Number of Hospitals where Surgeon Performed CABG

TABLE 4A: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
Western Pennsylvania Hospital <i>continued</i>	1,854	3.3%	2.0% - 3.3%
Samadani, Siroos R. ²	1		
Senan, Pushpendra ²	21		
* Stept, Larry L. ³	86	8.1%	0.0% - 5.8%
* Sullivan, Lawrence X., Jr. ²	45	8.9%	0.0% - 6.7%
Tzeng, James	4		
Weinstein, Gerald S.	214	1.9%	0.9% - 4.7%
Westmoreland Regional Hospital	370	4.3%	1.9% - 4.9%
Hardesty, Robert L. ²	8		
Hattler, Brack G. ²	3		
Hellman, Arthur	44	4.5%	0.0% - 6.8%
Payne, Dale N.	315	4.1%	1.6% - 4.8%

KEY

* Actual Mortality significantly higher than Expected

◦ Actual Mortality significantly lower than Expected

^{2,3,4} Number of Hospitals where Surgeon Performed CABG

TABLE 4B: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
CENTRAL & NORTHEASTERN PENNSYLVANIA			
Altoona Hospital	853	1.4%	1.4% - 3.3%
Anastasi, John S.	417	1.7%	1.2% - 3.8%
Fazi, Burt	436	1.1%	0.9% - 3.4%
Conemaugh Valley Memorial Hospital	831	1.8%	1.8% - 3.7%
Devineni, Rajsekhar	475	1.5%	1.5% - 4.0%
Kolff, Jacob	356	2.2%	1.4% - 4.2%
Geisinger Medical Center /Danville	816	1.7%	1.7% - 3.7%
Benoit, Charles H.	159	1.3%	0.6% - 3.8%
Dietl, Charles Albert	194	2.6%	1.0% - 5.7%
◦ Gilbert, Christian L.	166	0.0%	0.6% - 4.2%
Pharr, William F.	90	4.4%	0.0% - 6.7%
Woods, Edward Lawson	207	1.4%	0.5% - 3.9%
Harrisburg Hospital	1,028	3.7%	1.8% - 3.7%
Boylston, Bedford F. ²	46	0.0%	0.0% - 6.5%
Hart, James C. ²	177	2.8%	0.6% - 4.5%
Iams, William B. ²	44	6.8%	0.0% - 9.1%
Jorge, Eduardo ²	145	3.4%	0.7% - 4.1%
Judson, John P. ²	54	5.6%	0.0% - 7.4%
Keagy, Gregory S. ²	114	1.8%	0.9% - 6.1%
McCarty, Christine M. ²	62	3.2%	0.0% - 3.2%
* Pennock, John L. ²	159	5.7%	0.6% - 5.0%
Shaffer, Carolyn W. ²	83	4.8%	0.0% - 6.0%
Travisano, Frank J. ²	77	1.3%	0.0% - 5.2%
Wisman, Craig B. ²	67	6.0%	0.0% - 7.5%
Lancaster General Hospital	1,018	3.0%	2.4% - 4.3%
Bonchek, Lawrence I.	230	6.5%	2.2% - 6.5%
Burlingame, Mark W.	290	2.1%	1.4% - 4.8%
Lundy, Edward F.	250	3.2%	1.2% - 4.8%
◦ Vazales, Brad E.	248	0.8%	1.2% - 4.4%
Mercy Hospital /Scranton	842	2.9%	2.1% - 4.3%
Hamzavi, Siamak A.	361	2.5%	1.7% - 5.0%
Koch, Lear Von	336	3.0%	1.8% - 5.1%
Wilcox, Kenneth R.	145	3.4%	0.7% - 4.8%
Penn State University Hospital /Hershey	472	1.7%	1.3% - 3.6%
* Aufiero, Thomas X.	80	5.0%	0.0% - 3.8%
Campbell, David B.	114	1.8%	0.0% - 4.4%
Kupferschmid, John P.	3		
Pae, Walter E., Jr.	121	0.8%	0.0% - 4.1%
Pierce, William S.	154	0.6%	0.6% - 5.2%

KEY	
* Actual Mortality significantly higher than Expected	◦ Actual Mortality significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

TABLE 4B: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
Polyclinic Medical Center	1,188	3.6%	2.2% - 4.0%
Boylston, Bedford F. ²	261	4.2%	1.9% - 5.7%
Hart, James C. ²	26		
Iams, William B. ²	65	4.6%	0.0% - 6.2%
Jorge, Eduardo ²	16		
Judson, John P. ²	40	0.0%	0.0% - 5.0%
Keagy, Gregory S. ²	46	2.2%	0.0% - 4.3%
McCarty, Christine M. ²	260	3.1%	1.2% - 4.2%
Pennock, John L. ²	32	0.0%	0.0% - 6.3%
Shaffer, Carolyn W. ²	308	3.6%	1.6% - 4.9%
Travisano, Frank J. ²	28		
Wisman, Craig B. ²	106	5.7%	0.0% - 5.7%
Robert Packer Hospital	587	2.9%	1.5% - 3.7%
* Barrett, Peter W. ²	76	6.6%	0.0% - 5.3%
McGovern, Thomas Michael	134	2.2%	0.0% - 3.7%
Quigley, Robert L.	37	8.1%	0.0% - 8.1%
Reitknecht, Felice L.	340	1.8%	1.2% - 4.4%
Saint Joseph Hospital, Inc./Lancaster	242	3.7%	1.2% - 5.0%
Duda, Andrew M.	79	5.1%	0.0% - 6.3%
Zadeh, Barry J.	163	3.1%	1.2% - 5.5%
Wilkes-Barre General Hospital /WVHCS	1,007	2.2%	1.8% - 3.6%
Cimochowski, George E.	322	1.6%	0.9% - 4.0%
Foldes, Peter J.	205	1.5%	0.5% - 3.9%
Fried, Robert Thomas ²	38	2.6%	0.0% - 7.9%
Harostock, Michael D.	414	3.1%	1.4% - 4.6%
Sharma, Ramesh	28		
Williamsport Hospital & Medical Center	331	3.0%	0.6% - 3.3%
Cardwell, Robert J.	71	2.8%	0.0% - 2.8%
Hanan, Scott A.	51	3.9%	0.0% - 5.9%
Illes, Richard W. ²	209	2.9%	0.5% - 3.8%
York Hospital	1,300	1.6%	1.5% - 3.1%
Fried, Robert Thomas ²	314	1.6%	0.6% - 2.9%
Haupt, Hans M.	67	0.0%	0.0% - 4.5%
* Illes, Richard W. ²	35	8.6%	0.0% - 5.7%
Levin, Bradley H.	428	1.9%	0.9% - 3.5%
◦ Mathai, John M.	439	0.9%	1.6% - 4.3%
Zama, Nche	17		

