Supplemental Digital Appendix 1

Risk of Bias for 15 Included Studies Comparing Patient Outcomes for General Internal Medicine Teaching and Non-teaching Services, Published 1991–2011*

Study Author, year[ref]	Study type	Allocation sequence random?	Allocation concealed?	Baseline outcomes similar?	Baseline character-istics similar?	Plan for missing data/ incomplete measurement of primary outcome (outreach to find other site readmissions)?	Outcomes assessed blind to interven-tion?	No contami-nation?	Free of selective outcome reporting risk?	No other bias? (including whether study was from single institution)	EPOC Group Risk of Bias criteria total (9 max)
Simmer, 1991[17]	RCT	Yes	Yes	Unclear	Yes	Unclear	Yes	Unclear	Yes	No	5
Dynan, 2009[18]	Cohort	No	No	Unclear	Yes	Unclear	Yes	Unclear	Yes	No	3
Everett, 2007[19]	Retro cohort	No	No	Unclear	No	Unclear	Yes	Unclear	Yes	No	2
Hackner, 2001[20]	Retro cohort	No	No	Unclear	No	Unclear	Yes	Unclear	Yes	No	2
Halasyamani, 2005[21]	Retro cohort	No	No	Unclear	No	Unclear	Yes	Unclear	Yes	No	2
Horwitz, 2007[22]	Retro cohort	No	No	Unclear	No	Unclear	Yes	Unclear	Yes	No	2
Khaliq, 2007[23]	Cohort	No	No	Unclear	Yes	Unclear	Yes	Unclear	Yes	No	3
Myers, 2006[24]	Cohort	No	No	Unclear	Yes	Unclear	Yes	Unclear	Yes	No	3
O'Connor, 2009[25]	Retro cohort	No	No	Unclear	No	Unclear	Yes	Unclear	Yes	No	2
O'Connor, 2011[26]	Cohort	No	No	Unclear	No	Unclear	Yes	Unclear	Yes	No	2

Study Author, year[ref]	Study type	Allocation sequence random?	Allocation concealed?	Baseline outcomes similar?	Baseline character-istics similar?	Plan for missing data/ incomplete measurement of primary outcome (outreach to find other site readmissions)?	Outcomes assessed blind to interven-tion?	No contami-nation?	Free of selective outcome reporting risk?	No other bias? (including whether study was from single institution)	EPOC Group Risk of Bias criteria total (9 max)
Palacio, 2009[27]	Retro cohort	Unclear	No	Unclear	Yes	Unclear	Yes	Unclear	Yes	No	3
Roy, 2008[28]	Retro cohort	No	No	Unclear	Yes	Unclear	Yes	Unclear	Yes	No	3
Singh, 2011[29]	Retro cohort	No	No	Unclear	Yes	Yes	Yes	Unclear	Yes	No	4
Stein, 1998[30]	Retro cohort	No	No	Unclear	No	Unclear	Yes	Unclear	Yes	No	2
Van Rhee, 2002[31]	Retro cohort	No	No	Unclear	Yes	No	Yes	Unclear	Yes	No	3

*All studies were single institution except O'Connor 2009, which had data from two affiliated hospitals (both of which had teaching and non-teaching services).
RCT indicates randomized controlled trial; retro, retrospective; EPOC, Cochrane Effective Practice and Organisation of Care Group.

