

Potentially Preventable Readmissions in Texas

Calendar Year 2014 Report

As Required by

Section 98.1046, Health and Safety Code

Department of State Health Services February 2018



Texas Department of State Health Services

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1. Executive Summary

Public reporting of Potentially Preventable Readmissions (PPR) for non-exempt hospitals is required by the Texas Legislature under Health and Safety Code, Chapter <u>98.1046</u> (S.B. 7, 82nd Legislature, First Called Session, 2011).

A PPR is a readmission (return hospitalization) to an acute care hospital following a prior acute care admission within a specified time interval, for a reason that is clinically related to the initial hospitalization.

PPRs are increasingly viewed as an indicator of healthcare quality, based on the expectation that PPRs could have been prevented with quality care during the initial admission, adequate post-discharge planning and follow-up, or improved coordination between inpatient and outpatient healthcare services.¹

- In 2014, slightly over five percent (5.4%) of at-risk admissions in Texas hospitals were followed by one or more PPRs.
- Approximately 77.8% of Texas hospitals (n=323) had a number of PPR chains* that was lower than or equal to the expected number and 22.2% of hospitals (n=92) had more PPR chains than expected.
- Approximately 53.0% of Texas hospitals (n=220) had a number of PPR chains that was lower than or equal to the statewide average of 5.4 PPR chains per 100 at-risk admissions.
- Approximately 47.0% of hospitals (n=195) had a higher number of PPR chains per 100 at-risk admissions than the statewide average.

^{*}A PPR chain is a sequence of readmissions (PPR events) that are all clinically related to the same initial hospitalization.

2. Introduction

A Potentially Preventable Readmission (PPR) is a readmission (return hospitalization) to an acute care hospital following a prior acute care admission within a specified time interval, for a reason that is clinically related to the initial hospitalization.

The Department of State Health Services (DSHS) is required by Section 98.1046, Texas Health and Safety Code, to publicly report information on Texas hospitals regarding risk-adjusted outcome rates for PPRs. The outcome rates are determined by DSHS to be the most effective measures of quality and efficiency. In publishing the report, DSHS may not disclose the identity of a patient or health care professional.

PPRs are increasingly viewed as an indicator of healthcare quality, based on the expectation that PPRs could have been prevented with quality care during the initial admission, adequate post-discharge planning and followup, or improved coordination between inpatient and outpatient healthcare services.

3. Background

All initial hospital admissions are considered at risk for PPR, with the exception of transfer admissions, non-acute care admissions, and other admissions meeting the exclusion criteria listed in the 3M[™] PPR Methodology. (See <u>Appendix B: Methods</u> for a list of exclusion criteria.)

A PPR chain is a sequence of readmissions (PPR events) that are all related to the same initial hospitalization. A PPR chain may contain an initial admission and only one PPR event (the most common situation) or may contain multiple PPR events following the initial admission.

The data presented in this report are based on a 30-day readmission interval, as defined by the 3M[™] Methodology². The first PPR to occur within a 30-day readmission interval opens a PPR chain. Once a PPR chain is opened, any subsequent PPRs that are clinically related to the initial admission are considered part of the chain, even if they occur beyond the 30-day window.

Factors that may influence the occurrence of PPRs include:

- Quality of care rendered during the initial hospital stay³
- Coordination between the inpatient and outpatient healthcare teams⁴
- Quality of medical care following discharge⁵
- Underlying health conditions that were not treated during the initial hospitalization⁶
- Preventable complications that developed after discharge

This report used the 3M[™] PPR Methodology to identify admissions at risk for PPR. Statewide and hospital-specific PPRs were identified based on a 30-day readmission interval. Statewide aggregate statistics provided in this report include the total number of PPR chains and PPR events at the state level. Hospital-specific information, including actual and risk-adjusted PPR numbers, are reported as well. As per the 3M[™] PPR Methodology, statewide

and hospital-specific PPR numbers were calculated using the number of PPR chains, rather than the number of PPR events (<u>Appendix B: Methods</u>).

Analyses were conducted using the *Texas Hospital Inpatient Discharge Research Data File, 2014* (Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. August, 2015)⁷ collected by the Texas Health Care Information Collection program (THCIC) overseen by DSHS. The underlying data were collected in accordance with <u>Chapter 108</u>, <u>Health and Safety Code (HSC)</u>.

4. Results

Calculation Method Overview

In 2014, a total of 2,947,191 admission records were captured from 637 hospitals in Texas. The records went through a series of steps to cleanse the data (<u>Appendix B: Methods</u>). After data cleansing and processing, 81.6% of the total records were included in the PPR analysis, which accounted for 2,405,193 records (i.e., inpatient admissions) from 415 hospitals.

This report used the 3M[™] PPR Methodology to identify admissions at risk for PPR. The number of admissions at risk includes all initial admissions that are at risk for potentially preventable readmissions, excluding admissions meeting the criteria for exclusion as listed in the 3M PPR Methodology. Statewide and hospital-specific PPRs were identified based on a 30-day readmission interval. Statewide aggregate statistics provided in this report include the total number of PPR chains and PPR events at the state level. Hospital-specific information, including actual and risk-adjusted PPR numbers, are reported as well.

According to the 3M[™] PPR methodology, the overall PPR summary statistic is expressed as a percentage (i.e., number of occurrences per 100 events), calculated by dividing the number of PPR chains by the number of admissions at risk and multiplying by 100.

In order to enable comparisons of performance across hospitals, hospital PPR results were risk-adjusted using $3M^{\text{TM}}$ All Patient Refined Diagnosis-Related Groups (APR-DRGs), a diagnosis and procedure code classification system for inpatient services. This classification system is designed to reflect the clinical complexity and severity of each case. For each hospital, the actual-to-expected ratio was calculated as the actual number of PPR chains divided by the risk-adjusted number of PPR chains (<u>Appendix B: Methods</u>).

