

Appendix III: Detailed Tables

Table 1: Findings From National Studies of Usual Source of Care Among Non-Hispanic Whites, Non-Hispanic Blacks, and Hispanics.

Study	Data Source	Subjects	Measure/Findings ^a	White	Black	Hispanic	Other
Decomposition Studies							
Zuvekas and Taliaferro (55)	MEPS 1998	All ages	Observed percentages not having a usual source of care	15.1%	20.5%	30.8%	
			Unadjusted difference with whites	----	5.4% *	15.7% *	----
			Adjusted for insurance	----	3.2% ¶	12.0% ¶	----
			Adjusted for insurance and SES	----	NA ¶	NA ¶	----
			Adjusted for all measured variables (language not included)	----	0.1% ¶	10.6% ¶	----
Waidmann and Rajan (48)	NSAF 1997-1999	All ages	Observed percentages not having a usual source of care	15.1%	20.2%	30.5%	
			Unadjusted difference with whites	----	5.0% ¶	15.4% ¶	----
			Adjusted for insurance	----	3.2% ¶	10.3% ¶	----
			Adjusted for insurance and SES	----	2.5% ¶	9.1% ¶	----
			Adjusted for insurance, SES, and citizenship	----	2.3% ¶	6.2% ¶	----
			Adjusted for all measured variables	----	0.5% ¶	2.9% ¶	----
Weinick et al. (50)	MEPS 1996	Children and adults less than 65	Observed percentages not having a usual source of care	16.2%	20.6%	31.7%	
			Unadjusted difference with whites	----	4.4% ¶	15.5% ¶	----
			Adjusted for insurance	----	4.2% ¶	11.9% ¶	----
			Adjusted for insurance and SES	----	2.4% ¶	8.4% ¶	----
			Adjusted for all measured variables (language not included)	----	1.8% ¶	6.9% ¶	----
Kirby et al. (22)	MEPS 2000	Adults 18 or older	Observed percentages not having a usual source of care	17.7%	23.8%	36.5%	
			Unadjusted difference with whites	----	6.1% **	18.8% **	----

	2001		Adjusted for insurance	----	4.0%	¶	13.0%	¶	----
			Adjusted for insurance and SES	----	2.7%	¶	11.1%	¶	----
			Adjusted for insurance, SES, and language	----	2.7%	¶	10.5%	¶	----
			Adjusted for all measured variables including language	----	0.1%	¶	6.7%	¶	----
Hadley et al. (15)	CTS 1998/99 2000/01 2003	Children and adults less than 65, income < 300% of poverty	Observed percentages not having a usual source of care	14.6%	20.5%		26.5%		40.8%
			Unadjusted difference with whites	----	5.9%	¶	11.9%	¶	26.2%
			Adjusted for insurance	----	5.4%	¶	10.4%	¶	20.0%
			Adjusted for insurance and SES	----	2.9%	¶	9.8%	¶	19.5%
			Adjusted for all measured variables	----	6.8%	¶	2.5%	¶	19.9%
Odds Ratios Studies									
Weinick and Krauss (49)	MEPS 1996	Children 17 or younger	Observed percentages not having a usual source of care	6.0%	12.5%		17.2%		----
			Unadjusted odds ratio relative to whites	----	2.2	**	3.3	**	----
			Adjusted for all measured variables except language	----	1.8	**	1.9	**	----
			Adjusted for all measured variables including language	----	1.8	**	1.4		----
Shi and Stevens (37)	MEPS 2000	Children 17 or younger	Observed percentages not having a usual source of care	6.1%	12.4%		18.6%		----
			Unadjusted odds ratio relative to whites	----	2.2	**	3.5	**	----
			Adjusted for all measured variables (language not included)	----	1.9	**	2.5	**	----
Doescher et al. (9)	CTS 1996/97	Adults 18 to 64	Observed percentages not having a usual source of care	16.1%	26.2%		25.1%		39.2%
			Unadjusted odds ratio relative to whites	----	1.9	**	1.7	**	3.4
			Adjusted for all measured variables	----	1.4	**	1.2	**	1.6

Notes: *p<.05, **p<.01
¶ Statistical tests not reported.

NSAF=National Survey of American Families.

MEPS=Medical Expenditure Panel Survey.

CTS=Community Tracking Study.

^a All odds ratios and differences are relative to whites.

Table 2: Findings From National Studies of Ambulatory Visits Among Non-Hispanic Whites, Non-Hispanic Blacks, and Hispanics.