KEY

* Actual Mortality significantly higher than Expected

◦ Actual Mortality significantly lower than Expected

^{2,3,4} Number of Hospitals where Surgeon Performed CABG

TABLE 4C: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
SOUTHEASTERN PENNSYLVANIA			
* Albert Einstein Medical Center	1,043	5.4%	3.1% - 5.2%
Ablaza, Sariel G. ²	98	5.1%	1.0% - 7.1%
Adkins, Mark	227	3.1%	1.3% - 5.3%
* Cavarocchi, Nicholas C. ²	139	7.9%	0.7% - 6.5%
Connolly, Mark W.	70	1.4%	0.0% - 7.1%
* Ghosh, Suresh C.	87	11.5%	2.3% - 9.2%
Grana, Vicente P.	39	5.1%	0.0% - 10.3%
* Larrieu, Alberto J.	35	11.4%	0.0% - 5.7%
Levine, Frederick Hugh	19		
Weiss, Steven J.	329	4.9%	2.7% - 6.4%
° Bryn Mawr Hospital	690	1.4%	1.7% - 4.1%
Boova, Robert S.	327	1.5%	1.2% - 4.6%
Davis, Paul K.	323	1.5%	1.5% - 4.6%
Plzak, Louis F., Jr. ³	40	0.0%	0.0% - 5.0%
Crozer-Chester Medical Center	386	2.3%	1.8% - 4.9%
Brockman, Stanley K. ²	1		
Figueroa, Peter R. ²	9		
Grunewald, Karl E. ²	329	1.8%	1.5% - 4.9%
* Kuretu, M. L. Ray ²	36	8.3%	0.0% - 5.6%
Samuels, Louis E. ²	2		
Solomon-Seto, Lynn	7		
Strong, Michael D., III ²	1		
Tomasello, Donald N. ²	1		
Easton Hospital	262	2.7%	1.1% - 5.0%
Barrett, Peter W. ²	65	6.2%	0.0% - 7.7%
Morgan, Richard J.	197	1.5%	1.0% - 4.6%
* Episcopal Hospital	322	5.3%	1.6% - 4.7%
Ahmad, Imtiaz	6		
Beatty, Albert C., Jr.	1		
Carter, Craig Steven	21		
Deshpande, Anil S. ²	102	3.9%	1.0% - 7.8%
Figueroa, Peter R. ²	79	2.5%	0.0% - 5.1%
Olearchyk, Andrew S.	19		
Seto, Robb S.	9		
* Shariff, Haji M. ²	84	7.1%	0.0% - 6.0%
Sherafat, Mostafa	1		
* Graduate Hospital	540	6.1%	2.2% - 5.0%
Goldenberg, Marc R. ²	125	6.4%	0.8% - 6.4%
Hendren, William G.	281	5.0%	1.4% - 5.3%
Plzak, Louis F., Jr. ³	46	4.3%	0.0% - 6.5%
* Woody, Daniel J. ²	88	10.2%	0.0% - 6.8%

KEY	
* Actual Mortality significantly higher than Expected	° Actual Mortality significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

TABLE 4C: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
Hahnemann University Hospital	2,331	4.6%	3.4% - 4.9%
Alpern, Jeffrey B. ²	1		
* Brockman, Stanley K. ²	88	9.1%	0.0% - 5.7%
Goel, Inder P.	275	6.5%	2.9% - 7.3%
Grunewald, Karl E. ²	130	6.2%	2.3% - 8.5%
Kuretu, M. L. Ray ²	449	5.8%	2.7% - 6.0%
Maquilan, Jose March	313	6.7%	3.2% - 7.3%
Morris, Rohinton J.	482	2.7%	2.1% - 5.0%
Samuels, Louis E. ²	54	1.9%	0.0% - 5.6%
Strong, Michael D., III ²	539	2.2%	2.2% - 4.8%
Hospital of the University of PA	714	4.2%	2.5% - 4.9%
Acker, Michael A.	230	2.2%	1.7% - 5.7%
Bavaria, Joseph E.	170	2.9%	1.2% - 5.3%
* Edmunds, L. Henry, Jr.	135	8.9%	2.2% - 8.1%
Gardner, Timothy J.	166	4.2%	0.6% - 5.4%
Rosengard, Bruce	13		
Lankenau Hospital	1,502	3.1%	2.6% - 4.3%
Casey, Kevin	269	4.8%	1.9% - 5.9%
Goldman, Scott M.	285	3.2%	1.1% - 4.6%
Priest, Brian	200	2.5%	1.5% - 6.0%
Sutter, Francis P.	372	1.6%	1.6% - 5.1%
Tomasello, Donald N. ²	369	3.5%	1.6% - 5.1%
Whitlark, Joseph	7		
^o Lehigh Valley Hospital	1,657	2.3%	2.4% - 3.9%
Gordon, David A.	266	2.6%	1.5% - 4.9%
Jafari, Nercy	9		
Khindri, Chetan D.	2		
Phillips, Theodore G.	286	2.1%	1.4% - 4.9%
Sadr, Farrokh S.	242	2.5%	2.1% - 6.2%
Sinclair, Michael C.	254	3.9%	1.2% - 5.1%
Singer, Raymond L.	239	1.7%	0.4% - 3.8%
Toonder, F. Geoffrey	41	7.3%	0.0% - 9.8%
^o Yeisley, Geary L.	318	0.6%	0.9% - 3.8%
Medical College Hospital /Main Campus	501	3.4%	1.6% - 4.2%
Ablaza, Sariel G. ²	2		
Deshpande, Anil S. ²	17		
DiSesa, Verdi J.	178	1.7%	0.6% - 4.5%
Shariff, Haji M. ²	93	4.3%	1.1% - 6.5%
Whitman, Glenn J.	211	4.3%	0.9% - 4.7%
Pennsylvania Hospital	331	2.7%	1.5% - 4.8%
Diehl, James T.	235	1.7%	1.3% - 5.1%
Dresdale, Arthur R.	79	6.3%	0.0% - 6.3%