Results Overview

Of the 2,405,193 inpatient admissions included in the 2014 PPR analysis, 1,989,311 were classified as admissions at risk for PPR by the $3M^{\text{TM}}$ PPR methodology. Of these, a total of 107,769 PPR chains were identified, resulting in a statewide average of approximately 5.4 PPR chains per 100 atrisk admissions. Most of the 107,769 PPR chains comprised only one PPR event. However, the average number of PPR events per chain was 1.3, for a total of 138,015 PPR events.

<u>Table 1</u> shows the number and percent of hospitals grouped by actual-to-expected ratios. The categories used (e.g., "lower than expected," "about as expected," "higher than expected") follow the methodology of the Texas Medicaid PPR reports⁸. In 2014, 415 hospitals were included in the statewide PPR analysis. Approximately 77.9% of hospitals (n=323) performed about as expected or had fewer PPR chains than expected, whereas 22.1% of hospitals (n=92) had more PPR chains than expected.

Among the 415 hospitals included in the analysis, 220 (53.0%) had a number of PPR chains per 100 at-risk admissions that was lower than or equal to the statewide average of 5.4, and 195 (47.0%) had a number of PPR chains per 100 at-risk admissions that was higher than the statewide average. Seventy-five percent of hospitals had fewer than 7.0 PPR chains per 100 at-risk admissions. (See <u>Appendix A: Table A1</u> for additional details.)

Table 1: Number and Percentage of Hospitals by PPR Actual-to-Expected Ratio, Texas, 2014

Actual-to- Expected Ratio	Actual-to-Expected Ratio Interpretation	Number of Hospitals	% of Hospitals
less than 0.75	Much lower than expected	104	25.1%
0.75-0.89	Lower than expected	71	17.1%
0.90-1.10	About as expected	148	35.6%
1.11-1.25	Higher than expected	58	14.0%
more than 1.25	Much higher than expected	34	8.2%
	Total Hospitals	415	100.0%

Source: *Texas Hospital Inpatient Discharge Research Data File, 2014*. Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. August, 2015.

Detailed PPR performance indicators for each hospital are presented in <u>Appendix A: Table A2</u>. In <u>Table A2</u>, hospitals with fewer than 40 admissions at risk or fewer than 5 PPR chains were masked for some statistics to protect patient confidentiality under HSC Section <u>98.1046(c)</u>.

<u>Appendix A: Figure A1</u> shows the distribution of Actual-to-Expected Ratios for Texas hospitals in 2014. As shown in <u>Figure A1</u>, over 75% of hospitals had an Actual-to-Expected Ratio less than 1.1.

5. Conclusion

The 2014 Texas Hospital Inpatient Discharge Database was used for preparing the results presented in this report. Of the 1,989,311 at-risk-admissions identified in the database, 5.4% were followed by one or more PPRs.

The current findings are comparable to those from other published reports^{3,6,8} and they suggest that PPRs continue to be prevalent. The reader should be aware that this report is cross sectional in nature, using only calendar year 2014 data. The number of PPRs and the PPR rate will vary from hospital to hospital and year by year, and the 3M™ methodology utilized in this report accounts for differences in severity of illness, age, and other patient characteristics that have a certain amount of predictability, thus providing a certain degree of comparability between facilities. However, other characteristics affecting patient outcomes are not accounted for, such as patient motivation and environmental or social factors, such as lifestyle, diet, and exercise.⁹

The Department of State Health Services will continue to calculate PPRs for Texas hospitals each year to enable comparisons over time, using the same methodology. The reader is advised to be aware that attempting any comparison of the PPR results in this report with those based on data from other states or national databases may not be valid or correct, due to potential differences in the way data are collected, prepared, and analyzed.

List of Acronyms

Acronym	Full Name
AIDS	Acquired Immune Deficiency Syndrome
APR-DRG	All-Payer Refined - Diagnosis Related Group
CHS	Center for Health Statistics
CMS	Centers for Medicare and Medicaid Services
DSHS	Department of State Health Services
HIV	Human Immunodeficiency Virus
HSC	Health and Safety Code
MH/SA	Mental Health / Substance Abuse
PPR	Potentially Preventable Readmission
RDF	Research Data File
SOI	Severity of Illness
THCIC	Texas Health Care Information Collection

Appendix A: Tables

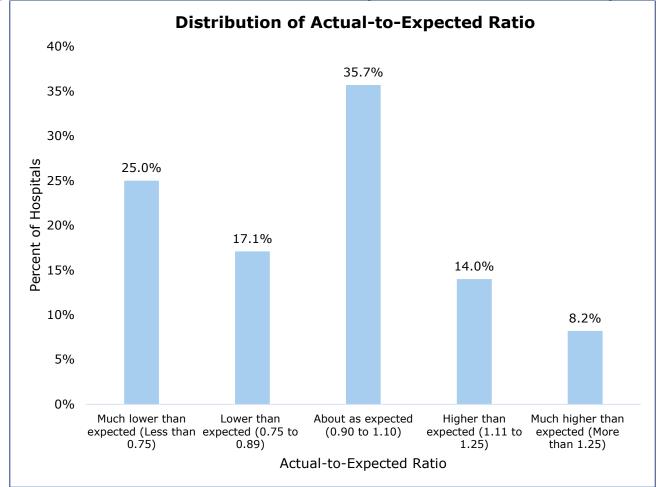
Table A1: PPR Performance Indicators for Texas Hospitals, 2014

Admissions at Risk	Actual PPR Chains	PPR Events	PPR Chains/ 100 At-risk Admissions	Actual-to- Expected Ratio
1,989,311	107,769	138,015	5.4	1.00

Source: *Texas Hospital Inpatient Discharge Research Data File, 2014*. Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. August, 2015.

