

Supplemental table 1: Association between billed ACP and location of death

	<b>OR (95% CI)</b>	<b>P value</b>
<b>ACP</b>		
No billed CP	Ref	<0.0001
Had billed ACP	0.83 (0.79, 0.88)	
<b>Sex</b>		
Male	Ref	<0.0001
Female	1.03 (0.99, 1.06)	
<b>Age Categories</b>		
65-69 years	Ref	<0.0001
70-74 years	0.88 (0.83, 0.93)	
75-79 years	0.81 (0.77, 0.86)	
80-84 years	0.65 (0.64, 0.72)	
85-89 years	0.57 (0.54, 0.60)	
90-94 years	0.47 (0.44, 0.50)	
>=95	0.38 (0.35-0.41)	
<b>Race/Ethnicity</b>		
Non-Hispanic White	Ref	<0.0001
Non-Hispanic Black	1.32 (1.25, 1.38)	
Hispanic	1.67 (1.49, 1.86)	
Asian	2.37 (2.11, 2.65)	
Other	1.56 (1.40, 1.74)	
Unknown	1.33 (1.05, 1.69)	
<b>Medicare spending by HRR</b>		
Low	Ref	<0.0001
Medium	1.00 (0.96-1.05)	
High	1.17 (1.12, 1.23)	
<b>Charlson index</b>		
0	Ref	<0.0001
1	2.77 (2.36, 3.26)	
2	4.28 (3.67, 4.99)	
3	5.77 (4.95, 6.72)	
4	7.42 (6.37, 8.63)	
5 or more	9.00 (7.75, 10.46)	
<b>Dual Eligibility Status</b>		
No	Ref	<0.0001
Yes	0.84 (0.81, 0.87)	

Supplemental table 2: Association between billed ACP and hospital admission in last 30 days

	<b>OR (95% CI)</b>	<b>P value</b>
<b>ACP</b>		
No billed CP	Ref	<0.0001
Had billed ACP	0.82 (0.78, 0.86)	
<b>Sex</b>		
Male	Ref	<0.0001
Female	1.05 (1.03, 1.08)	
<b>Age Categories</b>		
65-69 years	Ref	<0.0001
70-74 years	0.88 (0.83, 0.94)	
75-79 years	0.86 (0.81, 0.91)	
80-84 years	0.77 (0.73, 0.81)	
85-89 years	0.70 (0.66, 0.74)	
90-94 years	0.61 (0.58, 0.65)	
>=95	0.52 (0.48, 0.55)	
<b>Race/Ethnicity</b>		
Non-Hispanic White	Ref	<0.0001
Non-Hispanic Black	1.24 (1.19, 1.30)	
Hispanic	1.49 (1.34, 1.67)	
Asian	1.73 (1.53, 1.94)	
Other	1.37 (1.23, 1.53)	
Unknown	1.19 (0.95, 1.51)	
<b>Medicare spending by HRR</b>		
Low	Ref	<0.0001
Medium	1.11 (1.07, 1.15)	
High	1.37 (1.32, 1.43)	
<b>Charlson index</b>		
0	Ref	<0.0001
1	4.02 (3.54, 4.55)	
2	7.67 (6.79, 8.66)	
3	11.87 (10.53, 13.39)	
4	17.24 (15.29, 10.45)	
5 or more	28.65 (25.44, 32.27)	
<b>Dual Eligibility Status</b>		
No	Ref	<0.0001
Yes	0.77 (0.75, 0.79)	

Supplemental table 3: Association between billed ACP and ICU visit in last 30 days