Authors	Data Source	Subjects	Measure/Findings ^a	White	Black	Hispanic	Other		
Decomposition Studies									
Weinick et al. (50)	MEPS 1996	Children and adults less than 65	Observed percentages not having an ambulatory care visit during the year	25.2%	38.6%	40.6%			
			Unadjusted difference with whites	----	13.4%	¶	15.4%	¶	----
			Adjusted for insurance	----	13.1%	¶	12.9%	¶	----
			Adjusted for insurance and SES	----	10.3%	¶	9.6%	¶	----
			Adjusted for all measured variables (language not included)	----	9.6%	¶	6.8%	¶	----
Zuvekas and Taliaferro (55)	MEPS 1998	All ages	Observed percentages not having an ambulatory care visit during the year	23.5%	40.4%	42.4%			
			Unadjusted difference with whites	----	16.9%	*	18.9%	*	----
			Adjusted for insurance	----	15.1%	¶	15.4%	¶	----
			Adjusted for insurance and SES	----	NA	¶	NA	¶	----
			Adjusted for all measured variables (language not included)	----	9.8%	¶	6.0%	¶	----
Kirby et al. (22)	MEPS 2000, 2001	Adults 18 or older	Observed percentages not having an ambulatory care visit during the year	22.2%	34.7%	42.1%			
			Unadjusted difference with whites	----	12.6%	**	19.9%	**	----
			Adjusted for insurance	----	11.0%	¶	14.6%	¶	----
			Adjusted for insurance and SES	----	8.8%	¶	9.6%	¶	----
			Adjusted for insurance, SES, and language	----	8.8%	¶	3.0%	¶	----
Adjusted for all measured variables	----	7.3%	¶	-1.7%	¶	----			
Hargraves and Hadley	CTS 1996/97, 1998/99	Children and adults less than 65	Observed percentages not having a doctor visit during the year	22.2%	24.5%	36.2%			
			Unadjusted difference with whites	----	2.3%	*	14.0%	**	----

			Adjusted for insurance	----	0.4%	¶	8.5%	¶	----
			Adjusted for insurance and SES	----	-0.7%	¶	6.1%	¶	----
			Adjusted for all measured variables (language not included)	----	0.6%	¶	1.9%	¶	----
Hadley et al. (15)	CTS 1998/99, 2000/01, 2003	Children and adults less than 65, income < 300% of poverty	Observed percentages not having an ambulatory care visit during the year	21.0%	21.8%		26.7%		43.6%
			Unadjusted difference with whites	----	0.8%	¶	5.7%	¶	22.6%
			Adjusted for insurance	----	0.0%	¶	4.1%	¶	16.6%
			Adjusted for insurance and SES	----	-0.4%	¶	2.9%	¶	15.9%
			Adjusted for all measured variables	----	6.1%	¶	-1.0%	¶	16.0%
Odds Ratios Studies									
Shi and Stevens (37)	MEPS 2000	Children 17 or younger	Observed percentages not having an ambulatory care visit during the year	27.0%	45.8%		41.7%		
			Unadjusted odds ratio relative to whites	----	2.3	**	1.9	**	----
			Adjusted for all measured variables (language not included)	----	1.8	**	1.5	**	----
Glover et al.	NHIS 1999	Adults 18 to 64, residents of nonmetropolitan areas	Observed percentages not having an ambulatory care visit during the year	19.9%	26.9%		37.4%		
			Unadjusted odds ratio relative to whites	----	1.5	¶	2.4	¶	----
			Adjusted for all measured variables (includes language)	----	1.2		1.6	**	----
Weinick et al. (51)	MEPS 1997	All ages	Observed percentages not having an ambulatory care visit during the year	23.3%	39.2%		36.8%		47.6%
			Unadjusted odds ratio relative to whites	----	2.1	**	1.9	**	3.0
			Adjusted for all measured variables including language	----	1.9	**	1.4	**	1.6

Notes:

*p<.05, **p<.01

¶ Statistical tests not reported.

NHIS=National Health Interview Survey.

MEPS=Medical Expenditure Panel Survey.

CTS=Community Tracking Study.

^a All odds ratios and differences are relative to whites.

Table 3. Findings From National Studies of Preventive Services Among Non-Hispanic Whites, Non-Hispanic Blacks, and Hispanics.

Service/Study	Data Sources	Subjects/ Study Quality	Measure/Findings ^a	White	Black	Hispanic	Other
Pneumococcal Vaccination							
Lees et al. ^b (32)	NHIS 2000	Adults 65 or older Quality: Not Strong	Ever vaccinated	56.8%	30.5%	35.4%	24.2%
			Unadjusted odds ratio	----	0.3 **	0.4 **	0.2 **
			Adjusted odds ratio ^{c,d,h}	----	0.3 **	0.5 **	0.5 *
Hoover et al. (22)	NHIS 2001	Adults 65 or older Quality: Not Strong	Ever vaccinated	59.0%	35.4%	33.4%	
			Unadjusted odds ratio	----	0.4 **	0.3 **	----
			Adjusted odds ratio ^{c,d,f,g,h}	----	0.5 **	0.6 *	----
Influenza Vaccination							
Rangel et al. (40)	NHIS 1998	Adults 65 or older Quality: Not Strong	Vaccinated in prior winter	65.6%	45.9%	50.3%	
			Unadjusted odds ratio	----	0.4 **	0.5 **	----
			Adjusted odds ratio ^{c,d,g,h,i}	----	0.5 **	0.8	----
Lees et al. ^b (32)	NHIS 2000	Adults 65 or older Quality: Not Strong	Vaccinated in prior winter	66.6%	47.9%	60.0%	48.5%
			Unadjusted odds ratio	----	0.5 **	0.8	0.5 **
			Adjusted odds ratio ^{c,d,h}	----	0.6 **	1.0	0.9
Hebert et al. (21)	MCBS 1996	Fee-for-service Medicare beneficiaries 65 or older Quality: Strong	Vaccinated in prior winter	66.6%	43.3%	52.5%	
			Unadjusted difference	----	-23.3% **	-14.1% **	----
			Adjusted difference ^{c,f,g}	----	-14.8% **	-6.4% *	----
Schneider et al. (44)	MCBS 1996	Fee-for-service Medicare beneficiaries 65 or older Quality: Very Strong	Vaccinated in prior winter	67.1%	45.5%		
			Unadjusted difference	----	-21.6% **	----	----
			Adjusted difference ^e	----	-24.9% **	----	----
Schneider et al. (44)	MCBS 1996	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Vaccinated in prior winter	72.8%	51.2%		
			Unadjusted difference	----	-21.6% **	----	----
			Adjusted difference ^e	----	-18.6% **	----	----
Breast Cancer Screening							
Sambamoorthi et al. (42)	MEPS 1996	Women 50-64 Quality: Not Strong	Mammogram in prior 2 years	75.5%	74.8%	71.6%	
			Unadjusted odds ratio	----	1.0	0.8	----
			Adjusted odds ratio ^{c,d,f}	----	1.4	1.6	----