Note: Table A1 shows statewide totals and/or averages for all indicators.

Figure A1: Distribution of PPR Actual-to-Expected Ratio for Texas Hospitals, 2014



Source: *Texas Hospital Inpatient Discharge Research Data File*, 2014. Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. August, 2015.

Table A2: Hospital-Level PPR Performance Indicators and Actual-to-Expected Ratios, Texas, 2014

Notes: (a). The number of initial admissions at risk for a PPR, excluding admissions meeting the criteria for exclusions as listed in the 3M PPR Methodology. (b). Admissions with one or more return admissions that are clinically related to a prior/initial admission, where the first readmission in the chain occurs within a 30-day interval. (c). Risk-adjusted PPR chains per 100 atrisk admissions. (d). The ratio of the actual PPRs to expected PPRs. To protect patient confidentiality, admissions-at-risk fewer than 40 and PPR chains fewer than 5 were masked [/v].

Hospital County	Metropolitan/ Micropolitan Statistical Area (MSA)	Hospital Name	THCIC ID	Admissions At Risk ^a	Actual PPR Chains ^b	PPR Chains/ 100 Admits ^c	Actual- to- Expected Ratio ^d	Actual-to- Expected Ratio Interpretation
Anderson	Palestine, TX	Palestine Regional Medical Center	629001	4,116	282	6.64	1.02	About as expected
Angelina	Lufkin, TX	CHI St Lukes Health Memorial Lufkin	129000	5,054	296	7.97	0.68	Much lower than expected
		Woodland Heights Medical Center	481000	4,718	205	5.46	0.83	Lower than expected
Atascosa	San Antonio- New Braunfels, TX	South Texas Regional Medical Center	334002	1,271	67	5.41	0.86	Lower than expected
Austin	Houston-The Woodlands- Sugar Land, TX	CHI St Joseph Health Bellville Hospital	552000	104	8	6.56	1.57	Much higher than expected
Bastrop	Austin-Round Rock, TX	Seton Smithville Regional Hospital	424500	197	10	8.71	0.63	Much lower than expected
Вее	Beeville, TX	CHRISTUS Spohn Hospital-Beeville	429001	1,808	113	5.77	1.02	About as expected
Bell	Killeen-Temple, TX	Baylor Scott & White McLane Childrens Medical Center	537006	1,808	27	4.49	0.20	Much lower than expected
		Cedar Crest Hospital	806002	1,787	192	8.49	1.13	Higher than expected
		Metroplex Hospital	397001	5,339	255	5.05	0.88	Lower than expected
		Scott & White Medical Center Temple	537000	15,986	435	7.18	0.32	Much lower than expected

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Bell	Killeen-Temple, TX	Seton Medical Center Harker Heights	971000	3,284	132	4.80	0.78	Lower than expected
Bexar	San Antonio- New Braunfels,	Baptist Emergency Hospital Hausman	101100	Iv	lv	3.26	0.79	Lower than expected
	TX	Baptist Emergency Hospital Overlook	972810	Iv	lv	4.17	1.65	Much higher than expected
		Baptist Emergency Hospital Thousand Oaks	647000	Iv	lv	3.44	2.01	Much higher than expected
		Baptist Emergency Hospital Westover Hills	973000	lv	lv	4.21	0.33	Much lower than expected
		Baptist Medical Center	114001	13,708	1,062	7.66	0.99	About as expected
		CHRISTUS Santa Rosa Alamo Hts (open 6/2/14)	973930	203	6	3.81	0.70	Much lower than expected
		CHRISTUS Santa Rosa Hospital-Westover Hills	339002	7,122	407	6.22	0.98	About as expected
		CHRISTUS Santa Rosa Medical Center	339001	3,190	294	8.99	0.96	About as expected
		CHRISTUS Santa Rosa Alamo Hts (closed 6/2/14)	339003	lv	lv	4.26	0.80	Lower than expected
		Childrens Hospital of San Antonio	634000	3,636	108	3.53	0.85	Lower than expected
		Clarity Child Guidance Center	737000	1,033	121	7.66	1.34	Much higher than expected
		Forest Park Medical Center at San Antonio	974250	lv	lv	4.24	0.00	Much lower than expected
		Foundation Surgical Hospital-San Antonio	852100	659	24	3.54	0.86	Lower than expected
		Methodist Ambulatory Surgery Hospital- Northwest	681001	391	9	2.87	0.71	Much lower than expected
		Methodist Hospital	154000	29,259	1,320	4.76	0.92	About as expected

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Bexar	San Antonio- New Braunfels, TX	Methodist Specialty & Transplant Hospital	154001	6,228	640	9.28	1.12	Higher than expected
		Methodist Stone Oak Hospital	874100	8,847	408	4.70	0.95	About as expected
		Methodist Texsan Hospital	154003	2,364	173	7.59	0.88	Lower than expected
		Metropolitan Methodist Hospital	283000	14,337	634	4.29	0.99	About as expected
		Mission Trail Baptist Hospital	081001	4,932	393	9.17	0.90	About as expected
		Nix Health Care System	396002	6,558	700	10.40	0.97	About as expected
		North Central Baptist Hospital	677001	14,715	473	3.60	0.86	Lower than expected
		Northeast Baptist Hospital	134001	10,466	676	6.58	0.93	About as expected
		Northeast Methodist Hospital	154002	5,365	429	8.06	1.04	About as expected
		Select Specialty Hospital- San Antonio	719300	50	7	13.30	0.89	Lower than expected
		South Texas Spine & Surgical Hospital	786800	854	34	3.70	1.05	About as expected
		Southwest General Hospital	228001	7,475	459	5.33	1.09	About as expected
		St Lukes Baptist Hospital	503001	13,074	510	3.92	0.91	About as expected
		University Hospital	158000	18,676	1,076	6.17	0.88	Lower than expected
		Victory Medical Center Landmark	209100	421	17	4.19	0.66	Much lower than expected
		Victory Medical Center Southcross	820600	lv	lv	5.03	4.80	Much higher than expected
Bowie	Texarkana, TX- AR	CHRISTUS St Michael Health System	788001	10,330	676	6.67	1.00	About as expected

