

## **REPORT**

# **Appendix A – Annual Report 2015 Tables**

## **Evaluation and Monitoring of the Bundled Payments for Care Improvement Model 1 Initiative**

**Contract No.:**  
**HHSM-500-2011-00015I**

**Order No.:**  
**HHSM-500-T0008**

**Project No.:**  
**2248-000**

**Submitted To:**

**Centers for Medicare & Medicaid Services**  
Attn.: Arpit Misra  
Contracting Officer's Representative  
Center for Medicare & Medicaid Innovation  
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**Submitted By:**

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**May 19, 2016**

May 19, 2016

Mr. Arpit Misra  
Contracting Officer's Representative  
Centers for Medicare & Medicaid Services  
Center for Medicare & Medicaid Innovation  
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*Reference:* Contract No. HHSM-500-2011-00015I; Order No. HHSM-500-T0008;  
"Evaluation and Monitoring of the Bundled Payments for Care Improvement  
Model 1 Initiative" (Project No. 2248-000).

Dear Mr. Misra:

Econometrica is pleased to submit this Appendix A – Annual Report 2015 Tables as part of the Annual Report to the Centers for Medicare & Medicaid Services, Center for Medicare & Medicaid Innovation, regarding work being conducted under the above-referenced contract.

If you wish to discuss any aspect of this submission, please feel free to contact me at (301) 395-2281.

Sincerely,

**Econometrica, Inc.**

A handwritten signature in black ink, reading "Monique Sheppard". The signature is fluid and cursive, with the first and last names clearly legible.

Monique Sheppard, Ph.D.  
Project Director

cc: Contract File



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## List of Abbreviations

Acronym	Definition
ACH	Acute care hospital
CAH	Critical access hospital
BPCI	Bundled Payments for Care Improvement
DiD	Difference-in-differences
ED	Emergency department
LTCH	Long-term care hospital
PHC	Physician Hospital Collaboration
PY	Performance Year
SAM	Standardized allowed amount
SNF	Skilled nursing facility



## Appendix A: Annual Report 2015 Tables

For all tables in this appendix:

- Baseline Period: January 1, 2011, through March 31, 2013.
- Since BPCI Period: April 1, 2013, through March 31, 2015.
- PY1: Program Year 1 from April 1, 2013, through March 31, 2014.
- PY2: Program Year 2 from April 1, 2014, through March 31, 2015.

For tables in this appendix that display adjusted rates (e.g., expenditures or utilization measures), standard error is presented in parentheses following each adjusted value.



Table A.1. Means of Explanatory Variables for Full and Active Cohorts\*

Measure	Full Cohort				Active Cohort			
	Baseline		Since BPCI (PY1 & 2)		Baseline		Since BPCI (PY1 & 2)	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Socio Demographics</b>								
Patient Age 0 to 64	12.24	15.23	12.62	15.57	12.81	15.05	13.43	15.41
Patient Age 65 to 74	25.83	27.73	27.40	29.04	24.98	27.64	26.31	28.80
Patient Age 75 to 84	33.11	31.80	31.57	30.50	32.64	31.71	30.85	30.45
Patient Age 85 plus	28.82	25.24	28.41	24.89	29.58	25.60	29.41	25.34
Dual Eligibility Status	18.92	24.01	18.16	23.74	21.65	24.87	20.83	24.46
Black	11.47	13.74	11.44	13.82	11.22	10.42	11.35	10.51
Hispanic	2.42	2.22	2.39	2.10	3.47	3.06	3.35	2.87
White	83.33	81.06	82.80	80.74	82.12	82.98	81.62	82.71
Other Racial/Ethnic Classification	2.79	2.98	3.37	3.33	3.19	3.55	3.68	3.92
<b>Episode Intensity/Cost Controls</b>								
Any hemodialysis during episode	0.47	0.51	0.53	0.55	0.48	0.52	0.48	0.52
Any ventilator use for 96 hours or more during episode	4.27	4.17	4.53	4.26	4.17	4.04	4.67	4.11
Central line management during episode	7.10	6.47	5.89	5.00	5.79	6.33	4.12	4.88
Severe pressure ulcer during episode	3.94	3.84	3.60	3.57	4.04	4.02	3.53	3.76
Total Parenteral Nutrition	1.29	0.88	1.15	0.85	1.33	0.91	1.11	0.85
MS-DRG Weight (SD)	1.58 (1.50)	1.62 (1.49)	1.64 (1.53)	1.65 (1.48)	1.49 (1.36)	1.61 (1.46)	1.51 (1.38)	1.64 (1.45)
CMS-HCC Score (SD)	1.72 (1.35)	1.68 (1.32)	1.72 (1.40)	1.70 (1.38)	1.75 (1.36)	1.68 (1.32)	1.75 (1.41)	1.70 (1.37)
Number of episodes	282,894	892,481	240,960	745,377	125,467	481,726	102,771	405,165

\*22 chronic condition indicators taken from the Master Beneficiary Summary File data are also included within most multivariate regression models.





Table A.2. Means of Explanatory Variables for Exiting and PHC Cohorts\*

Measure	Exiting Cohort				PHC Cohort			
	Baseline		Since BPCI (PY1 & 2)		Baseline		Since BPCI (PY1 & 2)	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Socio Demographics</b>								
Patient Age 0 to 64	11.78	16.46	12.03	16.85	9.15	13.66	9.41	14.22
Patient Age 65 to 74	26.51	28.15	28.21	29.41	24.34	27.66	26.12	29.17
Patient Age 75 to 84	33.49	31.28	32.10	29.98	34.25	32.91	32.73	31.43
Patient Age 85 plus	28.22	24.11	27.66	23.76	32.26	25.77	31.74	25.18
Dual Eligibility Status	16.75	24.40	16.17	24.27	14.14	21.12	13.70	20.85
Black	11.66	17.48	11.50	17.61	7.29	12.96	7.57	13.02
Hispanic	1.58	1.54	1.67	1.46	1.02	1.05	1.06	1.00
White	84.29	78.63	83.68	78.28	89.09	83.70	88.07	83.34
Other Racial/Ethnic Classification	2.48	2.35	3.14	2.66	2.60	2.29	3.29	2.65
<b>Episode Intensity/Cost Controls</b>								
Any hemodialysis during episode	0.47	0.53	0.57	0.59	0.37	0.48	0.47	0.57
Any ventilator use for 96 hours or more during episode	4.36	4.41	4.43	4.51	3.96	3.72	3.99	4.01
Central line management during episode	8.14	6.70	7.20	5.34	9.52	6.76	8.35	5.26
Severe pressure ulcer during episode	3.86	3.66	3.66	3.40	4.35	3.28	4.10	3.21
Total Parenteral Nutrition	1.25	0.87	1.17	0.88	1.15	0.77	0.95	0.80
MS-DRG Weight (SD)	1.65 (1.60)	1.64 (1.56)	1.73 (1.62)	1.68 (1.55)	1.55 (1.39)	1.62 (1.47)	1.63 (1.43)	1.68 (1.48)
CMS-HCC Score (SD)	1.70 (1.34)	1.66 (1.31)	1.69 (1.39)	1.69 (1.38)	1.73 (1.34)	1.64 (1.28)	1.73 (1.40)	1.65 (1.34)
Number of episodes	157,427	510,140	138,189	422,847	96,242	271,545	80,090	223,484

\*22 chronic condition indicators taken from the Master Beneficiary Summary File data are also included within most multivariate regression models.

**Table A.3. Unadjusted Mean Episode and Post-Episode Medicare Expenditures by Measure for Full Cohort**

Medicare Expenditure Measures	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Total Episode Payment</b>	13,426.20	12,804.08	13,426.88	12,633.89	13,305.76	12,741.51	13,544.92	12,526.47
Hospital Episode Payment	11,244.70	10,897.38	11,330.15	10,777.16	11,197.89	10,883.15	11,459.05	10,671.38
Hospital Outlier Payment	238.25	287.84	266.64	282.36	273.07	307.52	260.38	257.25
SAM Hospital Payment w/ IPPS discount	9,035.86	9,315.96	9,119.28	9,307.56	9,106.30	9,389.61	9,131.94	9,225.67
Non-hospital Episode Payment	2,181.51	1,906.70	2,096.73	1,856.72	2,107.87	1,858.36	2,085.87	1,855.08
Number of Episodes	270,984	858,464	230,729	717,551	113,882	358,424	116,847	359,127
<b>Total Post-Episode Payment</b>	10,127.54	8,862.20	10,034.16	8,655.81	9,959.07	8,672.39	10,107.21	8,639.21
ACH/CAH Payment	2,593.24	2,403.75	2,479.03	2,271.30	2,460.08	2,304.68	2,497.47	2,237.87
LTCH Payment	316.15	400.38	342.71	386.50	326.25	383.78	358.72	389.22
SNF Payment	3,756.06	2,844.01	3,746.91	2,827.08	3,709.13	2,800.27	3,783.67	2,853.93
Other Part A/B Payment	3,462.10	3,214.06	3,465.51	3,170.94	3,463.61	3,183.66	3,467.36	3,158.19
Number of Episodes	269,431	852,055	229,350	710,239	113,097	355,357	116,253	354,882

SAM = Standardized allowed amount. Values are presented in 2013 dollars.