Jones et al. (28)	MEPS 1996	Women 40 or older Quality: Not Strong	Mammogram in prior 2 years	68.5%	68.2%	66.9%		
			Unadjusted odds ratio	----	1.0	0.9	----	
			Adjusted odds ratio ^{c,d,f,g}	----	1.3 *	1.4 *	----	
Lees et al. ^b (32)	NHIS 2000	Women 40 or older Quality: Not Strong	Mammogram in prior 2 years	66.7%	59.8%	59.8%	52.4%	
			Unadjusted odds ratio	----	0.7 **	0.7 **	0.6 **	
			Adjusted odds ratio ^{c,d,h}	----	1.1	0.9	1.1	
Schneider et al. (35)	HEDIS 1997	Women 65-70 in Medicare managed care Quality: Very Strong	Mammogram in prior year	70.9%	62.9%			
			Unadjusted difference	----	-8.0% **	----	----	
			Adjusted difference ^{c,g,i}	----	-1.7% ¶	----	----	
Trivedi et al. (42)	HEDIS 1997	Women 65-69 in Medicare managed care Quality: Very Strong	Mammogram in prior 2 years	74%	69%			
			Unadjusted difference	----	-5% **	----	----	
			Adjusted difference ^{c,g,i}	----	0% ¶	----	----	
Trivedi et al. (42)	HEDIS 2003	Women 65-69 in Medicare managed care Quality: Very Strong	Mammogram in prior 2 years	77%	75%			
			Unadjusted difference	----	-2% **	----	----	
			Adjusted difference ^{c,g,i}	----	3% ¶	----	----	
Cervical Cancer Screening								
Sambamoorthi et al. (42)	MEPS 1996	Women 21-64 Quality: Not Strong	Pap test in prior 2 years	80.0%	85.3%	74.7%		
			Unadjusted odds ratio	----	1.5 **	0.7 **	----	
			Adjusted odds ratio ^{c,d,f}	----	2.1 **	1.2	----	
Colorectal Cancer Screening								
James et al. (25)	NHIS 2000	Adults 50 or older Quality: Not Strong	FOBT in prior year, sigmoidoscopy or proctoscopy in prior 5 years, or colonoscopy in prior 10 years	37.7%	28.8%	22.4%		
			Unadjusted odds ratio	----	0.7 **	0.5 **	----	
			Adjusted odds ratio ^{c,d,f,g}	----	0.8 **	0.7 **	----	
Lees et al. ^b (32)	NHIS 2000	Adults 50 or older Quality: Not Strong	FOBT in prior year or sigmoidoscopy, proctoscopy, or colonoscopy in prior 5 years	39.6%	32.6%	30.4%	19.1%	
			Unadjusted odds ratio	----	0.7 **	0.7 **	0.4 **	
			Adjusted odds ratio ^{c,d,h}	----	1.0	0.9	0.6 **	
Shih et al. (50)	NHIS 2003	Adults 65 or older Quality: Not Strong	Ever sigmoidoscopy, proctoscopy, or colonoscopy	50%	40%	33%		
			Unadjusted odds ratio	----	0.7 **	0.5 **	----	