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Bowie	Texarkana, TX- AR	Wadley Regional Medical Center	144000	6,088	321	5.52	1.06	About as expected
Brazoria	Houston-The Woodlands-	CHI St Lukes Health Brazosport	436000	3,834	248	5.80	1.07	About as expected
	Sugar Land, TX	Sweeny Community Hospital	178000	136	15	9.87	0.70	Much lower than expected
		UTMB Angleton Danbury Medical Center	126000	1,742	88	3.99	1.17	Higher than expected
Brazos	College Station-Bryan,	Baylor Scott & White Hospital College Station	206100	3,237	49	4.29	0.28	Much lower than expected
	TX	College Station Medical Center	071000	5,028	215	4.22	1.00	About as expected
		Physicians Centre Hospital	717500	277	8	3.52	0.63	Much lower than expected
		St Joseph Regional Health Center	002001	11,450	760	6.38	0.89	Lower than expected
Brewster	Not Available	Big Bend Regional Medical Center	711900	703	31	4.01	0.86	Lower than expected
Brown	Brownwood, TX	Brownwood Regional Medical Center	058000	3,133	178	5.17	0.97	About as expected
Burleson	College Station-Bryan, TX	Burleson St Joseph Health Center-Caldwell	679000	70	5	7.40	0.69	Much lower than expected
Burnet	Not Available	Seton Highland Lakes Hospital	559000	776	62	7.31	0.98	About as expected
Caldwell	Austin-Round Rock, TX	Seton Edgar B Davis Hospital	597000	453	39	7.84	0.89	Lower than expected
Calhoun	Port Lavaca, TX	Memorial Medical Center	487000	757	52	6.16	0.92	About as expected
Cameron	Brownsville-	Harlingen Medical Center	788002	4,440	218	5.84	0.90	About as expected
	Harlingen, TX	Valley Baptist Medical Center	400000	13,475	771	5.39	1.10	About as expected

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Cameron	Brownsville- Harlingen, TX	Valley Baptist Medical Center-Brownsville	314001	8,976	524	5.41	1.17	Higher than expected
		Valley Regional Medical Center	019000	9,280	444	4.10	1.22	Higher than expected
Camp	Not Available	East Texas Medical Center-Pittsburg	438000	606	47	8.60	0.74	Much lower than expected
Cass	Not Available	Christus St Michael Hospital Atlanta	788003	463	48	10.10	1.09	About as expected
		Good Shepherd Medical Center-Linden	822100	lv	lv	7.56	4.04	Much higher than expected
Cherokee	Jacksonville, TX	Christus Mother Frances Hospital-Jacksonville	725400	571	52	8.13	0.83	Lower than expected
		East Texas Medical Center-Jacksonville	416000	1,722	89	4.40	1.24	Higher than expected
Childress	Not Available	Childress Regional Medical Center	026000	761	11	3.44	0.45	Much lower than expected
Coleman	Not Available	Coleman County Medical Center	049000	459	45	6.04	1.59	Much higher than expected
Collin	Dallas-Fort Worth- Arlington, TX	Baylor Emergency Medical Center at Murphy	973550	lv	lv	4.42	4.13	Much higher than expected
		Baylor Scott & White Medical Center Centennial	806300	3,477	165	4.67	1.01	About as expected
		Baylor Scott & White Medical Center McKinney	971900	6,101	252	3.81	1.04	About as expected
		Baylor Scott & White Medical Center-Frisco	787400	6,237	52	1.38	0.55	Much lower than expected
		Baylor Scott & White Medical Center-Plano	814001	4,064	298	7.94	0.96	About as expected
		Bush Renner	549001	4,323	167	4.18	0.91	About as expected

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Collin	Dallas-Fort Worth- Arlington, TX	Childrens Medical Center Plano	143001	1,441	58	4.52	1.03	About as expected
		Columbia Medical Center-McKinney	246000	6,924	556	7.17	1.07	About as expected
		Forest Park Medical Center Frisco	971800	504	15	4.46	0.60	Much lower than expected
		Heart Hospital Baylor Plano	844000	3,203	247	9.60	0.76	Lower than expected
		Medical Center-Plano	214000	13,204	673	5.22	0.93	About as expected
		Methodist McKinney Hospital	937000	536	21	3.65	1.02	About as expected
		Star Medical Center	973390	lv	lv	5.18	0.12	Much lower than expected
		Texas Health Center- Diagnostics & Surgery Plano	815300	490	9	3.89	0.29	Much lower than expected
		Texas Health Presbyterian Hospital Allen	724200	2,615	120	4.55	1.06	About as expected
		Texas Health Presbyterian Hospital- Plano	664000	13,921	443	3.63	0.84	Lower than expected
		Victory Medical Center Craig Ranch	856400	lv	lv	4.26	0.37	Much lower than expected
		Victory Medical Center Plano	972910	378	16	4.08	0.75	Lower than expected
Collingsworth	Not Available	Collingsworth General Hospital	195000	92	6	5.50	1.06	About as expected
Colorado	Not Available	Columbus Community Hospital	014000	1,034	55	5.47	0.83	Lower than expected
		Rice Medical Center	560000	218	10	5.51	0.74	Much lower than expected