Table A.4. Adjusted Episode Medicare Expenditures by Measure for Full Cohort

Medicare Episode Expenditure Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Total Episode Payment	<b>BPCI</b>	14,581.84 (95.86)	14,412.72 (101.72)	-169.12*** (57.34)		14,405.81 (105.34)	-176.02** (68.76)		14,419.58 (116.21)	-162.26** (75.90)	
	<b>Comparison</b>	12,748.64 (34.60)	12,625.11 (35.89)	-123.54*** (28.79)	-45.58 (64.13)	12,695.72 (38.82)	-52.93 (32.30)	-123.10 (75.89)	12,554.96 (44.13)	-193.69*** (38.63)	31.43 (85.23)
Hospital Episode Payment	<b>BPCI</b>	12,302.76 (88.19)	12,245.13 (93.06)	-57.64 (51.42)		12,217.90 (97.03)	-84.87 (61.95)		12,272.18 (105.67)	-30.59 (68.65)	
	<b>Comparison</b>	10,863.02 (31.97)	10,797.79 (33.44)	-65.23** (26.82)	7.59 (57.94)	10,865.15 (36.14)	2.13 (30.09)	-87.00 (68.79)	10,730.87 (41.45)	-132.14*** (36.33)	101.56 (77.68)
Hospital Outlier Payment	<b>BPCI</b>	123.90 (9.56)	129.72 (9.99)	5.82 (5.45)		135.68 (11.06)	11.78* (6.62)		123.78 (10.57)	-0.12 (7.04)	
	<b>Comparison</b>	431.97 (25.80)	434.23 (27.71)	2.27 (10.62)	3.56 (11.97)	469.32 (29.86)	37.35*** (13.06)	-25.57* (14.81)	399.25 (27.67)	-32.72** (13.26)	32.60** (14.98)
SAM Hospital Payment w/ IPPS discount	<b>BPCI</b>	8,999.35 (44.61)	9,009.18 (44.70)	9.83 (22.89)		9,075.35 (48.36)	76.00** (29.92)		8,943.45 (47.19)	-55.90** (26.87)	
	<b>Comparison</b>	9,577.98 (16.56)	9,606.22 (17.89)	28.24* (15.90)	-18.41 (27.89)	9,656.15 (18.77)	78.17*** (16.27)	-2.18 (34.03)	9,556.62 (24.01)	-21.36 (23.01)	-34.53 (35.44)
Non-Hospital Episode Payment	<b>BPCI</b>	2,279.07 (17.97)	2,167.59 (19.00)	-111.48*** (11.01)		2,187.92 (18.80)	-91.16*** (11.13)		2,147.40 (22.43)	-131.67*** (15.92)	
	<b>Comparison</b>	1,885.63 (6.26)	1,827.31 (6.68)	-58.31*** (5.17)	-53.17*** (12.20)	1,830.57 (6.65)	-55.06*** (5.03)	-36.10*** (12.24)	1,824.08 (8.76)	-61.54*** (7.74)	-70.13*** (17.74)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

SAM = Standardized allowed amount. Values are presented in 2013 dollars.



**Table A.5. Unadjusted Mean Episode and Post-Episode Medicare Expenditures by Measure for Active Cohort**

Medicare Expenditure Measures	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Total Episode Payment</b>	12,719.04	12,958.91	12,515.91	12,704.67	12,515.79	12,849.72	12,516.03	12,562.27
Hospital Episode Payment	10,668.74	11,050.62	10,550.95	10,833.87	10,542.09	10,982.11	10,559.68	10,688.35
Hospital Outlier Payment	197.15	303.04	248.42	279.52	255.77	304.77	241.17	254.74
<b>SAM Hospital Payment w/ IPPS discount</b>	8,483.56	9,298.80	8,332.31	9,228.31	8,366.77	9,347.82	8,298.34	9,110.98
Non-Hospital Episode Payment	2,050.30	1,908.29	1,964.96	1,870.79	1,973.70	1,867.60	1,956.35	1,873.92
Number of Episodes	120,264	463,838	98,193	390,435	48,745	193,412	49,448	197,023
<b>Total Post-Episode Payment</b>	9,943.94	8,963.40	9,972.55	8,760.64	9,920.01	8,786.65	10,024.22	8,735.07
ACH/CAH Payment	2,613.60	2,447.34	2,530.97	2,302.83	2,524.99	2,338.13	2,536.85	2,268.11
LTCH Payment	339.03	346.24	391.12	343.18	370.96	347.66	410.94	338.78
SNF Payment	3,763.61	2,885.99	3,818.41	2,887.26	3,767.99	2,863.23	3,867.98	2,910.90
Other Part A/B Payment	3,227.71	3,283.82	3,232.06	3,227.37	3,256.07	3,237.63	3,208.45	3,217.28
Number of Episodes	119,489	460,214	97,578	386,676	48,376	191,738	49,202	194,938

SAM = Standardized allowed amount. Values are presented in 2013 dollars.



**Table A.6. Adjusted Episode Medicare Expenditures by Measure for Active Cohort**

Medicare Episode Expenditure Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Total Episode Payment	<b>BPCI</b>	14,201.65 (116.62)	14,016.64 (120.74)	-185.01*** (67.05)		14,124.22 (128.84)	-77.43 (85.20)		13,910.87 (134.51)	-290.78*** (85.33)	
	<b>Comparison</b>	12,868.68 (38.75)	12,598.89 (38.59)	-269.78*** (40.74)	84.77 (78.32)	12,718.08 (44.07)	-150.59*** (45.56)	73.16 (96.54)	12,481.71 (51.55)	-386.96*** (53.52)	96.18 (100.65)
Hospital Episode Payment	<b>BPCI</b>	11,943.41 (113.99)	11,845.30 (117.67)	-98.11 (60.53)		11,939.22 (124.29)	-4.19 (77.44)		11,752.98 (129.21)	-190.44** (76.12)	
	<b>Comparison</b>	11,002.80 (37.29)	10,786.16 (37.48)	-216.64*** (38.31)	118.54* (71.52)	10,906.42 (42.19)	-96.38** (42.63)	92.19 (88.34)	10,667.93 (50.00)	-334.88*** (50.87)	144.44 (91.48)
Hospital Outlier Payment	<b>BPCI</b>	93.57 (9.04)	106.76 (10.48)	13.19** (6.38)		112.12 (11.73)	18.55** (7.94)		101.45 (11.48)	7.88 (8.23)	
	<b>Comparison</b>	478.10 (31.65)	436.45 (30.25)	-41.65*** (13.23)	54.84*** (14.63)	475.10 (33.01)	-3.01 (15.33)	21.56 (17.35)	398.18 (30.05)	-79.92*** (16.62)	87.80*** (18.45)
SAM Hospital Payment w/ IPPS discount	<b>BPCI</b>	8,913.89 (61.22)	8,838.34 (61.98)	-75.55** (32.16)		8,953.65 (69.11)	39.76 (46.51)		8,724.98 (64.12)	-188.91*** (33.38)	
	<b>Comparison</b>	9,423.66 (19.20)	9,332.39 (18.79)	-91.27*** (17.80)	15.72 (36.72)	9,430.55 (21.56)	6.89 (20.35)	32.88 (50.72)	9,235.90 (23.06)	-187.77*** (22.59)	-1.14 (40.31)
Non-Hospital Episode Payment	<b>BPCI</b>	2,258.23 (21.91)	2,171.33 (24.71)	-86.90*** (12.14)		2,185.00 (22.85)	-73.23*** (11.75)		2,157.89 (29.86)	-100.34*** (18.74)	
	<b>Comparison</b>	1,865.87 (6.78)	1,812.73 (7.20)	-53.14*** (6.67)	-33.76** (13.84)	1,811.66 (7.31)	-54.21*** (6.63)	-19.02 (13.49)	1,813.79 (10.09)	-52.09*** (9.82)	-48.25** (21.16)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

SAM = Standardized allowed amount. Values are presented in 2013 dollars.