				Adjusted odds ratio ^{c,d,f,g,h}	----	0.9	0.8 *	----
Blood Pressure Screening								
Sambamoorthi et al. (42)	MEPS 1996	Adults 21-64 Quality: Not Strong	BP check in prior 2 years	94.0%	93.8%	88.9%		
				Unadjusted odds ratio	----	1.0	0.5 **	----
				Adjusted odds ratio ^{c,d,f}	----	1.3	1.0	----
Stewart and Silverstein ^b (53)	MEPS 1996	Adults 21 or older Quality: Not Strong	BP check in prior 2 years	90.8%	89.4%	77.0%		85.2%
				Unadjusted odds ratio	----	0.9	0.3 **	0.6 **
				Adjusted odds ratio ^{c,d,g}	----	1.1	0.8	1.0
Cholesterol Screening								
Sambamoorthi et al. (42)	MEPS 1996	Adults 45-64 Quality: Not Strong	Cholesterol test in prior 5 years	84.0%	88.5%	79.7%		
				Unadjusted odds ratio	----	1.5	0.8	----
				Adjusted odds ratio ^{c,d,f}	----	1.7	1.3	----
Stewart and Silverstein ^b (53)	MEPS 1996	Adults 21 or older Quality: Not Strong	Cholesterol test in prior 5 years	71.3%	72.5%	50.7%		71.5%
				Unadjusted odds ratio	----	1.1	0.4 **	1.0
				Adjusted odds ratio ^{c,d,g}	----	1.7 **	1.1	1.7 **

Notes:

*p<.05, **p<.01.

¶ statistical tests not reported.

NHIS=National Health Interview Survey.

MEPS=Medical Expenditure Panel Survey.

MCBS=Medicare Current Beneficiary Survey.

HEDIS=Health Plan Employer Data and Information Set.

FOBT=Fecal occult blood test.

BP=Blood pressure.

^a All odds ratios and differences are relative to whites.

^b In Lees et al. the "Hispanic" column is for English-speaking Hispanics and the "Other" column is for Spanish-speaking Hispanics. In Stewart and Silverstein the "Hispanic" column is for Mexican-Americans and the "Other" column is for other Hispanics.

^c Adjusted for age, sex (if appropriate), measures of socioeconomic status, insurance, and (in all but one study) relevant health status measures.

^d Additionally adjusted for having a usual source of care and (in some of the studies) for utilization measures such as number of visits.

^e Adjustment performed using propensity score weights that accounted for age, sex, measures of socioeconomic status, marital status, relevant health status measures, region, and residence in a metropolitan area.

^f Additionally adjusted for marital status and/or employment status.

^g Additionally adjusted for region and/or residence in a metropolitan area.

^h Additionally adjusted for nativity and/or time in the U.S.

ⁱ Additionally adjusted for language proficiency.

^j Additionally adjusted for health plan fixed effects.

The studies by Rangel et al., Sambamoorthi et al., and Jones et al. are also adjusted for access measures, which limits interpretation of adjusted differences (see text).

Table 4. Findings From a Study in 12 Large Metropolitan Areas of Quality of Care for Non-Hispanic Whites, Non-Hispanic Blacks, and Hispanics (1).^a

Measure/Findings^b	White	Black	Hispanic
Overall Care			
Observed percentage of times patients received recommended care: All indicators ^c	54.6%	56.4%	55.8%
Unadjusted difference	----	1.9% ¶	1.3% ¶
Adjusted difference ^d	----	3.2% **	2.7% *
By Type of Care			
Observed percentage of times patients received recommended care: Acute care	53.5%	51.4%	53.9%
Unadjusted difference	----	-2.0% ¶	0.4% ¶
Adjusted difference ^d	----	0.5%	1.9%
Observed percentage of times patients received recommended care: Chronic care	55.8%	61.5%	55.0%
Unadjusted difference	----	5.7% ¶	-0.8% ¶
Adjusted difference ^d	----	5.3% *	0.3%
Observed percentage of times patients received recommended care: Preventive care	54.4%	55.7%	57.2%
Unadjusted difference	----	1.3% ¶	2.8% ¶
Adjusted difference ^d	----	2.6% *	3.7% **
By Function of Services			
Observed percentage of times patients received recommended care: Screening	51.3%	52.1%	57.6%
Unadjusted difference	----	0.8% ¶	6.3% ¶
Adjusted difference ^d	----	1.0%	4.2% *
Observed percentage of times patients received recommended care: Diagnosis	55.7%	56.1%	55.0%
Unadjusted difference	----	0.4% ¶	-0.6% ¶
Adjusted difference ^d	----	2.2%	1.2%
Observed percentage of times patients received recommended care: Treatment	57.4%	61.9%	53.0%
Unadjusted difference	----	4.4% ¶	-4.4% ¶

Adjusted difference ^d	----	7.3%	**	1.1%
Observed percentage of times patients received recommended care:				
Follow-up	59.6%	59.0%		58.4%
Unadjusted difference	----	-0.5%	¶	-1.2% ¶
Adjusted difference ^d	----	2.0%		-0.2%

Notes: *p<.05, **p<.01

¶ Statistical tests not reported.

^a All results are from Asch et al. (2006). The subjects were adults who made at least one visit to a health care provider during a two-year period, and the data were from surveys and medical records abstractions conducted in the 12 study communities.

^b All differences are relative to whites.

^c The study assessed 439 quality indicators, and individual patients were eligible for subsets of these indicators based on their age, sex, and conditions.

^d Adjusted for age, sex, education, income, insurance, self-rated health status, number of acute conditions, number of chronic conditions, and metropolitan area fixed effects.