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Comal	San Antonio- New Braunfels,	Baptist Emergency Hospital Schertz	973120	Iv	lv	4.08	0.90	About as expected
	TX	CHRISTUS Santa Rosa Hospital New Braunfels	863300	3,841	191	5.96	0.86	Lower than expected
		Resolute Health	973850	403	9	3.58	0.92	About as expected
Comanche	Not Available	Comanche County Medical Center	495001	365	34	7.71	1.16	Higher than expected
Coryell	Killeen-Temple, TX	Coryell Memorial Hospital	346000	351	19	7.00	0.78	Lower than expected
Culberson	Not Available	Culberson Hospital	139000	lv	lv	5.66	0.96	About as expected
Dallas	Dallas-Fort Worth- Arlington, TX	Baylor Heart & Vascular Center	784400	1,554	106	8.72	0.86	Lower than expected
		Baylor Medical Center at Uptown	008001	975	20	3.47	0.55	Much lower than expected
		Baylor Scott & White Medical Center Sunnyvale	919000	3,992	183	5.10	0.93	About as expected
		Baylor Scott & White Medical Center White Rock	511000	5,451	325	5.91	0.91	About as expected
		Baylor Scott & White Medical Center-Garland	027000	5,588	476	8.74	0.92	About as expected
		Baylor Scott & White Medical Center-Irving	300000	8,958	476	5.11	0.98	About as expected
		Baylor Surgical Hospital at Las Colinas	799500	550	13	2.99	1.06	About as expected
		Baylor University Medical Center	331000	25,351	1,433	5.96	0.99	About as expected
		Childrens Medical Center-Dallas	143000	10,908	603	5.90	1.08	About as expected
		Crescent Medical Center Lancaster	973180	171	9	7.86	0.83	Lower than expected

Hospital County	Metropolitan/ Micropolitan Statistical Area (MSA)	Hospital Name	THCIC ID	Admissions At Risk ^a	Actual PPR Chains ^b	PPR Chains/ 100 Admits ^c	Actual- to- Expected Ratio ^d	Actual-to- Expected Ratio Interpretation
Dallas	Dallas-Fort Worth-	Dallas Medical Center	449000	3,236	207	5.89	1.47	Much higher than expected
	Arlington, TX	Dallas Regional Medical Center	315003	1,859	93	8.64	0.58	Much lower than expected
		Forest Park Medical Center	900000	1,675	87	5.28	0.98	About as expected
		HealthSouth Rehab Hospital Dallas	680001	Iv	lv	6.66	0.00	Much lower than expected
		Las Colinas Medical Center	814000	4,766	130	3.42	0.64	Much lower than expected
		Medical City Dallas Hospital	340000	19,892	919	4.84	0.95	About as expected
		Methodist Charlton Medical Center	142000	10,712	688	6.25	1.11	Higher than expected
		Methodist Dallas Medical Center	255000	13,454	654	5.00	1.04	About as expected
		Methodist Hospital for Surgery	750000	1,931	66	4.11	0.86	Lower than expected
		Methodist Richardson Medical Center	549000	1,598	109	6.55	1.19	Higher than expected
		North Central Surgical Center	860600	1,080	15	3.19	0.27	Much lower than expected
		Our Childrens House Baylor	710000	213	7	6.50	0.61	Much lower than expected
		Parkland Memorial Hospital	474000	31,082	1,281	3.98	1.06	About as expected
		Pine Creek Medical Center	818200	994	41	3.47	1.11	Higher than expected
		Texas Health Presbyterian Hospital Dallas	431000	21,279	905	4.60	0.90	About as expected

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Dallas	Dallas-Fort Worth- Arlington, TX	Texas Institute for Surgery-Texas Health Presbyterian-Dallas	813100	328	5	3.10	0.31	Much lower than expected
		Texas Scottish Rite Hospital for Children	054000	698	23	3.84	0.79	Lower than expected
		UT Southwestern University Hospital-St Paul	448001	11,033	864	6.87	1.22	Higher than expected Lower than expected About as expected About as expected
		UT Southwestern University Hospital-Zale Lipshy	653001	3,477	219	6.56	0.84	
		University General Hospital Dallas	908000	673	55	9.02	0.90	About as expected
		Walnut Hill Medical Center	973750	551	50	7.97	1.10	About as expected
Denton	Dallas-Fort Worth-	Baylor Emergency Medical Center at Aubrey	873200	Iv	lv	3.92	0.00	Much lower than expected
	Arlington, TX	Baylor Medical Center Trophy Club	805100	424	19	3.84	1.30	Much higher than expected
		Baylor Scott & White Medical Center Carrollton	042000	5,406	236	4.56	0.99	About as expected
		Denton Regional Medical Center	336001	7,144	476	6.16	1.09	About as expected
		Medical Center-Lewisville	394000	5,652	254	4.84	1.03	About as expected
		Texas Health Presbyterian Hospital Flower Mound	943000	4,478	147	3.56	0.99	About as expected
		Texas Health Presbyterian Hospital- Denton	820800	7,748	347	4.55	0.87	Lower than expected
		The Heart Hospital Baylor Denton	208100	230	11	7.33	0.84	Lower than expected