**Table A.7. Unadjusted Mean Episode and Post-Episode Medicare Expenditures by Measure for Exiting Cohort**

Medicare Expenditure Measures	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
Total Episode Payment	13,990.47	13,037.42	14,101.79	12,914.80	13,896.92	13,008.11	14,299.78	12,819.95
Hospital Episode Payment	11,704.28	11,178.46	11,907.44	11,112.79	11,688.65	11,200.18	12,118.88	11,023.96
Hospital Outlier Payment	271.05	307.98	280.14	313.27	286.01	339.74	274.47	286.37
SAM Hospital Payment w/ IPPS discount	9,476.56	9,455.63	9,702.33	9,481.27	9,659.73	9,540.36	9,743.51	9,421.21
Non-Hospital Episode Payment	2,286.20	1,858.96	2,194.36	1,802.01	2,208.28	1,807.93	2,180.90	1,796.00
Number of Episodes	150,720	490,342	132,536	406,865	65,137	205,089	67,399	201,776
Total Post-Episode Payment	10,273.85	8,713.87	10,079.78	8,512.80	9,988.27	8,527.06	10,168.11	8,498.25
ACH/CAH Payment	2,577.01	2,418.26	2,440.57	2,301.23	2,411.57	2,343.32	2,468.57	2,258.26
LTCH Payment	297.91	418.44	306.86	401.83	292.84	391.43	320.39	412.44
SNF Payment	3,750.05	2,725.25	3,693.97	2,707.60	3,665.13	2,671.35	3,721.80	2,744.60
Other Part A/B Payment	3,648.88	3,151.93	3,638.38	3,102.15	3,618.73	3,120.96	3,657.35	3,082.94
Number of Episodes	149,942	486,703	131,772	402,527	64,721	203,338	67,051	199,189

SAM = Standardized allowed amount. Values are presented in 2013 dollars.



**Table A.8. Adjusted Episode Medicare Expenditures by Measure for Exiting Cohort**

Medicare Episode Expenditure Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Total Episode Payment	<b>BPCI</b>	12,232.47 (119.31)	12,109.54 (126.99)	-122.93 (86.06)		12,000.81 (130.76)	-231.67** (97.59)		12,218.90 (153.87)	-13.57 (117.49)	
	<b>Comparison</b>	13,905.23 (43.06)	13,898.42 (44.38)	-6.81 (38.00)	-116.12 (94.21)	13,934.97 (48.89)	29.74 (42.88)	-261.41** (106.52)	13,861.67 (56.83)	-43.57 (52.24)	29.99 (128.85)
Hospital Episode Payment	<b>BPCI</b>	9,635.61 (112.14)	9,645.03 (118.46)	9.42 (77.03)		9,510.24 (122.98)	-125.36 (87.57)		9,780.58 (141.81)	144.97 (106.61)	
	<b>Comparison</b>	12,132.55 (40.51)	12,190.72 (42.48)	58.18* (35.24)	-48.76 (84.78)	12,218.71 (46.64)	86.17** (39.89)	-211.53** (96.13)	12,162.57 (54.32)	30.03 (49.08)	114.94 (117.53)
Hospital Outlier Payment	<b>BPCI</b>	100.38 (5.93)	101.50 (5.94)	1.12 (5.63)		105.60 (7.25)	5.23 (6.78)		97.36 (7.26)	-3.01 (7.22)	
	<b>Comparison</b>	611.28 (40.76)	661.94 (46.25)	50.67** (20.07)	-49.54** (20.73)	702.37 (49.14)	91.09*** (24.58)	-85.86*** (25.49)	621.28 (48.11)	10.01 (25.57)	-13.02 (26.41)
SAM Hospital Payment w/ IPPS discount	<b>BPCI</b>	9,254.03 (71.07)	9,323.60 (69.83)	69.56** (32.17)		9,355.39 (73.48)	101.36*** (38.79)		9,291.62 (73.65)	37.59 (40.48)	
	<b>Comparison</b>	9,794.02 (26.15)	9,897.05 (28.49)	103.03*** (24.30)	-33.47 (40.43)	9,917.28 (28.45)	123.26*** (23.27)	-21.90 (45.21)	9,876.72 (39.34)	82.70** (37.07)	-45.10 (55.05)
Non-Hospital Episode Payment	<b>BPCI</b>	2,596.87 (22.12)	2,464.52 (23.48)	-132.35*** (16.35)		2,490.56 (23.23)	-106.31*** (17.02)		2,438.32 (28.90)	-158.54*** (22.74)	
	<b>Comparison</b>	1,772.69 (7.56)	1,707.70 (8.40)	-64.99*** (7.00)	-67.37*** (17.86)	1,716.26 (8.22)	-56.43*** (6.77)	-49.88*** (18.35)	1,699.10 (11.54)	-73.59*** (10.56)	-84.95*** (25.17)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

SAM = Standardized allowed amount. Values are presented in 2013 dollars.



**Table A.9. Unadjusted Mean Episode and Post-Episode Medicare Expenditures by Measure for PHC Cohort**

Medicare Expenditure Measures	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Total Episode Payment</b>	12,396.75	11,774.27	12,445.14	11,834.69	12,216.47	11,881.38	12,670.62	11,787.67
Hospital Episode Payment	10,159.65	9,928.30	10,272.39	10,037.92	10,030.64	10,073.29	10,510.76	10,002.29
Hospital Outlier Payment	200.79	253.64	209.59	292.45	224.60	330.61	194.79	254.02
<b>SAM Hospital Payment w/ IPPS discount</b>	8,864.12	9,320.22	9,058.74	9,507.19	8,987.91	9,529.91	9,128.58	9,484.31
Non-Hospital Episode Payment	2,237.10	1,845.97	2,172.75	1,796.78	2,185.83	1,808.09	2,159.86	1,785.38
Number of Episodes	92,082	260,556	76,761	214,808	38,110	107,789	38,651	107,019
<b>Total Post-Episode Payment</b>	10,314.64	8,068.09	10,106.92	7,907.97	9,999.90	7,899.79	10,212.33	7,916.26
ACH/CAH Payment	2,305.00	2,093.67	2,166.98	2,010.86	2,143.39	2,029.44	2,190.22	1,992.01
LTCH Payment	247.31	291.19	263.89	313.46	245.08	297.52	282.41	329.63
SNF Payment	4,216.45	2,861.83	4,141.35	2,779.71	4,078.61	2,760.82	4,203.14	2,798.88
Other Part A/B Payment	3,545.88	2,821.39	3,534.70	2,803.94	3,532.81	2,812.01	3,536.56	2,795.74
Number of Episodes	91,709	258,935	76,425	212,574	37,921	107,072	38,504	105,502

SAM = Standardized allowed amount. Values are presented in 2013 dollars.



**Table A.10. Adjusted Episode Medicare Expenditures by Measure for PHC Cohort**

Medicare Episode Expenditure Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Total Episode Payment	<b>BPCI</b>	10,503.06 (115.30)	10,610.00 (133.31)	106.95 (100.66)		10,491.39 (123.46)	-11.67 (89.63)		10,728.51 (179.82)	225.46 (155.78)	
	<b>Comparison</b>	12,709.37 (50.64)	12,707.46 (53.67)	-1.91 (50.92)	108.86 (112.72)	12,725.80 (58.90)	16.43 (54.81)	-28.10 (105.02)	12,689.13 (73.81)	-20.23 (73.06)	245.69 (171.76)
Hospital Episode Payment	<b>BPCI</b>	7,958.11 (109.91)	8,132.12 (125.30)	174.01* (91.24)		7,990.13 (115.08)	32.01 (75.07)		8,273.99 (168.84)	315.88** (146.17)	
	<b>Comparison</b>	10,960.04 (47.99)	11,020.48 (51.94)	60.44 (46.95)	113.57 (102.53)	11,027.10 (56.30)	67.06 (50.14)	-35.05 (90.26)	11,013.86 (70.92)	53.82 (68.55)	262.06 (161.12)
Hospital Outlier Payment	<b>BPCI</b>	82.09 (5.52)	85.30 (5.60)	3.21 (5.72)		94.24 (7.67)	12.15 (7.71)		76.36 (6.00)	-5.73 (6.16)	
	<b>Comparison</b>	494.79 (36.45)	581.61 (41.84)	86.82*** (25.65)	-83.61*** (26.43)	636.34 (47.91)	141.56*** (32.67)	-129.40*** (33.77)	526.92 (44.88)	32.14 (32.52)	-37.87 (33.15)
SAM Hospital Payment w/ IPPS discount	<b>BPCI</b>	8,876.23 (68.25)	9,078.01 (67.42)	201.78*** (32.21)		9,096.28 (71.08)	220.05*** (38.61)		9,059.75 (69.42)	183.52*** (36.94)	
	<b>Comparison</b>	9,554.71 (31.47)	9,706.96 (36.57)	152.25*** (37.40)	49.53 (49.55)	9,713.45 (35.02)	158.74*** (32.65)	61.32 (50.58)	9,700.48 (57.85)	145.77** (60.25)	37.75 (70.83)
Non-Hospital Episode Payment	<b>BPCI</b>	2,544.94 (19.86)	2,477.88 (23.23)	-67.06*** (17.92)		2,501.26 (23.27)	-43.68** (19.31)		2,454.52 (30.70)	-90.42*** (25.95)	
	<b>Comparison</b>	1,749.33 (8.77)	1,686.98 (9.62)	-62.35*** (9.91)	-4.71 (20.52)	1,698.69 (9.35)	-50.63*** (9.40)	6.95 (21.48)	1,675.28 (14.55)	-74.05*** (14.91)	-16.37 (30.02)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

SAM = Standardized allowed amount. Values are presented in 2013 dollars.