Table 5: Findings From National Studies of Quality of Care Among Non-Hispanic Whites, Non-Hispanic Blacks, and Hispanics in Medicare Managed Care.

Concept/Study	Data Source	Subjects	Measure/Findings ^a				
				White	Black	Hispanic	
β-blocker After Myocardial Infarction							
Schneider et al. (35)	HEDIS 1997	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with β-blocker after hospitalization for AMI	73.8%	64.1%		
			Unadjusted difference with whites	----	-9.7%	**	NA
			Adjusted for SES and urban residence		-7.7%	**	
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c,d,e}	----	-4.3%	*	NA
Trivedi et al. (42)	HEDIS 1997	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with β-blocker after hospitalization for AMI	76%	64%		
			Unadjusted difference with whites	----	-12%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-4%	¶	NA
Trivedi et al. (42)	HEDIS 2002	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with β-blocker after hospitalization for AMI	94%	93%		
			Unadjusted difference with whites	----	-1%		NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-2%	¶	NA
Cardiovascular Care: LDL-C Testing							
Trivedi et al. (42)	HEDIS 1998	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C test after hospitalization for AMI or coronary revascularization	58%	40%		
			Unadjusted difference with whites	----	-18%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-11%	¶	NA
Trivedi et al. (42)	HEDIS 2003	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C test after hospitalization for AMI or coronary revascularization	84%	75%		
			Unadjusted difference with whites	----	-9%	**	NA

			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-6%	¶	NA
Cardiovascular Care: LDL-C Control							
Trivedi et al. (42)	HEDIS 1999	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C level <130 mg/dl after hospitalization for AMI or coronary revascularization	47%	33%		
			Unadjusted difference with whites	----	-14%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-7%	¶	NA
Trivedi et al. (42)	HEDIS 2002	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C level <130 mg/dl after hospitalization for AMI or coronary revascularization	68%	51%		
			Unadjusted difference with whites	----	-17%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-9%	¶	NA
Trivedi et al. (43)	HEDIS 2002-2004	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C level <130 mg/dl after hospitalization for AMI or coronary revascularization	71.6%	57.2%		
			Unadjusted difference with whites	----	-14.4%	**	NA
			Adjusted for all measured variables (including plan random effects) ^{b,d,e}	----	-11.5%	¶	NA
Diabetes Care: LDL-C Testing							
Trivedi et al. (42)	HEDIS 1999	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C test among diabetics	70%	61%		
			Unadjusted difference with whites	----	-9%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-7%	¶	NA
Trivedi et al. (42)	HEDIS 2003	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C test among diabetics	94%	92%		
			Unadjusted difference with whites	----	-2%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-2%	¶	NA
Diabetes Care: LDL-C Control							
Trivedi et al.	HEDIS	Managed care Medicare beneficiaries 65 or older	Observed percentages with LDL-C level <130 mg/dl among diabetics	36%	23%		

(42)	1999	Quality: Very Strong	Unadjusted difference with whites	----	-13%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-7%	¶	NA
Trivedi et al. (42)	HEDIS 2003	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C level <130 mg/dl among diabetics	73%	66%		
			Unadjusted difference with whites	----	-7%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-7%	¶	NA
Trivedi et al. (43)	HEDIS 2002-2004	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with LDL-C level <130 mg/dl among diabetics	72.2%	62.9%		
			Unadjusted difference with whites	----	-9.3%	**	NA
			Adjusted for all measured variables (including plan random effects) ^{b,d,e}	----	-7.8%	¶	NA
Diabetes Care: HbA_{1c} Testing							
Trivedi et al. (42)	HEDIS 1999	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with HbA _{1c} test among diabetics	75%	71%		
			Unadjusted difference with whites	----	-4%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-2%	¶	NA
Trivedi et al. (42)	HEDIS 2003	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with HbA _{1c} test among diabetics	90%	88%		
			Unadjusted difference with whites	----	-2%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-1%	¶	NA
Diabetes Care: HbA_{1c} Control							
Trivedi et al. (42)	HEDIS 1999	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with HbA _{1c} level <9.5% among diabetics	71%	67%		
			Unadjusted difference with whites	----	-4%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-4%	¶	NA
Trivedi et al. (42)	HEDIS 2002	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with HbA _{1c} level <9.5% among diabetics	82%	75%		
			Unadjusted difference with whites	----	-7%	**	NA