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Ector	Odessa, TX	Basin Healthcare Center	938000	Iv	lv	3.84	1.88	Much higher than expected
		Medical Center Hospital	181000	11,211	660	5.52	1.01	About as expected
		Odessa Regional Medical Center	425000	6,449	166	2.66	0.94	About as expected
El Paso	El Paso, TX	Del Sol Medical Center	319000	13,493	772	5.19	1.05	About as expected
		El Paso Childrens Hospital	969700	2,594	95	3.66	1.18	Higher than expected
		El Paso Specialty Hospital	728200	530		Lower than expected		
		Foundation Surgical Hospital of El Paso	801300	591	16	4.31	0.64	Much lower than expected
		Las Palmas Medical Center	180000	8,169	355	4.36	0.97	About as expected
		The Hospitals of Providence East Campus	865000	8,210	458	5.02	1.18	Higher than expected
		The Hospitals of Providence Memorial Campus	130000	15,183	674	4.25	1.03	About as expected
		The Hospitals of Providence Sierra Campus	266000	8,693	543	5.90	1.12	Higher than expected
		University Medical Center of El Paso	263000	14,663	659	4.43	1.10	About as expected
Ellis	Dallas-Fort Worth- Arlington, TX	Baylor Scott & White Medical Center Waxahachie	285000	2,193	156	8.13	0.85	Lower than expected
	- ,	Ennis Regional Medical Center	714500	1,905	55	3.43	0.79	Lower than expected
Erath	Stephenville, TX	Texas Health Harris Methodist Hospital- Stephenville	256000	1,756	79	4.10	1.02	About as expected

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Fannin	Not Available	TMC Bonham Hospital	106001	382	34	10.00	0.78	Lower than expected
Fayette	Not Available	St Marks Medical Center	823400	1,300	37	5.11	0.60	Much lower than expected
Fort Bend	end Houston-The Woodlands- Sugar Land, TX	Emerus Hospital	916000	lv	lv	4.22	0.00	Much lower than expected
		Hospital for Surgical Excellence of Oakbend Medical Center	230002	lv	lv	3.18	0.00	Much lower than expected
		Houston Methodist Sugar Land Hospital	823000	13,396	755	5.13	1.15	Higher than expected
		Memorial Hermann Katy Hospital	534001	9,380	436	4.70	1.07	About as expected
		Memorial Hermann Sugar Land	609001	5,277	244	4.50	1.01	About as expected
		Memorial Hermann Surgical Hospital First Colony	790500	292	13	3.22	1.24	Higher than expected
		Oakbend Medical Center	230000	1,567	152	10.10	0.91	About as expected
		Oakbend Medical Center (Southwest Freeway)	230001	2,939	48	2.04	0.58	Much lower than expected
		St Lukes Sugar Land Hospital	869700	1,901	168	8.47	1.20	Higher than expected
Franklin	Not Available	East Texas Medical Center-Mount Vernon	282000	365	33	7.88	1.00	About as expected
Freestone	Not Available	East Texas Medical Center-Fairfield	401000	299	26	9.09	1.02	About as expected
Frio	Not Available	Nix Community General Hospital	973150	lv	lv	6.63	1.03	About as expected
Galveston	Houston-The Woodlands- Sugar Land, TX	Mainland Medical Center	793000	5,144	525	8.43	1.28	Much higher than expected

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Galveston	Houston-The Woodlands-	Shriners Hospital for Children-Galveston	247000	lv	lv	1.31	1.29	Much higher than expected
	Sugar Land, TX	UT Medical Branch Hospital	000102	21,030	1,099	4.44	1.15	Higher than expected
Gillespie	Fredericksburg, TX	Hill Country Memorial Hospital	219000	2,589	93	5.18	0.60	Much lower than expected
Gray	Pampa, TX	Pampa Regional Medical Center	832900	1,408	89	6.40	0.96	About as expected
Grayson	Sherman- Denison, TX	Heritage Park Surgical Hospital	100076	236	5	4.04	0.22	Much lower than expected
		Texoma Medical Center	847000	9,059	641	6.75	1.11	Higher than expected
		Wilson N Jones Regional Medical Center	297000	3,127	204	8.18	0.72	Much lower than expected
Gregg	Longview, TX	Allegiance Specialty Hospital-Kilgore	031001	199	22	13.20	0.90	About as expected
		CHRISTUS Good Shepherd Medical Center-Longview	029000	12,172	846	6.39	1.08	About as expected
		Longview Regional Medical Center	525000	7,424	314	4.57	0.98	About as expected
Grimes	Not Available	CHI St Joseph Health Grimes Hospital	728800	124	15	8.96	1.41	Much higher than expected
Guadalupe	San Antonio- New Braunfels, TX	Guadalupe Regional Medical Center	155000	3,447	147	4.66	0.76	Lower than expected
Hale	Plainview, TX	Covenant Hospital- Plainview	146000	1,845	81	4.34	0.95	About as expected
Harris	Houston-The Woodlands-	Altus Baytown Hospital	973860	lv	lv	3.28	0.24	Much lower than expected
	Sugar Land, TX	Bay Area Regional Med Ctr	973960	493	35	7.25	1.01	About as expected
		Bayshore Medical Center	349001	11,317	623	5.46	1.05	About as expected

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Harris	Houston-The Woodlands- Sugar Land, TX	CHI St Lukes Health Baylor College of Medicine Medical Center	118000	17,639	1,666	8.56	1.12	Higher than expected
		Clear Lake Regional Medical Center	212000	18,510	964	4.95	1.08	About as expected
		Cypress Creek Hospital	744001	2,891	233	8.38	0.87	Lower than expected
		Cypress Fairbanks Medical Center	606000	9,090	313	3.06	1.22	Higher than expected
		East Houston Regional Medical Center	458001	7,004	364	4.57	1.21	Higher than expected
		Emerus Community Hospital	973600	Iv	lv	4.05	0.70	Much lower than expected
		First Nobilis Hospital	974450	Iv	lv	4.71	2.16	Much higher than expected
		First Surgical Hospital	840100	336	12	4.10	1.18	Higher than expected
		Harris Health System Ben Taub Hospital	459000	20,158	1,148	5.47	1.00	About as expected
		Harris Health System Lyndon B Johnson Hospital	384000	11,483	556	4.99	1.08	About as expected
		HealthBridge Childrens Hospital-Houston	712500	lv	lv	7.75	0.00	Much lower than expected
		Houston Hospital for Specialized Surgery	758000	lv	lv	3.84	0.80	Lower than expected
		Houston Methodist Hospital	124000	25,264	2,282	8.48	1.11	Higher than expected
		Houston Methodist San Jacinto Hospital	405000	9,847	655	6.32	1.12	Higher than expected
		Houston Methodist St Catherine Hospital	973620	lv	lv	13.60	0.31	Much lower than expected