**Table A.11. Adjusted Post-Episode Medicare Expenditures by Measure for Full Cohort**

Medicare Episode Expenditure Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Total Post-Episode Payment	<b>BPCI</b>	10,603.20 (224.76)	10,518.13 (246.79)	-85.07 (111.15)		10,433.74 (227.72)	-169.45*** (63.23)		10,602.13 (302.84)	-1.06 (206.10)	
	<b>Comparison</b>	8,847.71 (72.29)	8,635.32 (87.10)	-212.39*** (57.00)	127.33 (125.00)	8,650.27 (73.95)	-197.44*** (30.40)	27.99 (70.30)	8,620.43 (124.27)	-227.28** (106.35)	226.22 (232.06)
ACH/CAH Payment	<b>BPCI</b>	2,811.47 (103.79)	2,707.58 (107.64)	-103.89** (45.98)		2,684.00 (101.81)	-127.47*** (31.68)		2,731.06 (127.45)	-80.41 (81.62)	
	<b>Comparison</b>	2,348.09 (26.33)	2,220.54 (29.87)	-127.55*** (21.90)	23.67 (51.37)	2,238.11 (27.74)	-109.98*** (17.63)	-17.49 (36.36)	2,203.05 (42.17)	-145.05*** (37.56)	64.64 (90.65)
LTCH Payment	<b>BPCI</b>	255.48 (30.02)	281.22 (33.73)	25.74** (12.16)		266.86 (33.25)	11.38 (13.45)		295.55 (36.43)	40.07** (16.50)	
	<b>Comparison</b>	429.41 (19.47)	413.82 (19.91)	-15.58 (10.14)	41.33*** (15.80)	409.48 (19.91)	-19.92* (10.94)	31.30* (17.24)	418.15 (22.75)	-11.25 (14.41)	51.32** (22.00)
SNF Payment	<b>BPCI</b>	5,632.93 (161.21)	5,630.52 (169.12)	-2.42 (63.34)		5,539.51 (160.21)	-93.42* (49.79)		5,721.11 (192.67)	88.18 (105.53)	
	<b>Comparison</b>	2,546.61 (22.79)	2,526.06 (27.71)	-20.55 (21.89)	18.13 (66.96)	2,508.15 (23.33)	-38.46** (15.96)	-54.96 (52.34)	2,543.90 (41.39)	-2.72 (37.74)	90.90 (111.87)
Other Part A/B Payment	<b>BPCI</b>	2,726.06 (63.47)	2,723.79 (67.30)	-2.28 (30.82)		2,722.55 (64.76)	-3.52 (23.41)		2,725.03 (79.76)	-1.04 (53.37)	
	<b>Comparison</b>	3,475.20 (20.65)	3,434.29 (23.86)	-40.91*** (15.78)	38.63 (34.64)	3,443.78 (21.96)	-31.43** (12.30)	27.91 (26.47)	3,424.85 (32.39)	-50.35* (27.17)	49.31 (59.91)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline. Values are presented in 2013 dollars.



**Table A.12. Adjusted Post-Episode Medicare Expenditures by Measure for Active Cohort**

Medicare Episode Expenditure Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Total Post-Episode Payment	<b>BPCI</b>	10,234.54 (178.78)	10,348.25 (213.74)	113.70 (154.48)		10,251.4 <sup>3</sup> (199.24)	16.89 (102.59)		10,443.5 <sup>4</sup> (308.35)	208.99 (283.72)	
	<b>Comparison</b>	9,015.34 (51.16)	8,784.24 (80.10)	-231.09*** (75.69)	344.79** (172.03)	8,813.34 (54.35)	-201.99*** (41.04)	218.88** (110.49)	8,755.60 (140.66)	-259.73* (140.25)	468.73 (316.71)
ACH/CAH Payment	<b>BPCI</b>	2,698.47 (96.40)	2,627.17 (109.71)	-71.29 (64.95)		2,605.41 (101.24)	-93.06* (48.04)		2,648.60 (144.14)	-49.87 (114.38)	
	<b>Comparison</b>	2,441.62 (25.11)	2,300.62 (32.01)	-141.00*** (30.35)	69.70 (72.12)	2,321.61 (28.74)	-120.01*** (24.87)	26.94 (54.09)	2,279.96 (51.63)	-161.66*** (51.62)	111.79 (126.45)
LTCH Payment	<b>BPCI</b>	187.61 (22.97)	226.79 (29.42)	39.18*** (13.62)		212.78 (28.81)	25.17* (14.75)		240.63 (32.88)	53.02*** (18.28)	
	<b>Comparison</b>	402.42 (28.70)	389.05 (27.64)	-13.37 (13.99)	52.55*** (18.99)	390.93 (28.41)	-11.49 (14.58)	36.66* (20.34)	387.18 (30.98)	-15.24 (20.45)	68.26** (26.95)
SNF Payment	<b>BPCI</b>	5,497.33 (165.08)	5,666.56 (179.79)	169.23* (91.36)		5,543.96 (170.02)	46.63 (72.51)		5,787.24 (219.38)	289.91* (154.36)	
	<b>Comparison</b>	2,668.47 (22.85)	2,668.59 (31.01)	0.12 (30.32)	169.11* (96.10)	2,649.11 (23.68)	-19.35 (22.23)	65.98 (75.87)	2,687.76 (52.19)	19.29 (52.01)	270.62* (162.51)
Other Part A/B Payment	<b>BPCI</b>	2,798.44 (54.78)	2,805.61 (60.98)	7.17 (41.71)		2,824.00 (59.17)	25.56 (31.09)		2,787.50 (82.66)	-10.94 (73.49)	
	<b>Comparison</b>	3,425.15 (16.42)	3,356.34 (22.34)	-68.80*** (21.36)	75.97 (46.89)	3,368.69 (18.91)	-56.46*** (16.74)	82.02** (35.35)	3,344.19 (36.62)	-80.96** (36.50)	70.02 (82.10)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline. Values are presented in 2013 dollars.