			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-4%	¶	NA
Trivedi et al. (43)	HEDIS 2002-2004	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with HbA1c level <9.5% or 9.0% among diabetics	80.2%	72.2%		
			Unadjusted difference with whites	----	-8.0%	**	NA
			Adjusted for all measured variables (including plan random effects) ^{b,d,e}	----	-7.0%	¶	NA
Diabetes Care: Eye Exams							
Schneider et al. (35)	HEDIS 1997	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with a retinal examination by eye care professional in prior year, among diabetics	50.4%	43.6%		
			Unadjusted difference with whites	----	-6.8%	*	NA
			Adjusted for SES and urban residence		-4.3%		
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c,d,e}	----	-2.5%	**	NA
Trivedi et al. (42)	HEDIS 1999	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with a retinal examination by eye care professional in prior year, among diabetics	64%	55%		
			Unadjusted difference with whites	----	-9%	**	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	-5%	¶	NA
Trivedi et al. (42)	HEDIS 2003	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with a retinal examination by eye care professional in prior year, among diabetics	72%	70%		
			Unadjusted difference with whites	----	-2%	*	NA
			Adjusted for all measured variables (including health plan fixed effects) ^{b,c}	----	1%	¶	NA
Blood Pressure Control							
Trivedi et al. (43)	HEDIS 2002-2004	Managed care Medicare beneficiaries 65 or older Quality: Very Strong	Observed percentages with SBP<140 and DBP <90 among hypertensives	60.2%	53.4%		
			Unadjusted difference with whites	----	-6.8%	**	NA
			Adjusted for all measured variables (including plan random effects) ^{b,d,e}	----	-6.2%	¶	NA

Notes:

* $p < .05$, ** $p < .01$

¶ Statistical tests not reported.

HEDIS=Health Plan Employer Data and Information Set.

AMI=Acute myocardial infarction.

LDL-C=Low density lipoprotein cholesterol.

HbA1c = Glycosylated hemoglobin.

SBP=Systolic blood pressure.

DBP=Diastolic blood pressure.

^a All differences are relative to whites.

^b Adjusted for age, sex, dual Medicaid eligibility, and zip-code based measures of socioeconomic status.

^c Additionally adjusted for urban (vs. rural) location of health plan.

^d Additionally adjusted for region.

^e Additionally adjusted for plan characteristics including type, size, age, percentage of blacks, and ownership.

Table 6: Findings From National Studies of Quality of Inpatient Care for Acute Coronary Syndromes, Myocardial Infarction, and Congestive Heart Failure Among Non-Hispanic Whites, Non-Hispanic Blacks, and Hispanics.

Condition/ Study	Data Source	Subjects	Measure/Findings ^a	White	Black	Hispanic
High-Risk NSTEMI ACS						
Sonel et al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving coronary angiography within 48 hours	49.0%	36.3%	
			Unadjusted odds ratio relative to whites	----	0.6 **	----
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	0.7 **	----
Cohen et al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving coronary angiography within 48 hours	55.5%		48.7%
			Unadjusted odds ratio relative to whites	----	----	0.8 **
			Adjusted for all measured variables ^{b,c,d}	----	----	NA
Sonel et al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving aspirin within 24 hours	90.9%	92.0%	
			Unadjusted odds ratio relative to whites	----	1.2 **	----
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	1.2 **	----
Cohen et al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving aspirin within 24 hours	92.7%		93.1%
			Unadjusted odds ratio relative to whites	----	----	1.1
			Adjusted for all measured variables ^{b,c,d}	----	----	1.2
Sonel et al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving heparin within 24 hours	83.1%	78.0%	
			Unadjusted odds ratio relative to whites	----	0.7 **	----

			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	0.9 *	----
Cohen at al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving heparin within 24 hours	90.5%		86.0%
			Unadjusted odds ratio relative to whites	----	----	0.6 **
			Adjusted for all measured variables ^{b,c,d}	----	----	1.0
Sonel at al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving β -blocker within 24 hours	77.8%	76.5%	
			Unadjusted odds ratio relative to whites	----	0.9 *	----
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	1.0	----
Cohen at al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving β -blocker within 24 hours	82.3%		80.2%
			Unadjusted odds ratio relative to whites	----	----	0.9 **
			Adjusted for all measured variables ^{b,c,d}	----	----	1.0
Sonel at al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving GP IIb/IIIa inhibitor within 24 hours	35.7%	29.2%	
			Unadjusted odds ratio relative to whites	----	0.7 **	----
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	0.8 **	----
Cohen at al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving GP IIb/IIIa inhibitor within 24 hours	40.1%		32.9%
			Unadjusted odds ratio relative to whites	----	----	0.7 **
			Adjusted for all measured variables ^{b,c,d}	----	----	0.9
Sonel at al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving aspirin at hospital discharge	89.7%	87.7%	
			Unadjusted odds ratio relative to whites	----	0.8 **	----

			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	1.0	----
Cohen at al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving aspirin at hospital discharge 91.4%	-----	-----	89.3%
			Unadjusted odds ratio relative to whites	----	----	0.8 **
			Adjusted for all measured variables ^{b,c,d}	----	----	1.0
Sonel at al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving ACE-inhibitor at hospital discharge 59.2%	-----	65.8%	-----
			Unadjusted odds ratio relative to whites	----	1.3 **	----
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	1.2 **	----
Cohen at al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving ACE-inhibitor at hospital discharge 61.0%	-----	-----	64.7%
			Unadjusted odds ratio relative to whites	----	----	1.2 **
			Adjusted for all measured variables ^{b,c,d}	----	----	1.2 **
Sonel at al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving β -blocker at hospital discharge 83.0%	-----	81.2%	-----
			Unadjusted odds ratio relative to whites	----	0.9 **	----
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	1.0	----
Cohen at al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving β -blocker at hospital discharge 86.1%	-----	-----	83.8%
			Unadjusted odds ratio relative to whites	----	----	0.8 **
			Adjusted for all measured variables ^{b,c,d}	----	----	1.0
Sonel at al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving a statin at discharge 74.9%	-----	70.9%	-----
			Unadjusted odds ratio relative to whites	----	0.8 **	----