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Harris	Houston-The Woodlands-	Houston Methodist St John Hospital	973640	4,537	319	6.70	0.99	About as expected		
	Sugar Land, TX	Houston Methodist West Hospital	800010	9,852	465	4.58	1.11	Higher than expected		
		Houston Methodist Willowbrook Hospital	724700	14,074	827	5.13	1.17	Higher than expected		
		Houston Northwest Medical Center	229000	16,078	781	4.24	1.21	Higher than expected		
				Houston Orthopedic & Spine Hospital	831900	1,785	83	3.51	1.14	Higher than expected
		Houston Physicians Hospital	822001	438	10	3.01	0.61	Much lower than expected		
		Humble Surgical Hospital	901100	lv	lv	3.77	0.00	Much lower than expected		
		Kindred Hospital East Houston	720400	lv	lv	11.20	0.38	Much lower than expected		
		Memorial Hermann Greater Heights Hospital	172000	10,601	634	5.88	1.10	About as expected		
		Memorial Hermann Hospital	347000	31,015	1,898	5.41	1.11	Higher than expected		
		Memorial Hermann Memorial City Medical Center	302000	18,895	924	5.11	0.99	About as expected		
		Memorial Hermann Northeast	847100	9,685	704	6.94	1.09	About as expected		
		Memorial Hermann Southeast Hospital	119000	12,551	913	6.99	1.13	Higher than expected		
		Memorial Hermann Southwest Hospital	407000	16,913	866	5.38	0.99	About as expected		
		Memorial Hermann Specialty Hospital Kingwood	813800	198	8	2.60	1.10	About as expected		

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Harris	Houston-The Woodlands-	North Cypress Medical Center	843200	6,750	620	7.64	1.16	Higher than expected	
	Sugar Land, TX	Park Plaza Hospital	390000	2,621	210	8.06	1.08	About as expected	
		Red Oak Hospital	970160	lv	lv	3.48	0.00	Much lower than expected	
		Riverside General Hospital	460000	168	9	5.41	0.81	Lower than expected	
		Shriners Hospitals for Children	526000	270	5	2.85	0.93	About as expected	
				Spring Central Hospital	973330	Iv	lv	3.37	3.74
		St Anthonys Hospital	909000	lv	lv	9.16	0.93	About as expected	
		St Joseph Medical Center	838600	14,973	610	4.29	1.02	About as expected	
		St Joseph Medical Center-Heights	973100	653	69	9.89	1.45	Much higher than expected	
		St Lukes Hospital at the Vintage	740000	2,657	165	6.29	0.84	Lower than expected	
		St Lukes Patients Medical Center	846100	2,677	218	8.27	0.88	Lower than expected	
		Surgery Specialty Hospitals of America- Southeast Houston	694100	lv	lv	3.59	0.40	Much lower than expected	
		TOPS Surgical Specialty Hospital	674000	657	19	3.42	0.71	Much lower than expected	
		Texas Childrens Hospital	117000	12,979	740	5.77	1.15	Higher than expected	
		Texas Childrens Hospital West Campus	117002	1,586	74	4.75	1.09	About as expected	
		Texas Childrens Hospital- Pavilion for Women	117100	9,822	95	0.73	1.08	About as expected	

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Harris	Houston-The Woodlands-	Texas Orthopedic Hospital	792000	3,061	65	3.61	0.47	Much lower than expected
	Sugar Land, TX	Tomball Regional Medical Center	076000	7,466	523	6.85	1.02	About as expected
		UT MD Anderson Cancer Center	000105	6,550	449	6.98	0.84	Lower than expected
		United Memorial Medical Center	030000	744	69	7.90	0.94	About as expected
		University General Hospital	840200	2,139	177	7.58	1.06	About as expected
		Victory Medical Center Houston	945500	443	17	3.72	0.87	Lower than expected
		Victory Surgical Hospital East Houston	972970	Iv	lv	3.47	0.24	Much lower than expected
		West Houston Medical Center	337001	11,309	573	4.92	1.11	Higher than expected
		Westside Surgical Hospital	101300	Iv	lv	2.90	0.35	Much lower than expected
		Womans Hospital-Texas	007000	19,531	207	0.78	1.23	Higher than expected
Harrison	Marshall, TX	CHRISTUS Good Shepherd Medical Center-Marshall	020000	3,199	208	6.32	1.17	Higher than expected
Haskell	Not Available	Haskell Memorial Hospital	572000	lv	lv	7.77	0.35	Much lower than expected
Hays	Austin-Round Rock, TX	Central Texas Medical Center	556000	3,857	182	4.58	0.92	About as expected
	,	Seton Medical Center Hays	921000	5,377	338	6.16	0.93	About as expected
Henderson	Athens, TX	East Texas Medical Center-Athens	374000	4,895	310	5.17	1.12	Higher than expected