**Table A.13. Adjusted Post-Episode Medicare Expenditures by Measure for Exiting Cohort**

Medicare Episode Expenditure Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Total Post-Episode Payment	<b>BPCI</b>	10,522.00 (240.35)	10,303.15 (278.50)	-218.85 (156.21)		10,218.15 (240.68)	-303.86*** (75.55)		10,388.88 (374.72)	-133.12 (293.77)	
	<b>Comparison</b>	8,781.68 (77.13)	8,584.68 (100.21)	-197.01** (77.08)	-21.84 (174.66)	8,593.41 (81.35)	-188.27*** (41.56)	-115.58 (86.42)	8,575.87 (155.42)	-205.82 (144.40)	72.70 (327.93)
ACH/CAH Payment	<b>BPCI</b>	1,933.52 (101.39)	1,863.00 (102.95)	-70.52 (48.32)		1,823.20 (98.07)	-110.32*** (35.32)		1,903.13 (122.86)	-30.39 (83.30)	
	<b>Comparison</b>	2,623.26 (45.14)	2,500.14 (50.11)	-123.13*** (31.85)	52.61 (58.48)	2,517.66 (47.00)	-105.61*** (24.72)	-4.71 (43.21)	2,482.47 (66.89)	-140.80** (55.50)	110.41 (101.28)
LTCH Payment	<b>BPCI</b>	491.65 (75.51)	487.03 (76.88)	-4.63 (29.55)		472.24 (77.94)	-19.41 (33.94)		501.93 (81.96)	10.28 (39.56)	
	<b>Comparison</b>	382.19 (12.43)	368.36 (13.60)	-13.83 (11.67)	9.20 (31.81)	358.12 (14.39)	-24.07* (12.97)	4.66 (36.41)	378.68 (17.80)	-3.50 (16.06)	13.78 (42.75)
SNF Payment	<b>BPCI</b>	4,640.90 (141.63)	4,532.96 (152.27)	-107.94 (79.90)		4,470.31 (138.85)	-170.59*** (60.95)		4,596.15 (189.18)	-44.75 (133.21)	
	<b>Comparison</b>	2,563.72 (28.47)	2,542.88 (35.97)	-20.84 (30.45)	-87.10 (85.62)	2,516.42 (30.06)	-47.30** (21.66)	123.29* (64.70)	2,569.57 (55.99)	5.85 (53.26)	-50.59 (143.50)
Other Part A/B Payment	<b>BPCI</b>	3,539.77 (65.61)	3,519.07 (71.91)	-20.70 (43.42)		3,505.68 (67.50)	-34.09 (33.11)		3,532.59 (93.17)	-7.19 (74.64)	
	<b>Comparison</b>	3,215.97 (21.59)	3,169.84 (26.22)	-46.13** (20.95)	25.43 (48.27)	3,186.30 (24.23)	-29.67* (17.23)	-4.43 (37.32)	3,153.23 (38.37)	-62.73* (35.58)	55.55 (82.79)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline. Values are presented in 2013 dollars.



**Table A.14. Adjusted Post-Episode Medicare Expenditures by Measure for PHC Cohort**

Medicare Episode Expenditure Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Total Post-Episode Payment	<b>BPCI</b>	9,977.65 (217.37)	9,845.63 (281.17)	-132.02 (201.96)		9,724.49 (221.47)	-253.16** (101.19)		9,967.26 (425.93)	-10.38 (379.07)	
	<b>Comparison</b>	8,309.63 (83.00)	8,101.85 (111.33)	-207.78** (99.37)	75.76 (225.72)	8,109.17 (85.04)	-200.46*** (52.96)	-52.70 (114.39)	8,094.49 (186.47)	-215.14 (184.83)	204.76 (422.62)
ACH/CAH Payment	<b>BPCI</b>	1,638.54 (88.93)	1,612.24 (96.26)	-26.30 (58.87)		1,580.68 (88.37)	-57.86 (42.55)		1,643.93 (126.71)	5.39 (102.24)	
	<b>Comparison</b>	2,326.26 (48.25)	2,211.83 (53.58)	-114.43*** (39.99)	88.13 (71.86)	2,217.55 (48.34)	-108.71*** (28.67)	50.85 (51.36)	2,206.08 (77.32)	-120.18* (70.36)	125.57 (125.59)
LTCH Payment	<b>BPCI</b>	359.18 (57.78)	376.08 (62.73)	16.90 (33.30)		351.84 (62.98)	-7.34 (35.92)		400.42 (71.66)	41.24 (46.45)	
	<b>Comparison</b>	266.33 (12.55)	290.57 (14.93)	24.23* (14.46)	-7.33 (36.34)	278.07 (16.45)	11.73 (16.31)	-19.08 (39.57)	303.12 (20.96)	36.78* (20.39)	4.46 (50.68)
SNF Payment	<b>BPCI</b>	4,801.78 (136.23)	4,680.46 (155.53)	-121.32 (106.19)		4,574.08 (134.55)	-227.69*** (80.85)		4,787.28 (212.16)	-14.50 (175.35)	
	<b>Comparison</b>	2,710.23 (36.00)	2,625.86 (43.66)	-84.37** (40.43)	-36.94 (113.83)	2,622.15 (35.44)	-88.07*** (27.96)	-139.62 (85.62)	2,629.58 (70.62)	-80.65 (70.14)	66.15 (188.98)
Other Part A/B Payment	<b>BPCI</b>	3,246.80 (60.82)	3,263.00 (70.62)	16.20 (53.68)		3,257.28 (63.18)	10.48 (39.32)		3,268.74 (101.35)	21.94 (92.23)	
	<b>Comparison</b>	2,950.17 (22.54)	2,920.73 (28.16)	-29.44 (24.43)	45.64 (59.18)	2,932.68 (24.88)	-17.49 (17.68)	27.97 (43.19)	2,908.73 (43.95)	-41.44 (42.97)	63.38 (101.99)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline. Values are presented in 2013 dollars.

**Table A.15. Unadjusted Mean Utilization Measures for Full Cohort**

Measure	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Episode</b>								
Length of Stay (days)	6.62	6.42	6.66	6.50	6.63	6.48	6.69	6.52
Number of Episodes	282,893	892,482	240,960	745,379	118,870	372,473	122,090	372,906
ICU Utilization (%) <sup>†</sup>	12.24	13.53	13.14	13.56	13.06	13.86	13.22	13.27
Number of Episodes	281,245	887,677	240,021	743,324	118,707	372,050	121,314	371,274
<b>Post-Episode Utilization</b>								
Any ACH/CAH Visit (%)	19.53	19.19	18.81	18.37	18.82	18.45	18.79	18.29
Any LTCH Visit (%)	0.62	1.01	0.72	1.01	0.68	1.02	0.76	0.99
Any SNF Visit (%)	32.18	25.69	32.66	26.45	32.66	26.28	32.66	26.62
Number of Episodes	269,431	852,055	229,350	710,239	113,097	355,357	116,253	354,882

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



**Table A.16. Adjusted Utilization Measures for Full Cohort**

Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Episode Length of Stay (days)	<b>BPCI</b>	7.37 (0.12)	7.40 (0.11)	0.03 (0.04)		7.38 (0.11)	0.02 (0.04)		7.42 (0.12)	0.05 (0.06)	
	<b>Comparison</b>	6.29 (0.03)	6.39 (0.03)	0.10*** (0.02)	-0.07 (0.04)	6.35 (0.03)	0.07*** (0.02)	-0.05 (0.04)	6.42 (0.04)	0.14*** (0.03)	-0.08 (0.07)
Episode ICU Utilization (%) <sup>†</sup>	<b>BPCI</b>	9.93 (0.21)	10.67 (0.24)	0.74*** (0.14)		10.67 (0.25)	0.74*** (0.16)		10.66 (0.27)	0.73*** (0.18)	
	<b>Comparison</b>	14.96 (0.14)	15.01 (0.16)	0.05 (0.14)	0.69*** (0.20)	15.26 (0.16)	0.30** (0.14)	0.44** (0.21)	14.76 (0.22)	-0.20 (0.21)	0.93*** (0.28)
<b>Post-Episode Utilization</b>											
Any ACH/CAH	<b>BPCI</b>	18.42 (0.61)	17.80 (0.65)	-0.63** (0.27)		17.85 (0.61)	-0.57*** (0.15)		17.74 (0.77)	-0.68 (0.50)	
	<b>Comparison</b>	19.44 (0.22)	18.51 (0.25)	-0.93*** (0.16)	0.30 (0.32)	18.59 (0.22)	-0.85*** (0.09)	0.28 (0.18)	18.43 (0.34)	-1.01*** (0.30)	0.33 (0.59)
Any LTCH	<b>BPCI</b>	0.45 (0.05)	0.54 (0.06)	0.08*** (0.02)		0.51 (0.06)	0.05** (0.02)		0.57 (0.06)	0.11*** (0.03)	
	<b>Comparison</b>	1.17 (0.06)	1.16 (0.06)	-0.01 (0.03)	0.09*** (0.03)	1.17 (0.06)	-0.00 (0.03)	0.05 (0.03)	1.16 (0.07)	-0.01 (0.04)	0.13*** (0.05)
Any SNF	<b>BPCI</b>	46.02 (1.14)	46.82 (1.23)	0.80* (0.44)		46.57 (1.15)	0.55** (0.23)		47.07 (1.44)	1.05 (0.83)	
	<b>Comparison</b>	23.17 (0.20)	23.84 (0.26)	0.68*** (0.19)	0.12 (0.48)	23.71 (0.21)	0.54*** (0.11)	0.00 (0.26)	23.98 (0.39)	0.81** (0.35)	0.24 (0.90)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



Table A.17. Unadjusted Mean Utilization Measures for Active Cohort

Measure	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Episode</b>								
Length of Stay (days)	6.61	6.41	6.65	6.53	6.61	6.50	6.69	6.57
Number of Episodes	125,466	481,725	102,771	405,167	50,979	200,843	51,792	204,324
ICU Utilization (%) <sup>†</sup>	11.13	13.55	11.71	13.14	11.70	13.60	11.71	12.68
Number of Episodes	123,818	476,920	101,832	403,112	50,816	200,420	51,016	202,692
<b>Post-Episode Utilization</b>								
Any ACH/CAH Visit (%)	19.63	19.23	19.19	18.43	19.28	18.57	19.11	18.28
Any LTCH Visit (%)	0.69	0.87	0.87	0.87	0.81	0.91	0.93	0.83
Any SNF Visit (%)	32.76	24.89	33.26	25.84	33.22	25.68	33.29	25.99
Number of Episodes	119,489	460,214	97,578	386,676	48,376	191,738	49,202	194,938

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.