			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	0.8	**	----
Cohen at al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving a statin at discharge	68.2%			67.8%
			Unadjusted odds ratio relative to whites	----	----		1.0
			Adjusted for all measured variables ^{b,c,d}	----	----		1.1
AMI							
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Men with AMI treated in NRMI hospitals Quality: Strong	Observed percentages receiving aspirin within 24 hours	84.2%	84.5%		
			Unadjusted odds ratio relative to whites	----	1.0	¶	----
			Adjusted for all measured variables ^b	----	0.9	**	----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Women with AMI treated in NRMI hospitals Quality: Strong	Observed percentages receiving aspirin within 24 hours	78.8%	79.3%		
			Unadjusted odds ratio relative to whites	----	1.0	¶	----
			Adjusted for all measured variables ^b	----	0.9	¶	----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Men with AMI treated in NRMI hospitals Quality: Strong	Observed percentages receiving β -blocker within 24 hours	79.7%	80.0%		
			Unadjusted odds ratio relative to whites	----	1.0	¶	----
			Adjusted for all measured variables ^b	----	1.0		----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Women with AMI treated in NRMI hospitals Quality: Strong	Observed percentages receiving β -blocker within 24 hours	76.0%	75.6%		
			Unadjusted odds ratio relative to whites	----	1.0	¶	----
			Adjusted for all measured variables ^b	----	0.9	¶	----
Vaccarino at al.	NRMI 1, 2, 3, and 4	Men with AMI treated in NRMI hospitals with full cardiovascular capability	Observed percentages receiving coronary angiography during hospitalization	65.4%	61.1%		

(47)	2000-2002 for rates 1994-2002 for odds ratios	Quality: Strong	Unadjusted odds ratio relative to whites Adjusted for all measured variables ^b	---- ----	0.8 ¶ 0.6 **	---- ----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Men with AMI treated in NRMI hospitals with full cardiovascular capability Quality: Strong	Observed percentages receiving coronary angiography during hospitalization Unadjusted odds ratio relative to whites Adjusted for all measured variables ^b	52.7% ---- ----	51.1% 0.9 ¶ 0.7 ¶	---- ---- ----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Men with STEMI treated in NRMI hospitals Quality: Strong	Observed percentages receiving reperfusion therapy within 24 hours Unadjusted odds ratio relative to whites Adjusted for all measured variables ^b	86.8% ---- ----	80.7% 0.6 ¶ 0.6 **	---- ---- ----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Women with STEMI treated in NRMI hospitals Quality: Strong	Observed percentages receiving reperfusion therapy within 24 hours Unadjusted odds ratio relative to whites Adjusted for all measured variables ^b	82.6% ---- ----	78.8% 0.7 ¶ 0.6 ¶	---- ---- ----
Bradley at al. (4)	NRMI 3 and 4 1999-2002	Adults with STEMI treated in NRMI hospitals Quality: Strong	Observed time to fibrinolytic therapy among those receiving it (min.) Unadjusted difference with whites Adjusted for insurance Adjusted for all patient variables Adjusted for patient and hospital variables (including hospital random effects) ^{b,c}	33.8 ---- ---- ---- ----	41.1 7.3 ** 6.3 ** 5.3 ** 5.1 **	36.1 2.3 ** 1.6 ** 1.4 ** 1.3 **
Bradley at al. (4)	NRMI 3 and 4 1999-2002	Adults with STEMI treated in NRMI hospitals Quality: Strong	Observed time to primary PCI among those receiving it (min.) Unadjusted difference with whites Adjusted for insurance	103.4 ---- ----	122.3 18.9 ** 12.7 **	114.8 11.4 ** 3.3 *

			Adjusted for all patient variables		9.1	**	4.0	**
			Adjusted for patient and hospital variables (including hospital random effects) ^{b,c}	----	8.7	**	3.7	**
Congestive Heart Failure								
Rathore at al. (31)	National Heart Failure Project 1998-1999	Fee-for-service Medicare beneficiaries hospitalized with CHF Quality: Strong	Observed percentages with evaluation of left ventricular ejection fraction	66.6%	67.8%			
			Unadjusted odds ratio relative to whites	----	1.1		----	
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	1.0		----	
Rathore at al. (31)	National Heart Failure Project 1998-1999	Fee-for-service Medicare beneficiaries hospitalized with CHF Quality: Strong	Observed percentages receiving ACE-inhibitor at hospital discharge	73.8%	81.0%			
			Unadjusted odds ratio relative to whites	----	1.5	**	----	
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	3.2	**	----	
Rathore at al. (31)	National Heart Failure Project 1998-1999	Fee-for-service Medicare beneficiaries hospitalized with CHF Quality: Strong	Observed percentages receiving ACE-inhibitor or ARB at hospital discharge	82.5%	85.7%			
			Unadjusted odds ratio relative to whites	----	1.3		----	
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	1.2		----	

Notes:

*p<.05, **p<.01

¶ Statistical tests not reported.