Supplemental Digital Appendix 2

Differences in Baseline Characteristics for Included Studies Comparing Patient Outcomes for General Internal Medicine Teaching and Non-teaching Services

Study	Age*		Gender: male		Ethnicity		Insurance status		Admissions through emergency department		Mean Charlson comorbidity index score**		DRG case-mix index	
	Teaching	Non-teaching	Teaching	Non-teaching	Teaching	Non-teaching	Teaching	Non-teaching	Teaching	Non-teaching	Teaching	Non-teaching	Teaching	Non-teaching
Simmer, 1991[17]	61.7	61.2	51.4%	56.4%	24.1% white, 72.2% black	21.8% white, 75.8% black	Not reported (NR)	NR	NR	NR	NR	NR	1.09	1.18
Dynan, 2009[18]	53.1	53.6	51.9%	47.3%	43.0% white, 51.8% black	43.2% white, 52.3% black	39.5% Medicare 29.1% Medicaid	36.5% Medicare 29.4% Medicaid	85.1%	89.0%	NR	NR	NR	NR
Everett, 2007[19]	58.6	64.0	44.3%	42.1%	59.4% white, 34.1% black	59.3% white, 24.8% black	58.8% Medicare 7.7% Medicaid	67.9% Medicare 6.5% Medicaid	NR	NR	NR	NR	NR	NR
Hackner, 2001[20]	52.8	56.4	41.0%	50.2%	63.1% white, 28.3% black	62.2% white, 21.6% black	NR	NR	NR	NR	NR	NR	NR	NR
Halasyamani, 2005[21]	62.6	68.2	46.4%	42.1%	NR	NR	53.6% Medicare 3.0% Medicaid	65.0% Medicare 11.8% Medicaid	86.6%	75.2%	NR	NR	NR	NR

Study	Age* Teaching	Age* Non-teaching	Gender: male Teaching	Gender: male Non-teaching	Ethnicity Teaching	Ethnicity Non-teaching	Insurance status Teaching	Insurance status Non-teaching	Admissions through emergency department Teaching	Admissions through emergency department Non-teaching	Mean Charlson comorbidity index score** Teaching	Mean Charlson comorbidity index score** Non-teaching	DRG case-mix index Teaching	DRG case-mix index Non-teaching
Horwitz, 2007[22]														
a: 2002–2003 cohort	62.9	62.5	50.9%	47.0%	70.8% white, 19.6% black	67.7% white, 22.2% black	52.8% Medicare 12.4% Medicaid	53.3% Medicare 13.3% Medicaid	65.8%	87.0%	Deyo score: 0: 52.7% 1:25.0% 2:12.4% ≥3: 9.8%	Deyo score: 0: 55.1% 1: 24.6% 2: 10.7% ≥3: 9.5%	NR	NR
b: 2003–2004 cohort	62.7	62.9	49.8%	43.6%	69.5% white, 20.4% black	67.8% white, 22.2% black	53.7% Medicare 12.9% Medicaid	53.9% Medicare 12.6% Medicaid	70.4%	91.0%	Deyo score: 0: 49.6% 1: 27.0% 2: 13.3% ≥3: 10.1%	Deyo score: 0: 50.6% 1: 26.9% 2: 12.7% ≥3: 9.8%	NR	NR
Khaliq, 2007[23]	67.1	67.5	50.0%	46.4%	NR	NR	66.9% Medicare 4.7% Medicaid	67.8% Medicare 5.6% Medicaid	NR	NR	6.7	6.7	NR	NR
Myers, 2006[24]	50.1	50.3	36.6%	42.5%	30.2% white, 65.3% black	15.9% white, 77.9% black	NR	NR	NR	NR	NR	NR	NR	NR