KEY

* Actual Mortality significantly higher than Expected

^o Actual Mortality significantly lower than Expected

^{2,3,4} Number of Hospitals where Surgeon Performed CABG

TABLE 4C: Actual to Expected Mortality, by Cardiac Surgeon, 1994-1995

	# CASES	MORTALITY RATE	
		ACTUAL %	EXPECTED RANGE %
Pennsylvania Hospital	331	2.7%	1.5% - 4.8%
Edie, Richard N. ²	1		
Hargrove, W. Clark, III ²	16		
° Presbyterian Med Ctr Univ of Health System	1,101	2.3%	2.4% - 4.3%
Blackwell, Ray	2		
Hargrove, W. Clark, III ²	426	3.5%	1.9% - 4.9%
Johnson, David Lee	36	2.8%	0.0% - 8.3%
Pelias, Anastasios J.	4		
° Sink, James D.	633	1.4%	2.1% - 4.4%
Reading Hospital and Medical Center	1,026	3.2%	1.8% - 3.6%
Fall, Stephen	6		
Feaster, Marshall M.	249	3.2%	0.8% - 4.0%
Gregory, George W., III	261	2.7%	0.8% - 4.2%
Lough, Frederick C.	252	3.6%	1.2% - 4.8%
Nutting, Ron D.	258	3.5%	1.2% - 4.7%
Saint Joseph Medical Center	368	2.4%	1.1% - 3.8%
Howanitz, E. Paul	233	1.7%	0.4% - 3.9%
Villars, J. Frederick	135	3.7%	0.0% - 4.4%
St. Luke's Hospital of Bethlehem	879	3.3%	1.9% - 3.9%
Alpern, Jeffrey B. ²	184	2.7%	1.1% - 4.9%
Angelico, Richard J.	40	0.0%	0.0% - 5.0%
Cavarocchi, Nicholas C. ²	142	2.8%	0.7% - 5.6%
Hoffman, William S.	204	4.4%	1.0% - 4.4%
Kline, Gary	45	6.7%	0.0% - 6.7%
Theman, Terrill E.	264	3.0%	1.5% - 4.9%
Temple University Hospital	777	4.5%	3.0% - 5.4%
Addonizio, V. Paul	275	5.1%	2.2% - 5.8%
Furukawa, Satoshi	143	4.9%	2.1% - 7.7%
Jeevanandam, Valluvan	186	4.8%	2.2% - 7.0%
McClurken, James B.	173	2.9%	1.2% - 5.8%
Thomas Jefferson University Hospital	644	3.1%	2.2% - 4.5%
Armenti, Frederick	15		
Carter, Thomas L., Jr.	122	3.3%	0.8% - 5.7%
Edie, Richard N. ²	218	2.3%	1.8% - 5.5%
Goldenberg, Marc R. ²	8		
Mannion, John D.	228	2.2%	0.9% - 4.8%
Plzak, Louis F., Jr. ³	30	10.0%	0.0% - 10.0%
Woody, Daniel J. ²	23		
STATEWIDE TOTAL	38,577	3.1%	

KEY	
* Actual Mortality significantly higher than Expected	° Actual Mortality significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

Risk-Adjusted (Post-Surgical) Length of Stay

Health Plans

Hospitals

Cardiac Surgeons

TABLE 5: Actual to Expected In-Hospital (Post-Surgical) Length of Stay, by Health Plan, 1994-1995

		# CASES	AVERAGE LOS (DAYS)	
			ACTUAL	EXPECTED RANGE
MEDICARE PLANS				
Traditional Fee for Service	Medicare	18,404	7.5	7.5 - 7.5
Licensed HMOs	◦ Geisinger Health Plan - Center	49	5.7	6.2 - 7.5
	Greater Atlantic Health Service	39	7.1	6.8 - 8.5
	* Keystone East	205	7.7	6.9 - 7.6
	Keystone West	47	7.2	6.3 - 7.7
	U.S. Healthcare	438	7.2	7.1 - 7.5
MEDICAID PLANS				
Traditional Fee for Service	* Medicaid	1,190	6.6	6.3 - 6.5
Licensed HMOs — There were 9 HMO plans that were the primary payor for Medicaid CABG cases in 1994-95; none had 30 or more cases and so are not reported.				
FEE FOR SERVICE				
Blue Cross Insurers	* Blue Cross of Northeast PA	680	6.8	6.1 - 6.5
	◦ Blue Cross of Western PA	2,687	6.1	6.2 - 6.3
	◦ Capital Blue Cross	1,944	5.9	6.1 - 6.3
	Independence Blue Cross	1,222	6.5	6.2 - 6.5
Commercial Insurers	Aetna	346	6.0	5.9 - 6.4
	CIGNA	98	6.1	5.8 - 6.6
	◦ Educators Mutual	35	5.0	5.2 - 6.6
	Guardian Life	30	5.9	5.3 - 6.8
	◦ John Hancock	47	5.6	5.7 - 7.0
	Metropolitan	176	6.4	5.9 - 6.5
	Provident	42	6.0	5.6 - 6.9
	Prudential	221	5.9	5.9 - 6.4
	Travelers	144	5.9	5.8 - 6.5
LICENSED HMOS <input checked="" type="checkbox"/>				
	Aetna Central & Eastern PA	80	6.2	5.7 - 6.7
	Aetna Western PA	31	6.3	5.4 - 6.9
	Central Medical	89	6.1	5.8 - 6.7
	CIGNA Healthcare of PA	46	5.8	5.5 - 6.7
	◦ Geisinger Health Plan	180	5.5	5.9 - 6.5
	◦ Greater Atlantic Health Service	33	5.8	5.9 - 7.4
	◦ HealthAmerica PA	383	5.6	6.0 - 6.4
	◦ HealthGuard of Lancaster	58	5.3	5.4 - 6.5
	* HMO of Northeastern PA	82	7.0	5.7 - 6.6
	◦ Keystone Central	151	5.5	5.7 - 6.4
	Keystone East	352	6.5	6.1 - 6.6
	Keystone West	214	6.1	5.8 - 6.3
	Prudential Health Care Plan	82	6.6	5.7 - 6.7
	* U.S. Healthcare	825	6.5	6.1 - 6.4
STATEWIDE TOTAL		36,772	6.9	

Does not include Medicare or Medicaid patients

KEY	
* Actual LOS significantly higher than Expected	◦ Actual LOS significantly lower than Expected

TABLE 6: Actual to Expected (Post-Surgical) Length of Stay, by Hospital, 1994-1995

