

American College of Emergency Physicians (ACEP) PRT Data Request

List of Tables detailing Rates of Admission and Observation Stays for 4 Conditions: Syncope, Chest Pain, Abdominal Pain and Altered Mental Status

Table 1:	Hospital-Level Variation in Rates of Admission to Inpatient or Observation Stay in 2016 (Principal Diagnosis Only)
Table 2:	Hospital-Level Variation in Rates of Admission to Inpatient Stay in 2016 (Principal Diagnosis Only)
Table 3:	Hospital-Level Variation in Rates of Admission to Observation Stay in 2016 (Principal Diagnosis Only)
Table 4:	Hospital-Level Variation in Rates of Admission to Inpatient or Observation Stay in 2016 (Principal or Secondary Diagnosis)
Table 5:	Hospital-Level Variation in Rates of Admission to Inpatient Stay in 2016 (Principal or Secondary Diagnosis)
Table 6:	Hospital-Level Variation in Rates of Admission to Observation Stay in 2016 (Principal or Secondary Diagnosis)
Table 7:	Fee-For-Service Users and Medicare Reimbursement for Selected Diagnoses
Appendix 1:	Methods - Medicare ED - Inpatient Hospital and Observation Stay Analysis
Appendix 2:	Methods - Medicare FFS Spending Breakdowns

**Table 1: Hospital-Level Variation in Rates of Admission to Inpatient or Observation Stay in 2016
(Principal Diagnosis Only)**

Group Name	Total ED Cases	Total % Admitted to Inpatient or Observation Stay	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Interquartile Range
Syncope	157,136	43.9%	20.0%	30.3%	44.1%	57.5%	71.4%	27.2%
Chest pain	412,947	42.9%	15.6%	26.7%	42.9%	56.8%	71.4%	30.2%
Abdominal pain	191,815	7.9%	2.9%	5.0%	8.7%	15.4%	25.0%	10.4%
Altered Mental Status	29,753	38.4%	18.2%	30.0%	48.1%	66.7%	100.0%	36.7%
Four Conditions	791,651	34.4%	13.9%	23.2%	34.6%	47.1%	61.9%	23.9%
Overall	7,804,407	36.6%	19.1%	27.9%	38.7%	82.1%	100.0%	54.1%

Source: Medicare Part A and B Research Identifiable Files, 2016

Notes.

1. Each condition group was identified by using the principal diagnosis field only.
2. Denominator: total number of unique ED visits within each condition group
3. Numerator: total number of ED visits that resulted in inpatient hospital or observation stays within each condition group

ED cases associated with Syncope

Among the 7,804,407 ED visits made by Medicare FFS beneficiaries in 2016, the number of syncope-specific ED visits as principal diagnosis only was 157,136.

43.9% of the syncope-specific ED visits as principal diagnosis on the ED claims resulted in an observation or inpatient admission.

Combined admission/observation rates for syncope were 20.0% for hospitals at the 10th percentile, 30.3% in the 25th percentile, 44.1% in the 50th percentile, 57.5% in the 75th percentile, and 71.4% in the 90th percentile. The unadjusted interquartile range demonstrated an absolute 27.2 % point difference in admission/observation rates between the 25th and 75th percentile of hospitals.

Table 2: Hospital-Level Variation in Rates of Admission to Inpatient Stay in 2016 (Principal Diagnosis Only)

Group Name	Total ED Cases	Total % Admitted to Inpatient Stay	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Interquartile Range
Syncope	157,136	11.4%	3.9%	6.7%	11.9%	22.2%	40.0%	15.6%
Chest pain	412,947	6.4%	1.8%	3.5%	7.2%	15.4%	35.7%	11.9%
Abdominal pain	191,815	3.1%	1.4%	2.4%	4.4%	9.1%	22.2%	6.7%
Altered Mental Status	29,753	15.4%	8.3%	14.3%	25.0%	50.0%	100.0%	35.7%
Four Conditions	791,651	6.9%	2.4%	4.2%	7.7%	16.1%	44.8%	11.9%
Overall	7,804,407	26.3%	13.3%	19.7%	27.7%	75.0%	100.0%	55.3%

Source: Medicare Part A and B Research Identifiable Files, 2016

Notes.