Study	Age* Teaching	Age* Non-teaching	Gender: male Teaching	Gender: male Non-teaching	Ethnicity Teaching	Ethnicity Non-teaching	Insurance status Teaching	Insurance status Non-teaching	Admissions through emergency department Teaching	Admissions through emergency department Non-teaching	Mean Charlson comorbidity index score** Teaching	Mean Charlson comorbidity index score** Non-teaching	DRG case-mix index Teaching	DRG case-mix index Non-teaching
O'Connor, 2009[25]	64.0 (49.0-80.0)	69.0 (51.0-82.0)	50.4%	44.2%	72.1% white, 23.2% black	74.3% white, 20.3% black	43.1% Medicare 13.0% Medicaid	44.4% Medicare 9.2% Medicaid	NR	NR	0: 23.7% 1-2: 24.3% 3-5: 27.3% >5: 24.7 % 9.0 (6.0-12.0)[†]	0: 29.8% 1-2: 28.0% 3-5 :23.5% >5: 18.8% 8.0 (6.0-11.0)[†]	NR	NR
O'Connor, 2011[26]														
a: 2007–2008 cohort	61 (47-76)	63 (48-78)	50.6%	49.6%	NR	NR	39.0% Medicare 12.6% Medicaid	43.0% Medicare 11.7% Medicaid	NR	NR	4.0 (1.0-7.0)[†]	3.0 (1.0-7.0)[†]	NR	NR
b: 2008–2009 cohort	61 (46-77)	63 (48-78)	53.1%	48.8%	NR	NR	41.2% Medicare 13.0% Medicaid	44.4% Medicare 10.5% Medicaid	NR	NR	3.0 (1.0-6.0)[†]	3.0 (1.0-6.0)[†]	NR	NR
Palacio, 2009[27]	56.7	58.2	48.8%	45.6%	38.2% white, 58.4% black	41.4% white, 55.2% black	43.7% Medicare 15.8% Medicaid	48.5% Medicare 13.5% Medicaid	NR	NR	1.14 ± 1.02[‡]	1.04 ± 0.94[‡]	NR	NR

Study	Age* Teaching	Age* Non-teaching	Gender: male Teaching	Gender: male Non-teaching	Ethnicity Teaching	Ethnicity Non-teaching	Insurance status Teaching	Insurance status Non-teaching	Admissions through emergency department Teaching	Admissions through emergency department Non-teaching	Mean Charlson comorbidity index score** Teaching	Mean Charlson comorbidity index score** Non-teaching	DRG case-mix index Teaching	DRG case-mix index Non-teaching
Roy, 2008[28]	18–44: 18.2%; 45–64: 31.9%; 65+: 49.9%	18–44: 19.1%; 45–64: 35.5%; 65+: 45.5%	40.0%	42.3%	59.3% white, 23.5% black	57.3% white, 24.0% black	43.8% Medicare 11.7% Medicaid	41.9% Medicare 14.4% Medicaid	NR	NR	0: 24.9% 1: 21.1% 2: 16.5% ≥3: 37.6%	0: 27.2% 1: 22.6% 2: 16.2% ≥3: 34.0%	1.2	1.1
Singh, 2011[29]	57.0	56.8	44.9%	45.9%	58.9% white, 36.7% black	59.1% white, 36.5% black	47.8% Medicare 33.0% Medicaid /others	46.8% Medicare 32.9% Medicaid /others	80.7%	76.6%	0.38‡	0.39‡	NR	NR
Stein, 1998[30]	63	75	NR	NR	NR	NR	56.4% Medicare Medicaid NR	74% Medicare Medicaid NR	NR	NR	NR	NR	NR	NR
Van Rhee, 2002[31]§	<65: 25.3%; 65–79: 41.8%; ≥ 80: 32.9%	<65: 29.8%; 65–79: 40.1%; ≥80: 30.1	49.6%	56.7%	NR	NR	76.2% Medicare Medicaid NR	72.9% Medicare Medicaid NR	82.7%	83.1%	NR	NR	NR	NR

* Age reported as mean age, median age (interquartile range), or percentage by age group.

** Mean Charlson comorbidity index[35] score reported as mean score ± standard deviation (if reported in study). Deyo score is an adapted version of the Charlson comorbidity index; see Deyo RA, Cherkin DC, Ciol MA. Adapting a clinical comorbidity index for use with ICD-9-CM administrative databases. J Clin Epidemiol. 1992;45:613-619.

† Median number of comorbidities (interquartile range)

‡ Median number of comorbidities

§ Demographics are based on 923 patients as outliers (3 SDs from mean) were removed from analysis by that study's authors.