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
WESTERN PENNSYLVANIA			
* Allegheny General Hospital	1,783	7.2	6.9 - 7.1
* Hamot Medical Center	984	7.6	6.6 - 6.9
Medical Center, Beaver, PA, Inc	336	6.9	6.4 - 6.9
* Mercy Hospital of Pittsburgh	1,588	7.2	6.8 - 7.0
◦ Saint Francis Central Hospital	606	6.6	6.8 - 7.2
Saint Francis Medical Center	1,166	6.8	6.8 - 7.1
* Saint Vincent Health Center	846	7.5	6.8 - 7.2
Shadyside Hospital	1,964	6.9	6.8 - 7.0
◦ University of Pittsburgh Medical Center	563	6.5	6.9 - 7.3
* Washington Hospital	428	7.8	6.6 - 7.0
◦ Western Pennsylvania Hospital	1,774	6.4	6.7 - 7.0
Westmoreland Regional Hospital	348	7.1	6.7 - 7.2
CENTRAL & NORTHEASTERN PENNSYLVANIA			
◦ Altoona Hospital	837	5.1	6.6 - 7.0
◦ Conemaugh Valley Memorial Hospital	805	6.2	6.7 - 7.1
◦ Geisinger Medical Center /Danville	788	6.2	6.6 - 6.9
◦ Harrisburg Hospital	978	6.2	6.6 - 6.9
◦ Lancaster General Hospital	968	6.5	6.8 - 7.1
* Mercy Hospital /Scranton	803	7.7	6.9 - 7.2
◦ Penn State University Hospital /Hershey	460	6.1	6.5 - 7.0
◦ Polyclinic Medical Center	1,134	6.1	6.8 - 7.0
* Robert Packer Hospital	567	7.3	6.6 - 7.0
◦ Saint Joseph Hospital, Inc. /Lancaster	232	6.5	6.8 - 7.4
* Wilkes-Barre General Hospital /WVHCS	962	8.5	6.7 - 7.0
◦ Williamsport Hospital & Medical Center	318	5.5	6.3 - 6.8
◦ York Hospital	1,268	6.2	6.5 - 6.7
SOUTHEASTERN PENNSYLVANIA			
◦ Albert Einstein Medical Center	957	6.6	7.0 - 7.3
◦ Bryn Mawr Hospital	676	6.8	6.9 - 7.2
Crozer-Chester Medical Center	370	6.9	6.8 - 7.3
◦ Easton Hospital	246	6.1	6.7 - 7.3
* Episcopal Hospital	293	8.4	6.8 - 7.4
◦ Graduate Hospital	498	6.6	6.9 - 7.3
* Hahnemann University Hospital	2,185	7.5	7.1 - 7.3
* Hospital of the University of PA	672	7.8	6.8 - 7.2
* Lankenau Hospital	1,407	7.6	7.0 - 7.2
Lehigh Valley Hospital	1,601	6.9	6.8 - 7.1
* Medical College Hospital /Main Campus	477	7.4	6.7 - 7.2
* Pennsylvania Hospital	319	7.7	7.0 - 7.5
◦ Presbyterian Medical Ctr Univ of PA Hlth System	1,067	6.9	7.0 - 7.2
◦ Reading Hospital and Medical Center	984	6.7	6.8 - 7.0
* Saint Joseph Medical Center /Reading	351	7.9	6.6 - 7.1
* St. Luke's Hospital of Bethlehem	835	7.6	6.8 - 7.1
* Temple University Hospital	719	8.3	6.9 - 7.3
* Thomas Jefferson University Hospital	609	7.4	6.8 - 7.1
STATEWIDE TOTAL	36,772	6.9	

KEY	
* Actual LOS significantly higher than Expected	◦ Actual LOS significantly lower than Expected

TABLE 7A: Actual to Expected (Post-Surgical) Length of Stay, by Cardiac Surgeon, 1994-1995

WESTERN PENNSYLVANIA

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
* Allegheny General Hospital	1,783	7.2	6.9 - 7.1
* Benckart, Daniel H. ²	241	7.6	6.8 - 7.5
* Burkholder, John A. ²	240	7.7	6.8 - 7.5
* Liebler, George A. ²	227	7.4	6.5 - 7.1
Magovern, George J., Jr. ²	213	7.2	6.7 - 7.4
Magovern, George J., Sr.	7		
Magovern, James A. ²	233	7.5	6.9 - 7.6
Maher, Thomas D., Jr. ³	50	7.4	6.6 - 8.0
Marrone, Gary C. ²	107	6.6	6.5 - 7.4
Park, Sang B. ³	37	7.5	6.1 - 7.7
Savage, Edward B. ²	192	7.0	6.7 - 7.3
Szydowski, Gary W. ²	78	6.4	6.3 - 7.3
Wiechmann, Robert J. ²	158	6.5	6.3 - 7.0
* Hamot Medical Center	984	7.6	6.6 - 6.9
* D'Angelo, George J.	227	8.6	6.6 - 7.3
* Kish, George F.	76	7.5	6.0 - 7.0
Michalak, Dennis M.	231	6.6	6.4 - 7.0
* O'Connor, James V.	39	7.6	5.7 - 7.1
* Sardesai, Prabhaker G.	79	8.6	6.1 - 7.1
* Tan, Wilfredo S.	332	7.6	6.4 - 6.9
Medical Center, Beaver, PA, Inc	336	6.9	6.4 - 6.9
Benckart, Daniel H. ²	6		
Burkholder, John A. ²	5		
Liebler, George A. ²	7		
Magovern, George J., Jr. ²	54	7.3	6.5 - 7.8
Magovern, James A. ²	7		
Savage, Edward B. ²	37	6.5	5.9 - 7.4
Szydowski, Gary W. ²	133	6.7	6.4 - 7.2
* Wiechmann, Robert J. ²	87	7.2	6.0 - 6.9
* Mercy Hospital of Pittsburgh	1,588	7.2	6.8 - 7.0
* Darrell, John C. ³	241	7.4	6.7 - 7.3
* Davliakos, George P. ³	152	7.1	6.4 - 7.0
* DiMarco, Ross F., Jr. ³	315	7.4	6.7 - 7.3
* Grant, Kathleen J. ³	162	7.5	6.7 - 7.4
Manzetti, Gene W.	2		
Pellegrini, Ronald V. ⁴	287	7.1	6.6 - 7.1
Sortino, Antonio ³	112	7.0	6.5 - 7.4
* Wei, Lawrence M. ⁴	133	7.7	6.6 - 7.4
Woelfel, George F., Jr. ³	184	6.5	6.2 - 6.9
° Saint Francis Central Hospital	606	6.6	6.8 - 7.2
Darrell, John C. ³	23		
Davliakos, George P. ³	2		

KEY	
* Actual LOS significantly higher than Expected	° Actual LOS significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