1. Each condition group was identified by using the principal diagnosis field only.
2. Denominator: total number of unique ED visits within each condition group
3. Numerator: total number of ED visits that resulted in inpatient hospital stay within each condition group

Table 3: Hospital-Level Variation in Rates of Admission to Observation Stay in 2016 (Principal Diagnosis Only)

Group Name	Total ED Cases	Total % Admitted to Observation Stay	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Interquartile Range
Syncope	157,136	32.5%	12.0%	20.0%	31.8%	43.5%	55.3%	23.5%
Chest pain	412,947	36.5%	9.1%	18.9%	33.7%	47.9%	58.9%	29.0%
Abdominal pain	191,815	4.9%	1.8%	3.0%	5.6%	9.5%	14.7%	6.5%
Altered Mental Status	29,753	23.1%	11.1%	17.6%	29.4%	44.4%	60.0%	26.8%
Four Conditions	791,651	27.6%	7.0%	14.4%	24.7%	35.7%	44.4%	21.3%
Overall	7,804,407	10.3%	2.6%	5.0%	8.5%	12.8%	17.8%	7.8%

Source: Medicare Part A and B Research Identifiable Files, 2016

Notes.

1. Each condition group was identified by using the principal diagnosis field only.
2. Denominator: total number of unique ED visits within each condition group
3. Numerator: total number of ED visits that resulted in observation stay within each condition group

Table 4: Hospital-Level Variation in Rates of Admission to Inpatient or Observation Stay in 2016 (Primary or Secondary Diagnoses)

Group Name	Total ED Cases	ED Cases as Primary Diagnosis	ED Cases as Secondary Diagnoses	Total % Admitted to Inpatient or Observation Stay	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Interquartile Range
Syncope	266,827	157,136	109,691	51.1%	26.3%	37.7%	50.0%	63.3%	77.5%	25.5%
Chest Pain	624,287	412,947	211,340	42.2%	17.8%	28.6%	43.1%	57.1%	80.0%	28.6%
Abdominal Pain	401,971	191,815	210,156	16.3%	7.4%	11.1%	17.0%	26.1%	50.0%	15.0%
Altered Mental Status	75,431	29,753	45,678	50.0%	25.0%	38.6%	54.5%	72.7%	100.0%	34.1%
Four Conditions	1,297,618	791,651	505,967	36.3%	18.0%	26.8%	38.3%	51.6%	100.0%	24.8%
Overall	7,804,407			36.6%	19.1%	27.9%	38.7%	82.1%	100.0%	54.1%

Source: Medicare Part A and B Research Identifiable Files, 2016

Notes.

1. Each condition group was identified by using both principal and secondary diagnosis fields.
2. Denominator: total number of unique ED visits within each condition group
3. Numerator: total number of ED visits that resulted in inpatient hospital or observation stays within each condition group

Table 5: Hospital-Level Variation in Rates of Admission to Inpatient Stay in 2016 (Primary or Secondary Diagnoses)

Group Name	Total ED Cases	ED Cases as Primary Diagnosis	ED Cases as Secondary Diagnoses	Total % Admitted to Inpatient Stay	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Interquartile Range
Syncope	266,827	157,136	109,691	21.8%	9.3%	14.3%	21.1%	32.8%	52.9%	18.5%
Chest Pain	624,287	412,947	211,340	10.6%	4.4%	7.1%	12.0%	21.7%	62.5%	14.6%
Abdominal Pain	401,971	191,815	210,156	7.2%	3.1%	5.0%	8.5%	15.0%	50.0%	10.0%
Altered Mental Status	75,431	29,753	45,678	27.7%	11.5%	20.0%	33.3%	50.0%	100.0%	30.0%
Four Conditions	1,297,618	791,651	505,967	12.9%	6.4%	9.6%	14.8%	27.2%	100.0%	17.7%
Overall	7,804,407			26.3%	13.3%	19.7%	27.7%	75.0%	100.0%	55.3%

Source: Medicare Part A and B Research Identifiable Files, 2016

Notes.