Table A.18. Adjusted Utilization Measures for Active Cohort

Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Episode Length of Stay (days)	<b>BPCI</b>	7.04 (0.10)	7.10 (0.12)	0.06 (0.05)		7.07 (0.10)	0.03 (0.04)		7.14 (0.14)	0.09 (0.07)	
	<b>Comparison</b>	6.39 (0.03)	6.52 (0.03)	0.13*** (0.03)	-0.07 (0.06)	6.47 (0.03)	0.08*** (0.03)	-0.06 (0.05)	6.56 (0.04)	0.17*** (0.04)	-0.08 (0.09)
Episode ICU Utilization (%) <sup>†</sup>	<b>BPCI</b>	5.85 (0.49)	6.09 (0.57)	0.24 (0.16)		6.13 (0.53)	0.28* (0.16)		6.06 (0.63)	0.20 (0.23)	
	<b>Comparison</b>	17.48 (0.69)	16.86 (0.68)	-0.62*** (0.21)	0.87*** (0.25)	17.37 (0.69)	-0.11 (0.20)	0.39 (0.25)	16.35 (0.71)	-1.13*** (0.32)	1.34*** (0.38)
<b>Post-Episode Utilization</b>											
Any ACH/CAH	<b>BPCI</b>	18.45 (0.60)	18.07 (0.70)	-0.37 (0.39)		18.08 (0.62)	-0.37* (0.21)		18.06 (0.92)	-0.38 (0.73)	
	<b>Comparison</b>	19.45 (0.18)	18.57 (0.24)	-0.88*** (0.22)	0.51 (0.45)	18.73 (0.19)	-0.72*** (0.13)	0.35 (0.24)	18.41 (0.40)	-1.04*** (0.40)	0.66 (0.83)
Any LTCH	<b>BPCI</b>	0.32 (0.03)	0.41 (0.05)	0.09*** (0.02)		0.38 (0.04)	0.06** (0.02)		0.44 (0.05)	0.12*** (0.03)	
	<b>Comparison</b>	1.27 (0.09)	1.23 (0.08)	-0.04 (0.04)	0.13*** (0.04)	1.28 (0.09)	0.00 (0.04)	0.06 (0.04)	1.18 (0.09)	-0.09 (0.06)	0.21*** (0.06)
Any SNF	<b>BPCI</b>	41.77 (1.03)	43.14 (1.17)	1.37** (0.61)		42.68 (1.08)	0.91** (0.38)		43.59 (1.50)	1.82 (1.12)	
	<b>Comparison</b>	23.61 (0.18)	24.50 (0.28)	0.88*** (0.25)	0.49 (0.66)	24.35 (0.20)	0.74*** (0.15)	0.17 (0.41)	24.64 (0.48)	1.03** (0.47)	0.79 (1.21)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.

**Table A.19. Unadjusted Mean Utilization Measures for Exiting Cohort**

Measure	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Episode</b>								
Length of Stay (days)	6.62	6.45	6.67	6.47	6.65	6.47	6.69	6.47
Number of Episodes	157,427	510,142	138,189	422,847	67,891	213,197	70,298	209,650
ICU Utilization (%) <sup>†</sup>	13.12	13.12	14.20	13.61	14.07	13.72	14.32	13.50
Number of Episodes	157,427	510,142	138,189	422,847	67,891	213,197	70,298	209,650
<b>Post-Episode Utilization</b>								
Any ACH/CAH Visit (%)	19.46	19.22	18.52	18.45	18.48	18.53	18.56	18.36
Any LTCH Visit (%)	0.55	1.04	0.61	1.06	0.57	1.04	0.64	1.07
Any SNF Visit (%)	31.72	25.50	32.22	26.22	32.25	26.01	32.20	26.43
Number of Episodes	149,942	486,703	131,772	402,527	64,721	203,338	67,051	199,189

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



Table A.20. Adjusted Utilization Measures for Exiting Cohort

Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Episode Length of Stay (days)	<b>BPCI</b>	7.31 (0.15)	7.33 (0.14)	0.02 (0.06)		7.32 (0.14)	0.01 (0.05)		7.33 (0.16)	0.02 (0.09)	
	<b>Comparison</b>	6.33 (0.04)	6.40 (0.04)	0.07*** (0.02)	-0.05 (0.06)	6.38 (0.04)	0.05** (0.02)	-0.04 (0.06)	6.42 (0.05)	0.09** (0.04)	-0.06 (0.10)
Episode ICU Utilization (%) <sup>†</sup>	<b>BPCI</b>	18.48 (0.75)	19.94 (0.81)	1.45*** (0.29)		19.94 (0.83)	1.45*** (0.35)		19.93 (0.84)	1.45*** (0.34)	
	<b>Comparison</b>	12.39 (0.15)	12.80 (0.16)	0.41*** (0.15)	1.04*** (0.32)	12.89 (0.16)	0.50*** (0.15)	0.96** (0.38)	12.72 (0.23)	0.33 (0.22)	1.13*** (0.41)
<b>Post-Episode Utilization</b>											
Any ACH/CAH	<b>BPCI</b>	19.87 (0.72)	19.02 (0.78)	-0.85** (0.40)		19.11 (0.71)	-0.76*** (0.23)		18.94 (1.00)	-0.93 (0.74)	
	<b>Comparison</b>	18.95 (0.22)	18.07 (0.27)	-0.89*** (0.21)	0.04 (0.45)	18.14 (0.22)	-0.82*** (0.12)	0.06 (0.26)	18.00 (0.42)	-0.96** (0.39)	0.02 (0.83)
Any LTCH	<b>BPCI</b>	0.95 (0.14)	1.03 (0.15)	0.07 (0.06)		1.00 (0.15)	0.05 (0.06)		1.05 (0.16)	0.10 (0.08)	
	<b>Comparison</b>	0.93 (0.03)	0.95 (0.03)	0.02 (0.03)	0.06 (0.06)	0.93 (0.03)	0.00 (0.03)	0.05 (0.07)	0.96 (0.04)	0.03 (0.04)	0.07 (0.09)
Any SNF	<b>BPCI</b>	43.24 (1.14)	43.65 (1.30)	0.41 (0.63)		43.53 (1.15)	0.29 (0.28)		43.77 (1.68)	0.53 (1.20)	
	<b>Comparison</b>	23.47 (0.22)	24.10 (0.32)	0.64** (0.27)	-0.23 (0.68)	23.95 (0.25)	0.48*** (0.16)	-0.19 (0.33)	24.26 (0.52)	0.79 (0.49)	-0.27 (1.29)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.

**Table A.21. Unadjusted Mean Utilization Measures for PHC Cohort**

Measure	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>Episode</b>								
Length of Stay (days)	6.63	6.43	6.75	6.49	6.71	6.50	6.78	6.48
Number of Episodes	96,242	271,546	80,090	223,484	39,735	112,202	40,355	111,282
ICU Utilization (%) <sup>†</sup>	11.63	12.63	12.37	13.36	12.20	13.50	12.53	13.22
Number of Episodes	96,242	271,546	80,090	223,484	39,735	112,202	40,355	111,282
<b>Post-Episode Utilization</b>								
Any ACH/CAH Visit (%)	18.83	18.26	17.50	17.50	17.45	17.50	17.54	17.50
Any LTCH Visit (%)	0.48	0.75	0.54	0.83	0.47	0.80	0.60	0.86
Any SNF Visit (%)	35.16	27.56	35.50	28.07	35.33	28.02	35.67	28.13
Number of Episodes	91,709	258,935	76,425	212,574	37,921	107,072	38,504	105,502