TABLE 7A: Actual to Expected (Post-Surgical) Length of Stay, by Cardiac Surgeon, 1994-1995

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
Shadyside Hospital <i>continued</i>	1,964	6.9	6.8 - 7.0
Hong-Barco, Pablo	104	6.4	6.3 - 7.3
Klay, John Whitaker ³	50	7.8	6.5 - 7.9
◦ Lerberg, David B. ³	142	6.2	6.4 - 7.1
Lima, Claudio A. B. ³	249	6.8	6.7 - 7.3
Lolley, David M. ²	1		
Machiraju, Venkat Ratnam ³	381	6.9	6.6 - 7.1
* Samadani, Siroos R. ²	251	7.8	6.7 - 7.3
Santos, Arthur M.	1		
◦ Stept, Larry L. ³	57	6.9	6.3 - 7.5
◦ Sullivan, Lawrence X., Jr. ²	305	6.6	6.7 - 7.1
◦ University of Pittsburgh Medical Center	563	6.5	6.9 - 7.3
Armitage, John M.	26		
◦ Griffith, Bartley P.	168	6.0	6.7 - 7.4
Hardesty, Robert L. ²	28		
Hattler, Brack G. ²	106	7.3	6.8 - 7.7
◦ Kormos, Robert	75	6.6	6.7 - 7.8
◦ Pellegrini, Ronald V. ⁴	43	5.9	6.0 - 7.3
Pham, Si	11		
◦ Wei, Lawrence M. ⁴	106	6.3	6.5 - 7.4
* Washington Hospital	428	7.8	6.6 - 7.0
* Darrell, John C. ³	65	7.6	6.3 - 7.4
Davliakos, George P. ³	24		
DiMarco, Ross F., Jr. ³	9		
Grant, Kathleen J. ³	25		
Pellegrini, Ronald V. ⁴	21		
* Sortino, Antonio ³	222	7.5	6.4 - 7.0
* Wei, Lawrence M. ⁴	61	8.5	6.2 - 7.4
Woelfel, George F., Jr. ³	1		
◦ Western Pennsylvania Hospital	1,774	6.4	6.7 - 7.0
Barmada, Bicher ²	3		
Bennett, Robert D. ³	206	6.5	6.5 - 7.1
Chen, Robert F. ²	5		
◦ Culig, Michael H. ³	228	6.1	6.6 - 7.3
Di Marco, David B. ²	40	6.6	6.2 - 7.7
Gardner, Robert S. ³	17		
Haan, Constance K. ²	3		
◦ Klay, John Whitaker ³	150	6.6	6.8 - 7.6
◦ Lerberg, David B. ³	184	6.0	6.5 - 7.2
◦ Lima, Claudio A. B. ³	181	6.2	6.4 - 7.1
Lolley, David M. ²	120	6.7	6.4 - 7.2
Machiraju, Venkat Ratnam ³	106	6.5	6.4 - 7.3
Marrone, Gary C. ²	81	6.4	6.2 - 7.2
Palanisamy, Subramaniam ²	32	7.2	6.1 - 7.7
Rea, Franco R.	1		
Robinson, John N.	65	7.1	6.1 - 7.2

KEY	
* Actual LOS significantly higher than Expected	◦ Actual LOS significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

TABLE 7A: Actual to Expected (Post-Surgical) Length of Stay, by Cardiac Surgeon, 1994-1995

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
° Western Pennsylvania Hospital <i>continued</i>	1,774	6.4	6.7 - 7.0
Samadani, Siroos R. ²	1		
Senan, Pushpendra ²	21		
Stept, Larry L. ³	79	6.7	6.4 - 7.5
° Sullivan, Lawrence X., Jr. ²	40	5.8	5.9 - 7.3
Tzeng, James	4		
° Weinstein, Gerald S.	207	6.3	6.6 - 7.2
Westmoreland Regional Hospital	348	7.1	6.7 - 7.2
Hardesty, Robert L. ²	7		
Hattler, Brack G. ²	3		
* Hellman, Arthur	39	7.5	5.9 - 7.3
Payne, Dale N.	299	7.0	6.7 - 7.2

KEY

* Actual LOS significantly higher than Expected

° Actual LOS significantly lower than Expected

^{2,3,4} Number of Hospitals where Surgeon Performed CABG

TABLE 7B: Actual to Expected (Post-Surgical) Length of Stay, by Cardiac Surgeon, 1994-1995

CENTRAL & NORTHEASTERN PENNSYLVANIA

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
° Altoona Hospital	837	5.1	6.6 - 7.0
° Anastasi, John S.	408	5.2	6.6 - 7.0
° Fazi, Burt	429	5.1	6.6 - 7.1
° Conemaugh Valley Memorial Hospital	805	6.2	6.7 - 7.1
° Devineni, Rajsekhar	460	6.0	6.6 - 7.1
° Kolff, Jacob	345	6.3	6.7 - 7.2
° Geisinger Medical Center /Danville	788	6.2	6.6 - 6.9
Benoit, Charles H.	153	6.6	6.3 - 7.1
* Dietl, Charles Albert	185	7.4	6.5 - 7.2
° Gilbert, Christian L.	165	6.0	6.4 - 7.1
° Pharr, William F.	83	6.3	6.4 - 7.4
° Woods, Edward Lawson	202	5.1	6.4 - 7.0
° Harrisburg Hospital	978	6.2	6.6 - 6.9
Boylston, Bedford F. ²	45	7.2	6.3 - 7.8
° Hart, James C. ²	169	6.1	6.4 - 7.1
Iams, William B. ²	40	6.7	6.2 - 7.7
° Jorge, Eduardo ²	139	6.2	6.3 - 7.1
Judson, John P. ²	50	6.6	6.4 - 7.8
° Keagy, Gregory S. ²	112	6.0	6.4 - 7.2
° McCarty, Christine M. ²	60	5.6	6.0 - 7.2
° Pennock, John L. ²	149	6.2	6.4 - 7.1
° Shaffer, Carolyn W. ²	76	5.9	6.2 - 7.2
° Travisano, Frank J. ²	76	6.1	6.2 - 7.2
° Wisman, Craig B. ²	62	6.1	6.4 - 7.6
° Lancaster General Hospital	968	6.5	6.8 - 7.1
Bonchek, Lawrence I.	206	6.9	6.7 - 7.4
° Burlingame, Mark W.	279	6.3	6.6 - 7.2
Lundy, Edward F.	241	6.5	6.6 - 7.2
° Vazales, Brad E.	242	6.3	6.5 - 7.1
* Mercy Hospital /Scranton	803	7.7	6.9 - 7.2
* Hamzavi, Siamak A.	342	8.4	6.9 - 7.4
* Koch, Lear Von	323	7.5	6.8 - 7.3
Wilcox, Kenneth R.	138	6.5	6.4 - 7.2
° Penn State University Hospital /Hershey	460	6.1	6.5 - 7.0
Aufiero, Thomas X.	76	6.6	6.0 - 7.1
° Campbell, David B.	110	6.1	6.3 - 7.2
Kupferschmid, John P.	3		
° Pae, Walter E., Jr.	119	5.8	6.3 - 7.2
° Pierce, William S.	152	6.0	6.5 - 7.2