	<b>OR (95% CI)</b>	<b>P value</b>
<b>ACP</b>		
No billed CP	Ref	<0.0001
Had billed ACP	0.85 (0.79, 0.89)	
<b>Sex</b>		
Male	Ref	0.454
Female	1.01 (0.98, 1.04)	
<b>Age Categories</b>		
65-69 years	Ref	<0.0001
70-74 years	0.85 (0.80, 0.90)	
75-79 years	0.76 (0.71, 0.80)	
80-84 years	0.60 (0.57, 0.64)	
85-89 years	0.47 (0.45, 0.50)	
90-94 years	0.33 (0.31, 0.35)	
>=95	0.22 (0.20, 0.24)	
<b>Race/Ethnicity</b>		
Non-Hispanic White	Ref	<0.0001
Non-Hispanic Black	1.29 (1.23, 1.36)	
Hispanic	1.64 (1.46, 1.84)	
Asian	2.11 (1.87, 2.38)	
Other	1.33 (1.19, 1.50)	
Unknown	1.23 (0.96, 1.58)	
<b>Medicare spending by HRR</b>		
Low	Ref	<0.0001
Medium	1.19 (1.14, 1.26)	
High	1.50 (1.43, 1.58)	
<b>Charlson index</b>		
0	Ref	<0.0001
1	3.35 (2.74, 4.10)	
2	5.29 (4.36, 6.42)	
3	7.48 (6.18, 9.06)	
4	9.87 (8.16, 11.95)	
5 or more	12.90 (10.68, 15.59)	
<b>Dual Eligibility Status</b>		
No	Ref	<0.0001
Yes	0.88 (0.85, 0.91)	

Supplemental table 4: Association between billed ACP and late hospice use

	<b>OR (95% CI)</b>	<b>P value</b>
<b>ACP</b>		
No billed CP	Ref	0.183
Had billed ACP	0.96 (0.90, 1.11)	
<b>Sex</b>		
Male	Ref	0.007
Female	1.04 (1.01, 1.08)	
<b>Age Categories</b>		
65-69 years	Ref	<0.0001
70-74 years	1.07 (0.99, 1.16)	
75-79 years	1.20 (1.12, 1.29)	
80-84 years	1.29 (1.20, 1.38)	
85-89 years	1.39 (1.30, 1.50)	
90-94 years	1.44 (1.34, 1.55)	
>=95	1.49 (1.38, 1.63)	
<b>Race/Ethnicity</b>		
Non-Hispanic White	Ref	<0.0001
Non-Hispanic Black	0.69 (0.65, 0.73)	
Hispanic	0.85 (0.75, 0.98)	
Asian	0.59 (0.51, 0.71)	
Other	0.79 (0.69, 0.92)	
Unknown	1.09 (0.83, 1.45)	
<b>Medicare spending by HRR</b>		
Low	Ref	<0.0001
Medium	1.14 (1.09, 1.20)	
High	1.22 (1.16, 1.28)	
<b>Charlson index</b>		
0	Ref	<0.0001
1	3.57 (3.04, 4.19)	
2	4.33 (3.70, 5.06)	
3	5.00 (4.28, 5.84)	
4	5.39 (4.62, 6.29)	
5 or more	6.02 (5.17, 7.01)	
<b>Dual Eligibility Status</b>		
No	Ref	<0.0001
Yes	0.88 (0.85, 0.92)	

Supplemental table 5: Association between billed ACP and expenditures in last 30 days

	<b>Coefficient (95% CI)</b>	<b>P value</b>
ACP		0.0470
No billed CP	Ref	
Had billed ACP	473.74 (6.18, 941.30)	
<b>Sex</b>		0.0002
Male	Ref	
Female	-351.93 (-529.26, -174.60)	
<b>Age Categories</b>		<.0001
65-69 years	Ref	
70-74 years	-1989.17 (-2,561.97, -1416.38)	
75-79 years	-3,144.94 (-3,697.99, -2,591.90)	
80-84 years	-5,879.86 (-6,416.73, -5,343.00)	
85-89 years	-7,520.94 (-8,048.89, -6,992.99)	
90-94 years	-8829.08 (-9,374.90, -8,283.27)	
>=95	-9,688.16 (-10314.00, -9061.82)	
<b>Race/Ethnicity</b>		<.0001
Non-Hispanic White	Ref	
Non-Hispanic Black	2,926.99 (2600.06,3253.93)	
Hispanic	5,378.02 (4621.67,6134.37)	
Asian	9085.51 (8329.11,9841.91)	
Other	3670.77 (2967.05,4374.49)	
Unknown	3102.16 (1712.25,4492.06)	
<b>Medicare spending by HRR</b>		<.0001
Low	Ref	
Medium	-282.97 (-519.91, -46.0358)	
High	1918.97 (1654.28,2183.65)	
<b>Charlson index</b>		<.0001
0	Ref	
1	2,763.81 (1,750.83, 3776.78)	
2	5,218.08 (4,243.22, 6,192.93)	
3	7,294.72 (6,326.63, 8,262.81)	
4	9,558.73 (8,588.83, 10,529)	
5 or more	13,269 (12,321, 14,217)	
<b>Dual Eligibility Status</b>		<.0001
No	Ref	
Yes	-1,809.34 (-2,093.01, -1,525.68)	