1. Each condition group was identified by using both principal and secondary diagnosis fields.
2. Denominator: total number of unique ED visits within each condition group
3. Numerator: total number of ED visits that resulted in inpatient hospital stay within each condition group

Table 6: Hospital-Level Variation in Rates of Admission to Observation Stay in 2016 (Primary or Secondary Diagnoses)

Group Name	Total ED Cases	ED Cases as Primary Diagnosis	ED Cases as Secondary Diagnoses	Total % Admitted to Observation Stay	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Interquartile Range
Syncope	266,827	157,136	109,691	29.2%	10.3%	17.8%	27.7%	38.1%	48.9%	20.3%
Chest Pain	624,287	412,947	211,340	31.6%	7.8%	16.3%	28.8%	41.4%	51.2%	25.2%
Abdominal Pain	401,971	191,815	210,156	9.1%	2.6%	4.8%	8.3%	13.2%	19.8%	8.4%
Altered Mental Status	75,431	29,753	45,678	22.3%	8.3%	14.3%	22.8%	34.5%	50.0%	20.2%
Four Conditions	1,297,618	791,651	505,967	23.4%	6.1%	12.2%	21.0%	30.3%	38.7%	18.2%
Overall	7,804,407			10.3%	2.6%	5.0%	8.5%	12.8%	17.8%	7.8%

Source: Medicare Part A and B Research Identifiable Files, 2016

Notes.

1. Each condition group was identified by using both principal and secondary diagnosis fields.
2. Denominator: total number of unique ED visits within each condition group
3. Numerator: total number of ED visits that resulted in observation stay within each condition group

Table 7. FFS Users and Medicare Reimbursement for Selected Diagnoses

Service and Condition*	All FFS Users				FFS Users with QMB or Full Dual*****				FFS Users with Partial Dual***** Eligibility			
	Medicare FFS		Medicare FFS Users		Medicare FFS		Medicare FFS Users		Medicare FFS		Medicare FFS Users	
	Total (in \$million)	Percent of total	Total	Percent of total	Total (in \$million)	Percent of total	Total	Percent of total	Total (in \$million)	Percent of total	Total	Percent of total
All Enrollees**			41,758,656				9,756,044				1,123,947	
Inpatient stays	\$133,838	100.0%	5,878,065	14.1%	\$40,413	100.0%	1,498,485	15.4%	\$3,199	100.0%	156,319	13.9%
Abdominal pain	\$141	0.1%	22,690	0.1%	\$57	0.1%	8,380	0.1%	\$5	0.2%	859	0.1%
Altered mental status	\$313	0.2%	31,596	0.1%	\$133	0.3%	12,220	0.1%	\$5	0.2%	720	0.1%
Chest pain	\$342	0.3%	69,798	0.2%	\$136	0.3%	23,644	0.2%	\$12	0.4%	2,664	0.2%
Syncope	\$436	0.3%	58,916	0.1%	\$128	0.3%	14,688	0.2%	\$9	0.3%	1,373	0.1%
Other	\$132,607	99.1%	5,695,065	13.6%	\$39,960	98.9%	1,439,553	14.8%	\$3,168	99.0%	150,703	13.4%
Outpatient ED without observation stay***	\$5,510	100.0%	7,964,728	19.1%	\$1,920	100.0%	2,348,523	24.1%	\$196	100.0%	270,889	24.1%
Abdominal pain	\$282	5.1%	424,543	1.0%	\$123	6.4%	166,248	1.7%	\$12	6.2%	17,703	1.6%
Altered mental status	\$42	0.8%	63,492	0.2%	\$17	0.9%	25,276	0.3%	\$1	0.6%	1,717	0.2%
Chest pain	\$376	6.8%	516,626	1.2%	\$135	7.1%	172,889	1.8%	\$16	8.0%	20,796	1.9%
Syncope	\$108	2.0%	162,074	0.4%	\$25	1.3%	36,732	0.4%	\$3	1.5%	4,292	0.4%
Other	\$4,702	85.3%	6,797,993	16.3%	\$1,620	84.4%	1,947,378	20.0%	\$164	83.7%	226,381	20.1%
Outpatient ED with observation stay****	\$2,292	100.0%	1,169,710	2.8%	\$594	100.0%	294,918	3.0%	\$73	100.0%	37,271	3.3%
Abdominal pain	\$40	1.8%	22,694	0.1%	\$14	2.3%	7,389	0.1%	\$1	2.0%	830	0.1%
Altered mental status	\$32	1.4%	17,872	0.0%	\$11	1.8%	6,095	0.1%	\$1	1.2%	492	0.0%
Chest pain	\$496	21.6%	267,185	0.6%	\$137	23.1%	69,067	0.7%	\$19	26.2%	10,098	0.9%
Syncope	\$153	6.7%	81,930	0.2%	\$29	4.9%	15,258	0.2%	\$4	5.1%	1,991	0.2%
Other	\$1,571	68.5%	780,029	1.9%	\$403	67.9%	197,109	2.0%	\$48	65.7%	23,860	2.1%

Source: Medicare Part A and B Research Identifiable Files, 2016

Notes:

* Stays or visits are assigned to condition groups using the principal diagnosis listed on the claim.