KEY	
* Actual LOS significantly higher than Expected	° Actual LOS significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

TABLE 7B: Actual to Expected (Post-Surgical) Length of Stay, by Cardiac Surgeon, 1994-1995

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
° Polyclinic Medical Center	1,134	6.1	6.8 - 7.0
° Boylston, Bedford F. ²	249	6.5	6.8 - 7.4
Hart, James C. ²	23		
Iams, William B. ²	59	6.9	6.6 - 7.8
Jorge, Eduardo ²	15		
Judson, John P. ²	39	6.3	6.0 - 7.5
° Keagy, Gregory S. ²	45	5.7	6.1 - 7.4
° McCarty, Christine M. ²	252	5.8	6.5 - 7.1
Pennock, John L. ²	32	6.8	6.1 - 7.7
° Shaffer, Carolyn W. ²	294	6.2	6.5 - 7.1
Travisano, Frank J. ²	28		
° Wisman, Craig B. ²	98	5.5	6.5 - 7.5
* Robert Packer Hospital	567	7.3	6.6 - 7.0
* Barrett, Peter W. ²	69	8.0	6.4 - 7.5
* McGovern, Thomas Michael	131	7.3	6.3 - 7.1
Quigley, Robert L.	34	6.5	5.9 - 7.5
Reitknecht, Felice L.	333	7.1	6.6 - 7.2
° Saint Joseph Hospital, Inc. /Lancaster	232	6.5	6.8 - 7.4
° Duda, Andrew M.	75	6.4	6.5 - 7.7
° Zadeh, Barry J.	157	6.6	6.7 - 7.5
* Wilkes-Barre General Hospital /VVHCS	962	8.5	6.7 - 7.0
* Cimochoowski, George E.	312	8.3	6.5 - 7.0
* Foldes, Peter J.	199	8.1	6.3 - 7.0
* Fried, Robert Thomas ²	33	8.5	6.5 - 8.2
* Harostock, Michael D.	390	8.8	6.8 - 7.3
Sharma, Ramesh	28		
° Williamsport Hospital & Medical Center	318	5.5	6.3 - 6.8
Cardwell, Robert J.	69	7.1	6.1 - 7.2
° Hanan, Scott A.	47	5.2	5.8 - 7.1
° Illes, Richard W. ²	202	5.1	6.2 - 6.8
° York Hospital	1,268	6.2	6.5 - 6.7
° Fried, Robert Thomas ²	308	5.9	6.1 - 6.6
° Haupt, Hans M.	67	5.5	5.7 - 6.8
° Illes, Richard W. ²	32	5.9	6.0 - 7.6
° Levin, Bradley H.	416	6.4	6.5 - 7.0
° Mathai, John M.	430	6.2	6.5 - 7.0
Zama, Nche	15		

KEY

* Actual LOS significantly higher than Expected

° Actual LOS significantly lower than Expected

^{2,3,4} Number of Hospitals where Surgeon Performed CABG

TABLE 7C: Actual to Expected (Post-Surgical) Length of Stay, by Cardiac Surgeon, 1994-1995

SOUTHEASTERN PENNSYLVANIA

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
° Albert Einstein Medical Center	957	6.6	7.0 - 7.3
° Ablaza, Sariel G. ²	90	5.9	6.7 - 7.7
Adkins, Mark	215	6.8	6.6 - 7.2
Cavarocchi, Nicholas C. ²	122	7.0	6.8 - 7.7
° Connolly, Mark W.	65	6.1	6.3 - 7.5
Ghosh, Suresh C.	75	6.8	6.7 - 7.9
Grana, Vicente P.	37	6.7	6.7 - 8.3
Larrieu, Alberto J.	29		
Levine, Frederick Hugh	17		
° Weiss, Steven J.	307	6.6	7.0 - 7.5
° Bryn Mawr Hospital	676	6.8	6.9 - 7.2
Boova, Robert S.	319	6.8	6.7 - 7.3
Davis, Paul K.	317	6.8	6.7 - 7.3
Plzak, Louis F., Jr. ³	40	7.2	6.5 - 8.1
Crozer-Chester Medical Center	370	6.9	6.8 - 7.3
Figueroa, Peter R. ²	8		
Grunewald, Karl E. ²	320	7.0	6.8 - 7.4
° Kuretu, M. L. Ray ²	31	6.0	6.2 - 7.9
Samuels, Louis E. ²	2		
Solomon-Seto, Lynn	7		
Strong, Michael D., III ²	1		
Tomasello, Donald N. ²	1		
° Easton Hospital	246	6.1	6.7 - 7.3
Barrett, Peter W. ²	56	6.6	6.3 - 7.6
° Morgan, Richard J.	190	6.0	6.7 - 7.3
* Episcopal Hospital	293	8.4	6.8 - 7.4
Ahmad, Imtiaz	5		
Beatty, Albert C., Jr.	1		
Carter, Craig Steven	17		
* Deshpande, Anil S. ²	94	9.0	6.8 - 7.8
* Figueroa, Peter R. ²	72	7.8	6.5 - 7.7
Olearchyk, Andrew S.	18		
Seto, Robb S.	9		
* Shariff, Haji M. ²	76	8.5	6.4 - 7.5
Sherafat, Mostafa	1		
° Graduate Hospital	498	6.6	6.9 - 7.3
Goldenberg, Marc R. ²	115	6.7	6.7 - 7.6
° Hendren, William G.	262	6.4	6.9 - 7.5
Plzak, Louis F., Jr. ³	43	6.8	6.2 - 7.7
Woody, Daniel J. ²	78	6.8	6.5 - 7.6

KEY	
* Actual LOS significantly higher than Expected	° Actual LOS significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

TABLE 7C: Actual to Expected (Post-Surgical) Length of Stay, by Cardiac Surgeon, 1994-1995