Supplemental table 6: Association between billed ACP and ED use in last 30 days

	<b>95% CI</b>	<b>P value</b>
<b>ACP</b>		
No billed CP	Ref	<0.0001
Had billed ACP	0.81 (0.77, 0.85)	
<b>Sex</b>		
Male	Ref	0.160
Female	1.10 (0.99, 1.05)	
<b>Age Categories</b>		
65-69 years	Ref	<0.0001
70-74 years	0.88 (0.83, 0.94)	
75-79 years	0.86 (0.81, 0.91)	
80-84 years	0.82 (0.77, 0.87)	
85-89 years	0.74 (0.71, 0.78)	
90-94 years	0.68 (0.64, 0.72)	
>=95	0.59 (0.55, 0.63)	
<b>Race/Ethnicity</b>		
Non-Hispanic White	Ref	<0.0001
Non-Hispanic Black	1.33 (1.27, 1.39)	
Hispanic	1.44 (1.29, 1.61)	
Asian	1.52 (1.35, 1.70)	
Other	1.16 (1.05, 1.29)	
Unknown	1.01 (0.86, 1.35)	
<b>Medicare spending by HRR</b>		
Low	Ref	<0.0001
Medium	1.06 (1.02, 1.09)	
High	1.23 (1.18, 1.29)	
<b>Charlson index</b>		
0	Ref	<0.0001
1	2.56 (2.34, 2.81)	
2	4.23 (3.87, 4.63)	
3	5.97 (5.47, 6.53)	
4	8.43 (7.71, 9.21)	
5 or more	12.76 (11.70, 13.92)	
<b>Dual Eligibility Status</b>		
No		<0.0001
Yes	0.81 (0.79, 0.84)	

Supplemental table 7: Adjusted associations between ACP and Expenditures by setting and HRR regions

	Adjusted estimates among those who had ACP vs. those who did not have ACP		
	Coefficient	CI	p
<b>Total mean expenditures in all settings by HRR Regions</b>			
Low-intensity Regions	-\$1416.6	-\$2274.8, -\$558.3	<0.008
High-intensity Regions	\$1600.5	\$,945.9, \$2255.2	<0.0001
<b>Mean expenditures categorized by the setting and the HRR expenditure intensity regions</b>			
<b>All Regions:</b>			
Hospice	311.17	262.70 359.65	<0.0001
Inpatient	-934.46	-1252.60, -616.32	<0.0001
Outpatient	-123.75	-157.64, -89.8516	<0.0001
SNF	25.81	-38.4583, 90.0894	0.431
<b>Low-intensity Regions:</b>			
Hospice	424.4	305.76 543.33	<0.0001
Inpatient	-2,059.00	-2869.83, -1248.16	<0.0001
Outpatient	-259.45	-358.85, -160.05	<0.0001
SNF	-178.86	-385.52 27.7947	0.089
<b>Medium-intensity Regions</b>			
Hospice	323.77	259.23 388.30	<0.0001
Inpatient	-1,076.99	-1,507.94, -649.07	<0.0001
Outpatient	-117.37	-165.40 -69.3462	<0.0001
SNF	32.42	-50.1087 114.95	0.441
<b>High-intensity Regions</b>			
Hospice	232.48	140.23 324.72	<0.0001
Inpatient	-199.77	-779.85, 380.31	0.4997
Outpatient	-73.43	-124.97, -21.9063	0.005
SNF	106.53	-5.1258, 218.19	0.061