NSTE ACS=Non-ST-Elevation Acute Coronary Syndromes.

AMI=Acute myocardial infarction.

PCI=Percutaneous coronary intervention (e.g., balloon angioplasty).

STEMI=ST-segment elevation myocardial infarction.

NRMI=National Registry of Myocardial Infarction.

ACE-inhibitor=Angiotensin converting enzyme inhibitor.

ARB=Angiotensin receptor blocker.

^a All odds ratios are relative to whites.

- ^b Adjusted for age, sex, insurance, medical history and detailed clinical characteristics, and hospital characteristics that vary across studies and include teaching status and cardiac procedure facilities (in all studies), ownership, bed size, and urban (vs. rural) location.
- ^c Additionally adjusted for region.
- ^d Additionally adjusted for physician characteristics.

Table 7: Findings From National Studies of the Use of Invasive Procedures During Hospital Admission for Acute Coronary Syndromes or Myocardial Infarction Among Non-Hispanic Whites, Non-Hispanic Blacks, and Hispanics.

Condition/ Study	Data Source	Subjects	Measure/Findings ^a	White	Black	Hispanic
High-Risk NSTEMI ACS						
Sonel et al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving coronary angiography during hospitalization	67.3%	57.7%	
			Unadjusted odds ratio relative to whites	----	0.7	**
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	0.7	**
Cohen et al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving coronary angiography during hospitalization	75.9%		73.5%
			Unadjusted odds ratio relative to whites	----	----	0.9 **
			Adjusted for all measured variables ^{b,c,d}	----	----	NA
Sonel et al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving PCI during hospitalization	38.0%	26.4%	
			Unadjusted odds ratio relative to whites	----	0.6	**
			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	0.7	**
Cohen et al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving PCI during hospitalization	46.4%		39.6%
			Unadjusted odds ratio relative to whites	----	----	0.8 **
			Adjusted for all measured variables ^{b,c,d}	----	----	NA
Sonel et al. (39)	CRUSADE Registry 2002-2003	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving CABG surgery during hospitalization	12.1%	8.1%	
			Unadjusted odds ratio relative to whites	----	0.6	**

			Adjusted for all measured variables (including hospital random effects) ^{b,c,d}	----	0.8	**	----
Cohen at al. (7)	CRUSADE Registry 2001-2004	Adults with NSTEMI ACS treated in CRUSADE hospitals Quality: Strong	Observed percentages receiving CABG surgery during hospitalization Unadjusted odds ratio relative to whites Adjusted for all measured variables ^{b,c,d}	14.8% ---- ----			14.0% 0.9 NA
AMI							
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Men with AMI treated in NRMI hospitals with full cardiovascular capability Quality: Strong	Observed percentages receiving PCI during hospitalization, among ideal candidates for angiography Unadjusted odds ratio relative to whites Adjusted for all measured variables ^b	30.5% ---- ----	26.3%	0.8 ¶ **	---- ---- ----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Women with AMI treated in NRMI hospitals with full cardiovascular capability Quality: Strong	Observed percentages receiving PCI during hospitalization, among ideal candidates for angiography Unadjusted odds ratio relative to whites Adjusted for all measured variables ^b	23.5% ---- ----	21.2%	0.8 ¶ ¶	---- ---- ----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates 1994-2002 for odds ratios	Men with AMI treated in NRMI hospitals with full cardiovascular capability Quality: Strong	Observed percentages receiving CABG surgery during hospitalization, among ideal candidates for angiography Unadjusted odds ratio relative to whites Adjusted for all measured variables ^b	18.4% ---- ----	13.9%	0.7 ¶ **	---- ---- ----
Vaccarino at al. (47)	NRMI 1, 2, 3, and 4 2000-2002 for rates	Women with AMI treated in NRMI hospitals with full cardiovascular capability Quality: Strong	Observed percentages receiving CABG surgery during hospitalization, among ideal candidates for angiography Unadjusted odds ratio relative to whites	12.3% ----	10.4%	0.8 ¶	----

1994-2002 for
odds ratios

Adjusted for all measured variables^b

0.7 ¶

Notes:

*p<.05, **p<.01

¶ Statistical tests not reported.

NSTE ACS=Non-ST-Elevation Acute Coronary Syndromes.

AMI=Acute myocardial infarction.

PCI=Percutaneous coronary intervention (e.g., balloon angioplasty).

CABG=Coronary artery bypass graft.

NRMI=National Registry of Myocardial Infarction.

ARB=Angiotensin receptor blocker.

^a All odds ratios are relative to whites.

^b Adjusted for age, sex, insurance, medical history and detailed clinical characteristics, and hospital characteristics that vary across studies and include teaching status and cardiac procedure facilities (in all studies), ownership, bed size, and urban (vs. rural) location.

^c Additionally adjusted for region.

^d Additionally adjusted for physician characteristics.