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
* Hahnemann University Hospital	2,185	7.5	7.1 - 7.3
Alpern, Jeffrey B. ²	1		
* Brockman, Stanley K.	80	8.4	6.7 - 7.8
Goel, Inder P.	252	7.3	6.9 - 7.5
Grunewald, Karl E. ²	118	7.6	6.8 - 7.8
* Kuretu, M. L. Ray ²	405	7.8	7.0 - 7.5
* Maquilan, Jose March	290	8.2	7.1 - 7.7
Morris, Rohinton J.	465	7.5	7.0 - 7.5
Samuels, Louis E. ²	52	6.9	6.2 - 7.5
* Strong, Michael D., III ²	522	7.2	6.7 - 7.1
* Hospital of the University of PA	672	7.8	6.8 - 7.2
* Acker, Michael A.	222	7.5	6.7 - 7.4
* Bavaria, Joseph E.	161	7.7	6.6 - 7.3
* Edmunds, L. Henry, Jr.	121	8.2	6.7 - 7.6
* Gardner, Timothy J.	156	7.8	6.5 - 7.3
Rosengard, Bruce	12		
* Lankenau Hospital	1,407	7.6	7.0 - 7.2
* Casey, Kevin	246	8.8	6.7 - 7.3
Goldman, Scott M.	264	7.1	6.7 - 7.3
* Priest, Brian	190	7.8	6.7 - 7.4
◦ Sutter, Francis P.	361	6.9	7.0 - 7.5
* Tomasello, Donald N. ²	340	7.9	6.7 - 7.3
Whitlark, Joseph	6		
Lehigh Valley Hospital	1,601	6.9	6.8 - 7.1
Gordon, David A.	253	7.0	6.5 - 7.1
Jafari, Nercy	9		
Khindri, Chetan D.	2		
Phillips, Theodore G.	280	6.9	6.7 - 7.3
Sadr, Farrokh S.	232	7.2	6.9 - 7.5
Sinclair, Michael C.	242	7.0	6.7 - 7.3
Singer, Raymond L.	233	6.7	6.5 - 7.1
Toonder, F. Geoffrey	36	8.2	6.7 - 8.4
◦ Yeisley, Geary L.	314	6.5	6.6 - 7.1
* Medical College Hospital /Main Campus	477	7.4	6.7 - 7.2
Ablaza, Sariel G. ²	2		
Deshpande, Anil S. ²	16		
* DiSesa, Verdi J.	174	7.4	6.6 - 7.3
Shariff, Haji M. ²	87	7.6	6.6 - 7.6
* Whitman, Glenn J.	198	7.3	6.6 - 7.2
* Pennsylvania Hospital	319	7.7	7.0 - 7.5
* Diehl, James T.	230	7.6	6.9 - 7.5
Dresdale, Arthur R.	72	7.9	6.8 - 8.0

KEY

* Actual LOS significantly higher than Expected

◦ Actual LOS significantly lower than Expected

^{2,3,4} Number of Hospitals where Surgeon Performed CABG

TABLE 7C: Actual to Expected (Post-Surgical) Length of Stay, by Cardiac Surgeon, 1994-1995

	# CASES	AVERAGE LOS (DAYS)	
		ACTUAL	EXPECTED RANGE
* Pennsylvania Hospital <i>continued</i>	319	7.7	7.0 - 7.5
Edie, Richard N. ²	1		
Hargrove, W. Clark, III ²	16		
° Presbyterian Medical Center Univ of PA Hlth System	1,067	6.9	7.0 - 7.2
Blackwell, Ray	2		
Hargrove, W. Clark, III ²	410	7.0	6.9 - 7.3
Johnson, David Lee	34	6.9	6.4 - 8.1
Pelias, Anastasios J.	4		
° Sink, James D.	617	6.8	6.9 - 7.2
° Reading Hospital and Medical Center	984	6.7	6.8 - 7.0
Fall, Stephen	6		
* Feaster, Marshall M.	240	7.2	6.5 - 7.1
° Gregory, George W., III	251	6.0	6.5 - 7.1
Lough, Frederick C.	240	7.1	6.7 - 7.3
Nutting, Ron D.	247	6.7	6.7 - 7.3
* Saint Joseph Medical Center /Reading	351	7.9	6.6 - 7.1
* Howanitz, E. Paul	225	7.7	6.6 - 7.2
* Villars, J. Frederick	126	8.3	6.4 - 7.2
* St. Luke's Hospital of Bethlehem	835	7.6	6.8 - 7.1
* Alpern, Jeffrey B. ²	178	7.4	6.4 - 7.1
Angelico, Richard J.	40	7.2	6.4 - 7.9
Cavarocchi, Nicholas C. ²	138	7.3	6.6 - 7.4
* Hoffman, William S.	188	7.7	6.6 - 7.2
* Kline, Gary	42	8.1	6.2 - 7.7
* Theman, Terrill E.	249	7.7	6.7 - 7.3
* Temple University Hospital	719	8.3	6.9 - 7.3
* Addonizio, V. Paul	250	8.2	6.7 - 7.3
* Furukawa, Satoshi	133	8.9	6.8 - 7.7
* Jeevanandam, Valluvan	170	8.5	6.8 - 7.5
* McClurken, James B.	166	7.6	6.7 - 7.4
* Thomas Jefferson University Hospital	609	7.4	6.8 - 7.1
Armenti, Frederick	14		
Carter, Thomas L., Jr.	114	7.2	6.6 - 7.5
* Edie, Richard N. ²	207	7.4	6.6 - 7.2
Goldenberg, Marc R. ²	8		
* Mannion, John D.	221	7.4	6.6 - 7.2
Plzak, Louis F., Jr. ³	25		
Woody, Daniel J. ²	20		
STATEWIDE TOTAL	36,772	6.9	

KEY	
* Actual LOS significantly higher than Expected	° Actual LOS significantly lower than Expected
^{2,3,4} Number of Hospitals where Surgeon Performed CABG	