** Includes all enrollees with Fee-for-Service A and B enrollment, no Medicare Advantage enrollment, no ESRD, and resident in the 50 States and DC

*** Includes observation stays of short duration (not separately billable under Outpatient Prospective Payment System), based on facility claims and carrier claims with similar service dates

**** Outpatient observation stays (separately billable under OPPS) reported on the same claim as the ED visit

***** Full duals represent dual-eligible beneficiaries who qualify for full benefits from Medicaid as well as from Medicare. Thus, Medicaid pays for their premiums for Part B of Medicare (and for Part A, if applicable) and covers various health care services that Medicare does not cover, such as most types of long-term services and supports (as well as dental care and other services in some states). In addition, some states' Medicaid programs cover the entire cost-sharing amounts that full duals incur under Medicare, whereas other states cover only a portion of those amounts. Beneficiaries with Qualified Medicare Benefit (QMB) program only is also included in this category since they are qualified for assistance with cost sharing for the full range of Medicare benefits.

***** Partial duals refer to dual-eligible beneficiaries who qualify to have Medicaid pay some of the expenses they incur under Medicare. For all partial duals, Medicaid pays the premiums for Part B of Medicare (and for Part A, if applicable). For some partial duals (depending on the state they live in and their income and assets), Medicaid also pays part of the cost-sharing amounts they owe under Medicare.

Appendix 1. Medicare ED - Inpatient Hospital and Observation Stay Analysis

Methods: By using Medicare RIF files, first, we pulled all the ED events (including observation stays of short duration) that occurred during 2016. Based on diagnosis criteria (either principal diagnosis only or principal or secondary diagnosis), we identified four specific subsets of conditions (syncope, abdominal pain, chest pain, or altered mental health) within the universe of ED events. Then by using service dates, ED events from carrier claims were matched to ED events found from facility (inpatient and outpatient) files. If there is a match, those matched events were included. Otherwise, we excluded unmatched events. By linking the Master Beneficiary Summary File that determines FFS A&B eligibility, we dropped ED visits if the Medicare beneficiary were not FFS A&B eligible in the month of and month following the visit. Also, by using NCH primary payer code, we dropped those events where Medicare was a secondary payer. Additionally, we excluded trigger ED events that are preceded within 90 days by an inpatient event as well as trigger ED events that are preceded within 30 days by an ED event. Lastly, we limited our evaluation period to 11 months of the year (see page 2A in the ACEP's proposal).

Post-ED visit disposition was classified in the following way:

- Inpatient claims with the ED revenue centers were counted as an inpatient admission unless there is an observation-stay revenue center, in which case the disposition was to the observation stay.
- Outpatient ED claims with an OBS revenue center (0762) were counted as transfer to OBS. Observation stays previously identified as short duration and included with trigger events were excluded from this disposition.
- Outpatient ED claims with a discharge to this or another hospital (where patient discharge status code = 02, 05, 09, 43, 66) were counted as an inpatient admission (see page 10A in the ACEP's proposal).
- Outpatient ED claims with a discharged dead (20) code were counted as "dead."
- All other outpatient ED dispositions (for example, a discharge to intermediate care facility, home care of organized home health service organization, court/law enforcement, hospice, designated cancer center, long term care hospital, or home) were counted as "other."

Appendix 2. Medicare FFS Spending Breakdowns

Methods: In the VRDC, the annual MedPAR and monthly outpatient revenue centers and claims were processed, as for ED-based analysis. ED facility revenue centers with a matching carrier line, and ED or observation revenue centers with a matching carrier line, were combined into one group. Other observation revenue centers, without a short-duration carrier line, were retained as observation stays in outpatient claims. Claims were matched to eligibility from the Master Beneficiary Summary File, to exclude enrollees with any A-only, B-only, or Medicare Advantage months, those with end-stage renal disease, and those resident outside of the 50 states and D.C. Inpatient stays and outpatient ED visits were assigned to condition groups on the basis of the principal diagnosis code.