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



**Table A.22. Adjusted Utilization Measures for PHC Cohort**

Measure	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Episode Length of Stay (days)	<b>BPCI</b>	7.20 (0.14)	7.34 (0.14)	0.15* (0.08)		7.33 (0.14)	0.14** (0.07)		7.35 (0.17)	0.16 (0.12)	
	<b>Comparison</b>	6.31 (0.05)	6.38 (0.04)	0.07** (0.03)	0.08 (0.08)	6.38 (0.04)	0.07** (0.03)	0.07 (0.07)	6.39 (0.06)	0.07 (0.05)	0.08 (0.13)
Episode ICU Utilization (%) <sup>†</sup>	<b>BPCI</b>	17.88 (0.74)	19.05 (0.81)	1.17*** (0.27)		19.05 (0.81)	1.17*** (0.31)		19.06 (0.85)	1.18*** (0.35)	
	<b>Comparison</b>	11.36 (0.19)	11.97 (0.20)	0.61*** (0.22)	0.56 (0.35)	12.08 (0.20)	0.72*** (0.22)	0.44 (0.38)	11.85 (0.31)	0.49 (0.32)	0.69 (0.48)
<b>Post-Episode Utilization</b>											
Any ACH/CAH	<b>BPCI</b>	19.04 (0.67)	18.06 (0.80)	-0.98* (0.53)		18.05 (0.66)	-0.99*** (0.29)		18.07 (1.16)	-0.97 (0.98)	
	<b>Comparison</b>	18.14 (0.24)	17.18 (0.32)	-0.96*** (0.29)	-0.02 (0.61)	17.18 (0.24)	-0.96*** (0.17)	-0.03 (0.34)	17.19 (0.54)	-0.95* (0.53)	-0.02 (1.12)
Any LTCH	<b>BPCI</b>	0.72 (0.11)	0.80 (0.12)	0.08 (0.07)		0.73 (0.12)	0.01 (0.07)		0.87 (0.15)	0.15 (0.10)	
	<b>Comparison</b>	0.68 (0.03)	0.75 (0.03)	0.07** (0.03)	0.01 (0.08)	0.72 (0.04)	0.04 (0.04)	-0.04 (0.08)	0.78 (0.05)	0.10** (0.05)	0.05 (0.11)
Any SNF	<b>BPCI</b>	45.97 (1.09)	46.35 (1.36)	0.38 (0.84)		46.03 (1.09)	0.06 (0.37)		46.67 (1.94)	0.70 (1.60)	
	<b>Comparison</b>	25.20 (0.26)	25.60 (0.39)	0.39 (0.36)	-0.01 (0.91)	25.64 (0.28)	0.44** (0.19)	-0.38 (0.41)	25.55 (0.67)	0.35 (0.67)	0.35 (1.74)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.

**Table A.23. Unadjusted Mean (%) Health Outcome Measures for Full Cohort**

Measure (%)	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>All-Cause Mortality<sup>†</sup></b>	7.54	7.44	7.77	7.58	7.67	7.50	7.87	7.66
Number of Episodes	284,381	890,037	241,855	742,774	119,644	372,153	122,211	370,621
<b>All-Cause 30-Day Post-Episode Readmissions</b>	18.97	18.24	18.17	17.59	18.24	17.61	18.10	17.57
Number of Episodes	267,920	846,195	228,105	705,092	112,653	352,909	115,452	352,183
<b>Any 30-Day Post-Episode ED Visit</b>	10.71	11.94	11.31	12.46	10.92	12.30	11.68	12.63
Number of Episodes	269,428	851,949	229,347	710,060	113,095	355,318	116,252	354,742

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



Table A.24. Adjusted Health Outcome Measures for Full Cohort

Measure (%)	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
All-Cause Mortality <sup>†</sup>	<b>BPCI</b>	8.58 (0.35)	8.79 (0.38)	0.21 (0.14)		8.68 (0.00)	0.11 (0.11)		8.89 (0.00)	0.32 (0.24)	
	<b>Comparison</b>	7.31 (0.09)	7.45 (0.11)	0.14** (0.07)	0.07 (0.16)	7.37 (0.00)	0.06 (0.06)	0.05 (0.12)	7.53 (0.00)	0.22* (0.12)	0.10 (0.27)
All-Cause 30-Day Readmission	<b>BPCI</b>	18.79 (0.64)	18.19 (0.67)	-0.59** (0.29)		18.24 (0.01)	-0.54*** (0.15)		18.15 (0.01)	-0.64 (0.54)	
	<b>Comparison</b>	18.34 (0.20)	17.60 (0.24)	-0.74*** (0.16)	0.15 (0.33)	17.61 (0.00)	-0.72*** (0.09)	0.18 (0.18)	17.58 (0.00)	-0.76*** (0.29)	0.12 (0.61)
ED 30-Day Visits	<b>BPCI</b>	13.72 (0.40)	14.40 (0.41)	0.68*** (0.14)		14.19 (0.00)	0.47*** (0.15)		14.61 (0.00)	0.89*** (0.21)	
	<b>Comparison</b>	10.96 (0.08)	11.35 (0.10)	0.39*** (0.07)	0.29* (0.16)	11.22 (0.00)	0.26*** (0.07)	0.21 (0.16)	11.48 (0.00)	0.52*** (0.10)	0.38 (0.24)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



Table A.25. Unadjusted Mean (%) Health Outcome Measures for Active Cohort

Measure (%)	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>All-Cause Mortality<sup>†</sup></b>	7.49	7.39	7.81	7.46	7.77	7.41	7.85	7.51
Number of Episodes	124,925	478,657	102,835	402,389	51,273	200,252	51,562	202,137
<b>All-Cause 30-Day Post-Episode Readmissions</b>	19.11	18.33	18.66	17.65	18.77	17.74	18.55	17.56
Number of Episodes	118,705	456,995	96,910	383,853	48,133	190,396	48,777	193,457
<b>Any 30-Day Post-Episode ED Visit</b>	10.63	11.64	11.35	12.12	11.25	11.98	11.45	12.26
Number of Episodes	119,487	460,113	97,577	386,507	48,375	191,702	49,202	194,805

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.





**Table A.26. Adjusted Health Outcome Measures for Active Cohort**

Measure (%)	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
All-Cause Mortality <sup>†</sup>	<b>BPCI</b>	8.53 (0.41)	8.86 (0.48)	0.32* (0.19)		8.79 (0.00)	0.26* (0.14)		8.92 (0.01)	0.39 (0.32)	
	<b>Comparison</b>	7.30 (0.09)	7.36 (0.11)	0.06 (0.09)	0.27 (0.21)	7.32 (0.00)	0.02 (0.08)	0.24 (0.16)	7.40 (0.00)	0.10 (0.15)	0.29 (0.35)
All-Cause 30-Day Readmission	<b>BPCI</b>	18.69 (0.63)	18.41 (0.74)	-0.28 (0.42)		18.40 (0.01)	-0.29 (0.21)		18.42 (0.01)	-0.27 (0.79)	
	<b>Comparison</b>	18.49 (0.18)	17.74 (0.24)	-0.75*** (0.21)	0.47 (0.47)	17.84 (0.00)	-0.65*** (0.13)	0.36 (0.25)	17.64 (0.00)	-0.85** (0.39)	0.58 (0.88)
ED 30-Day Visits	<b>BPCI</b>	12.04 (0.40)	12.70 (0.42)	0.65*** (0.19)		12.84 (0.00)	0.80*** (0.20)		12.55 (0.00)	0.51* (0.28)	
	<b>Comparison</b>	11.08 (0.10)	11.50 (0.11)	0.42*** (0.09)	0.23 (0.21)	11.39 (0.00)	0.31*** (0.10)	0.49** (0.22)	11.61 (0.00)	0.53*** (0.14)	-0.02 (0.31)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.