Hospital Average Charges

TABLE 8: Average Charges, by Hospital, 1994-1995

	AVERAGE CHARGE
Albert Einstein Medical Center	\$78,505
Allegheny General Hospital	\$50,034
Altoona Hospital	\$39,662
Bryn Mawr Hospital	\$60,374
Conemaugh Valley Memorial Hospital	\$53,024
Crozer-Chester Medical Center	\$90,504
Easton Hospital	\$41,295
Episcopal Hospital	\$61,132
Geisinger Medical Center /Danville	\$36,102
Graduate Hospital	\$105,853
Hahnemann University Hospital	\$77,115
Hamot Medical Center	\$51,282
Harrisburg Hospital	\$47,918
Hospital of the University of PA	\$85,363
Lancaster General Hospital	\$29,513
Lankenau Hospital	\$60,303
Lehigh Valley Hospital	\$45,976
Medical Center, Beaver, PA, Inc	\$31,902
Medical College Hospital /Main Campus	\$78,828
Mercy Hospital of Pittsburgh	\$42,155
Mercy Hospital /Scranton	\$36,287
Penn State University Hospital /Hershey	\$38,225
Pennsylvania Hospital	\$66,654
Polyclinic Medical Center	\$44,520
Presbyterian Medical Ctr Univ of PA Hlth System	\$49,029
Reading Hospital and Medical Center	\$27,524
Robert Packer Hospital	\$27,803
Saint Francis Central Hospital	\$45,438
Saint Francis Medical Center	\$50,212
Saint Joseph Hospital, Inc. /Lancaster	\$29,197
Saint Joseph Medical Center /Reading	\$37,374
Saint Vincent Health Center	\$53,285
Shadyside Hospital	\$61,874
St. Luke's Hospital of Bethlehem	\$35,264
Temple University Hospital	\$88,995
Thomas Jefferson University Hospital	\$65,171
University of Pittsburgh Medical Center	\$76,936
Wilkes-Barre General Hospital /WVHCS	\$37,552
Washington Hospital	\$55,328
Western Pennsylvania Hospital	\$56,623
Westmoreland Regional Hospital	\$52,204
Williamsport Hospital & Medical Center	\$31,906
York Hospital	\$34,900
STATEWIDE AVERAGE	\$52,465

Volume of Procedures

TABLE 9: Number of CABG and Total Open Heart Procedures, by Hospital, 1994-1995

	TOTAL OPEN HEART	TOTAL REPORTED CABG	REPORTED CABG/OPEN HEART %	AVERAGE VOLUME OF OPEN HEART PER SURGEON
Albert Einstein Medical Center	1,340	1,043	77.8%	149
Allegheny General Hospital	2,671	1,897	71.0%	223
Altoona Hospital	1,072	853	79.6%	536
Bryn Mawr Hospital	892	690	77.4%	297
Conemaugh Valley Memorial Hospital	1,121	831	74.1%	561
Crozer-Chester Medical Center	455	386	84.8%	57
Easton Hospital	315	262	83.2%	158
Episcopal Hospital	417	322	77.2%	46
Geisinger Medical Center /Danville	1,384	816	59.0%	277
Graduate Hospital	797	540	67.8%	199
Hahnemann University Hospital	3,079	2,331	75.7%	342
Hamot Medical Center	1,332	1,041	78.2%	222
Harrisburg Hospital	1,328	1,028	77.4%	121
Hospital of the University of PA	1,263	714	56.5%	253
Lancaster General Hospital	1,475	1,018	69.0%	369
Lankenau Hospital	2,037	1,502	73.7%	340
Lehigh Valley Hospital	2,118	1,657	78.2%	235
Medical Center, Beaver, PA, Inc	415	345	83.1%	52
Medical College Hospital /Main Campus	664	501	75.5%	133
Mercy Hospital of Pittsburgh	2,137	1,655	77.4%	237
Mercy Hospital /Scranton	1,158	842	72.7%	386
Penn State University Hospital /Hershey	1,076	472	43.9%	215
Pennsylvania Hospital	386	331	85.8%	97
Polyclinic Medical Center	1,441	1,188	82.4%	131
Presbyterian Medical Ctr Univ of PA Hlth System	1,473	1,101	74.7%	295
Reading Hospital and Medical Center	1,316	1,026	78.0%	263
Robert Packer Hospital	797	587	73.7%	199
Saint Francis Central Hospital	691	624	90.3%	53
Saint Francis Medical Center	1,567	1,210	77.2%	75
Saint Joseph Hospital, Inc. /Lancaster	382	242	63.4%	191
Saint Joseph Medical Center /Reading	423	368	87.0%	212
Saint Vincent Health Center	1,110	896	80.7%	185
Shadyside Hospital	2,474	2,034	82.2%	177
St. Luke's Hospital of Bethlehem	1,105	879	79.5%	184
Temple University Hospital	1,368	777	56.8%	342
Thomas Jefferson University Hospital	967	644	66.6%	138
University of Pittsburgh Medical Center	1,191	615	51.6%	149
Wilkes-Barre General Hospital /WVHCS	1,214	1,007	82.9%	243
Washington Hospital	491	447	91.0%	61
Western Pennsylvania Hospital	2,229	1,854	83.2%	101
Westmoreland Regional Hospital	447	370	82.8%	112
Williamsport Hospital & Medical Center	486	331	68.1%	162
York Hospital	1,527	1,300	85.1%	255
STATEWIDE TOTAL	51,631	38,577	74.7%	254

Risk Factors

Listed below are risk factors to in-hospital mortality in the *Pennsylvania's Guide to Coronary Artery Bypass Graft Surgery, 1994-1995*:

- as severity increases (*being an ordered categorical variable, the coefficients are as expected; that is, the higher levels are associated with an increased risk of in-hospital mortality*);
- as age increases (from approximately age 45 and up);
- for patients with pre-operative cardiogenic shock;
- for patients who underwent PTCA during the same admission as CABG;
- for patients with complicated hypertension;
- for patients undergoing dialysis;
- for females;
- for patients with heart failure; and
- for patients who had prior CABG and/or valve surgery.

Note: Detailed information on risk factors is available in the *Research Methods and Results* report.

Listed below are risk factors to in-hospital (post-surgical) length of stay in the *Pennsylvania's Guide to Coronary Artery Bypass Graft Surgery, 1994-1995*:

- AMI principal reason for admission
- *Atlas*TM ASG
 - ASG 0 / blank
 - ASG 1
 - ASG 2
 - ASG 3
 - ASG 4
- Admission Source
 - emergency room*
 - referrals*
 - transfers*
- Age
- Age-squared (divided by 1,000)
- Cardiogenic Shock (pre-operative)
- Cardiomyopathy
- Complicated Hypertension
- Concurrent PTCA
- Diabetes
 - with complications*
 - without complications*
- Dialysis
- Gender - female
- Heart Failure
- Prior CABG/Valve Surgery
- Race
 - Asian/Pacific Island*
 - black*
 - other/unknown*
 - white*
- Renal Failure
 - acute (pre-operative)*
 - chronic*
- Year

Note: Detailed information on risk factors is available in the *Research Methods and Results* report.