**Table A.27. Unadjusted Mean (%) Health Outcome Measures for Exiting Cohort**

Measure (%)	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>All-Cause Mortality<sup>†</sup></b>	7.58	7.46	7.75	7.66	7.61	7.55	7.88	7.77
Number of Episodes	159,456	509,851	139,020	422,122	68,371	213,015	70,649	209,107
<b>All-Cause 30-Day Post-Episode Readmissions</b>	18.86	18.17	17.80	17.65	17.84	17.67	17.77	17.64
Number of Episodes	149,215	483,194	131,195	399,401	64,520	201,817	66,675	197,584
<b>Any 30-Day Post-Episode ED Visit</b>	10.78	12.46	11.27	13.01	10.68	12.86	11.84	13.16
Number of Episodes	149,941	486,687	131,770	402,510	64,720	203,331	67,050	199,179

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



**Table A.28. Adjusted Health Outcome Measures for Exiting Cohort**

Measure (%)	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
All-Cause Mortality <sup>†</sup>	<b>BPCI</b>	9.40 (0.36)	9.53 (0.40)	0.12 (0.22)		9.40 (0.00)	-0.00 (0.17)		9.66 (0.01)	0.25 (0.38)	
	<b>Comparison</b>	7.17 (0.08)	7.36 (0.11)	0.19** (0.09)	-0.07 (0.24)	7.25 (0.00)	0.09 (0.07)	-0.09 (0.19)	7.47 (0.00)	0.30* (0.16)	-0.05 (0.41)
All-Cause 30-Day Readmission	<b>BPCI</b>	19.44 (0.72)	18.63 (0.79)	-0.82** (0.40)		18.70 (0.01)	-0.74*** (0.22)		18.55 (0.01)	-0.89 (0.75)	
	<b>Comparison</b>	18.01 (0.21)	17.38 (0.27)	-0.63*** (0.21)	-0.19 (0.45)	17.38 (0.00)	-0.63*** (0.12)	-0.11 (0.25)	17.39 (0.00)	-0.62 (0.39)	-0.27 (0.85)
ED 30-Day Visits	<b>BPCI</b>	9.25 (0.20)	9.77 (0.21)	0.52*** (0.14)		9.38 (0.00)	0.13 (0.14)		10.15 (0.00)	0.90*** (0.21)	
	<b>Comparison</b>	12.81 (0.10)	13.28 (0.13)	0.46*** (0.10)	0.05 (0.17)	13.13 (0.00)	0.31*** (0.09)	-0.18 (0.16)	13.43 (0.00)	0.62*** (0.16)	0.29 (0.27)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



Table A.29. Unadjusted Mean (%) Health Outcome Measures for PHC Cohort

Measure (%)	Baseline		Since BPCI PY1 & 2		BPCI PY1		BPCI PY2	
	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison	BPCI	Comparison
<b>All-Cause Mortality<sup>†</sup></b>	8.22	7.78	8.41	7.88	8.21	7.80	8.60	7.95
Number of Episodes	97,505	270,517	81,102	223,031	40,211	112,211	40,891	110,820
<b>All-Cause 30-Day Post-Episode Readmissions</b>	18.45	17.31	17.16	16.81	17.13	16.74	17.19	16.88
Number of Episodes	91,371	257,629	76,207	211,325	37,856	106,410	38,351	104,915
<b>Any 30-Day Post-Episode ED Visit</b>	10.11	12.12	10.69	12.62	10.34	12.47	11.03	12.78
Number of Episodes	91,709	258,931	76,424	212,566	37,921	107,069	38,503	105,497

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



**Table A.30. Adjusted Health Outcome Measures for PHC Cohort**

Measure (%)	Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
All-Cause Mortality <sup>†</sup>	<b>BPCI</b>	9.80 (0.37)	9.95 (0.45)	0.15 (0.29)		9.78 (0.00)	-0.02 (0.24)		10.12 (0.01)	0.32 (0.49)	
	<b>Comparison</b>	7.48 (0.10)	7.56 (0.15)	0.08 (0.14)	0.07 (0.32)	7.49 (0.00)	0.01 (0.11)	-0.03 (0.26)	7.63 (0.00)	0.15 (0.24)	0.17 (0.55)
All-Cause 30-Day Readmission	<b>BPCI</b>	18.66 (0.67)	17.74 (0.81)	-0.92* (0.54)		17.74 (0.01)	-0.92*** (0.29)		17.75 (0.01)	-0.92 (1.01)	
	<b>Comparison</b>	17.30 (0.24)	16.61 (0.32)	-0.69** (0.29)	-0.23 (0.62)	16.54 (0.00)	-0.76*** (0.16)	-0.16 (0.33)	16.69 (0.01)	-0.61 (0.54)	-0.30 (1.15)
ED 30-Day Visits	<b>BPCI</b>	8.88 (0.20)	9.52 (0.22)	0.64*** (0.17)		9.25 (0.00)	0.37** (0.16)		9.79 (0.00)	0.91*** (0.27)	
	<b>Comparison</b>	12.54 (0.12)	12.98 (0.16)	0.44*** (0.14)	0.20 (0.23)	12.79 (0.00)	0.25** (0.13)	0.12 (0.20)	13.17 (0.00)	0.63*** (0.23)	0.28 (0.36)

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



**Table A.31. Adjusted In-Hospital All-Cause Mortality Rates (%) by Cohort<sup>†</sup>**

Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Full BPCI	2.92 (0.15)	2.91 (0.15)	-0.01 (0.07)		2.91 (0.00)	-0.01 (0.05)		2.91 (0.00)	-0.01 (0.12)	
Full Control	3.25 (0.06)	3.26 (0.07)	0.01 (0.04)	-0.02 (0.08)	3.26 (0.00)	0.01 (0.04)	-0.02 (0.06)	3.26 (0.00)	0.01 (0.07)	-0.02 (0.14)
Active BPCI	2.84 (0.17)	2.92 (0.20)	0.08 (0.09)		2.87 (0.00)	0.03 (0.07)		2.97 (0.00)	0.13 (0.16)	
Active Comparison	3.15 (0.06)	3.18 (0.08)	0.03 (0.06)	0.05 (0.11)	3.20 (0.00)	0.05 (0.05)	-0.02 (0.09)	3.16 (0.00)	0.01 (0.10)	0.12 (0.19)
Exiting BPCI	4.83 (0.35)	4.70 (0.36)	-0.13 (0.16)		4.76 (0.00)	-0.06 (0.11)		4.63 (0.00)	-0.20 (0.28)	
Exiting Comparison	2.91 (0.05)	2.87 (0.06)	-0.04 (0.05)	-0.09 (0.16)	2.88 (0.00)	-0.03 (0.04)	-0.03 (0.11)	2.86 (0.00)	-0.05 (0.09)	-0.14 (0.29)
PHC BPCI	4.93 (0.35)	4.79 (0.36)	-0.14 (0.20)		4.86 (0.00)	-0.07 (0.13)		4.71 (0.00)	-0.22 (0.35)	
PHC Comparison	2.98 (0.06)	2.86 (0.08)	-0.12 (0.07)	-0.02 (0.21)	2.90 (0.00)	-0.07 (0.05)	0.01 (0.14)	2.82 (0.00)	-0.16 (0.12)	-0.06 (0.37)

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01 denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.

<sup>†</sup>Kansas Surgical Recovery Center and its comparison hospitals are excluded from these analyses due to low or no incidence rates of these events.



**Table A.32. Adjusted Average Number of Skilled Nursing Facility Claims by Cohort**

Cohort	Baseline (a)	Since BPCI (PY1 & 2) (b)	Difference Between (a) & (b)	Since BPCI DiD	BPCI PY1 (c)	Difference Between (a) & (c)	BPCI PY1 DiD	BPCI PY2 (d)	Difference Between (a) & (d)	BPCI PY2 DiD
Full BPCI	1.69 (0.01)	1.71 (0.01)	0.02*** (0.00)		1.71 (0.01)	0.02*** (0.00)		1.72 (0.01)	0.03*** (0.00)	
Full Control	1.68 (0.00)	1.68 (0.00)	0.01*** (0.00)	0.02*** (0.00)	1.68 (0.00)	0.01** (0.00)	0.01*** (0.00)	1.68 (0.00)	0.01*** (0.00)	0.02*** (0.01)
Active BPCI	1.65 (0.01)	1.68 (0.01)	0.03*** (0.01)		1.68 (0.01)	0.02*** (0.01)		1.69 (0.01)	0.03*** (0.01)	
Active Comparison	1.69 (0.00)	1.70 (0.00)	0.01*** (0.00)	0.02*** (0.01)	1.70 (0.00)	0.01*** (0.00)	0.01** (0.01)	1.70 (0.00)	0.01*** (0.00)	0.02** (0.01)
Exiting BPCI	0.43 (0.01)	0.44 (0.01)	0.00 (0.01)		0.44 (0.01)	0.00 (0.00)		0.44 (0.02)	0.01 (0.01)	
Exiting Comparison	0.23 (0.00)	0.24 (0.00)	0.01** (0.00)	-0.00 (0.01)	0.24 (0.00)	0.00*** (0.00)	-0.00 (0.00)	0.24 (0.01)	0.01 (0.00)	-0.00 (0.01)
PHC BPCI	0.46 (0.01)	0.46 (0.01)	0.00 (0.01)		0.46 (0.01)	0.00 (0.00)		0.47 (0.02)	0.01 (0.02)	
PHC Comparison	0.25 (0.00)	0.26 (0.00)	0.00 (0.00)	-0.00 (0.01)	0.26 (0.00)	0.00** (0.00)	-0.00 (0.00)	0.26 (0.01)	0.00 (0.01)	0.00 (0.02)

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01 denote statistical significance levels when program periods (Since BPCI, PY1, and PY2) are each compared to Baseline.