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Hidalgo	McAllen- Edinburg- Mission, TX	Cornerstone Regional Hospital	830000	554	14	2.71	0.64	Much lower than expected
	MISSION, TA	Doctors Hospital- Renaissance	797100	30,938	1,287	3.81	1.17	Higher than expected
		Edinburg Regional Medical Center	140002	4,620	234	4.93	1.35	Much higher than expected
		Knapp Medical Center	480000	7,735	356	4.91	1.57	Much higher than expected
		McAllen Medical Center	802001	13,933	1,280	6.98	1.59	Much higher than expected
		Mission Regional Medical Center	370000	8,162	404	4.16	1.41	Much higher than expected
		Rio Grande Regional Hospital	601000	12,021	676	4.97	1.18	Higher than expected
Hill	Not Available	Hill Regional Hospital	383000	1,137	65	5.96	0.97	About as expected
Hockley	Levelland, TX	Covenant Hospital- Levelland	307000	752	36	3.83	1.08	About as expected
Hood	Dallas-Fort Worth- Arlington, TX	Lake Granbury Medical Center	424000	2,515	120	5.38	0.74	Much lower than expected
Houston	Not Available	East Texas Medical Center-Crockett	185000	847	52	5.48	1.26	Much higher than expected
Howard	Big Spring, TX	Scenic Mountain Medical Center	221000	1,809	115	5.70	1.00	About as expected
Hunt	Dallas-Fort Worth-	Hunt Regional Community Hospital	087000	116	8	9.25	0.74	Much lower than expected
	Arlington, TX	Hunt Regional Medical Center Greenville	085000	4,130	237	5.54	1.03	About as expected
Hutchinson	Borger, TX	Golden Plains Community Hospital	654000	935	26	3.01	0.72	Much lower than expected
Jasper	Not Available	CHRISTUS Southeast Texas - Jasper Memorial	038001	1,191	65	5.70	0.97	About as expected

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Jefferson	Beaumont-Port Arthur, TX	Baptist Hospitals of Southeast Texas	389000	12,019	888	6.59	1.02	About as expected
		CHRISTUS Southeast Texas - St Elizabeth	444001	12,440	768	5.68	1.07	About as expected
		CHRISTUS Southeast Texas -St Mary	299001	2,446	149	6.04	1.12	Higher than expected
		CHRISTUS Southeast Texas Orthopedic Specialty Center	973570	lv	lv	1.95	0.00	Much lower than expected About as expected
		Medical Center- Southeast Texas	464002	6,876	422	5.78	1.06	About as expected
		Victory Medical Center Beaumont	973170	Iv	lv	3.48	0.65	Much lower than expected
Jim Wells	Alice, TX	CHRISTUS Spohn Hospital Alice	689401	2,535	168	6.12	1.14	Higher than expected
Johnson	Dallas-Fort Worth- Arlington, TX	Texas Health Harris Methodist Hospital Cleburne	323000	3,282	182	5.20	0.89	Lower than expected
Kaufman	Dallas-Fort Worth- Arlington, TX	Texas Health Presbyterian Hospital- Kaufman	303000	1,569	86	6.04	0.71	Much lower than expected
Kerr	Kerrville, TX	Peterson Regional Medical Center	406000	3,443	182	6.76	0.69	Much lower than expected
Kimble	Not Available	Kimble Hospital	205000	80	5	8.00	0.52	Much lower than expected
Kleberg	Kingsville, TX	CHRISTUS Spohn Hospital-Kleberg	216001	2,366	183	5.58	1.29	Much higher than expected
Lampasas	Killeen-Temple, TX	Rollins Brooks Community Hospital	397000	397	36	7.86	0.91	About as expected
Lavaca	Not Available	Yoakum Community Hospital	023000	668	43	7.31	0.72	Much lower than expected

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Liberty	Houston-The Woodlands-	Cleveland Regional Medical Center	108000	lv	lv	8.92	1.32	Much higher than expected
	Sugar Land, TX	Doctors Diagnostic Hospital	840400	lv	lv	11.10	4.39	Much higher than expected
		Liberty Dayton Regional Medical Center	089001	125	10	7.32	1.12	Higher than expected
Limestone	Not Available	Parkview Regional Hospital	505000	552	37	9.02	0.55	Much lower than expected
Llano	Not Available	Baylor Scott & White Medical Center Llano	476000	728	31	4.42	0.62	Much lower than expected
Lubbock	Lubbock, TX	Covenant Childrens Hospital	686000	1,432	36	4.21	0.60	Much lower than expected
		Covenant Medical Center	465000	11,404	715	9.02	0.68	Much lower than expected
		Covenant Medical Center-Lakeside	109000	5,176	78	1.95	0.81	Lower than expected
		Grace Medical Center	013001	748	17	4.48	0.48	Much lower than expected
		Lubbock Heart Hospital	801500	2,166	121	7.08	0.76	Lower than expected
		TrustPoint Hospital	865800	351	29	12.30	0.54	Much lower than expected
		University Medical Center	145000	14,772	704	5.01	0.96	About as expected
Madison	Not Available	CHI St Joseph Health Madison Hospital	041000	77	6	9.99	0.68	Much lower than expected
Matagorda	Bay City, TX	Matagorda Regional Medical Center	006000	1,931	103	4.44	1.48	Much higher than expected
		Palacios Community Medical Center	574001	lv	lv	6.32	1.02	About as expected
Maverick	Eagle Pass, TX	Fort Duncan Regional Medical Center	547001	4,245	165	4.33	1.01	About as expected

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McLennan	Waco, TX	Providence Health Center	040000	12,599	766	6.31	0.87	Lower than expected
Midland	Midland, TX	Midland Memorial Hospital	452000	11,123	486	4.74	0.89	Lower than expected
Milam	Not Available	Little River Healthcare	369000	243	14	7.12	0.75	Lower than expected
	Not Available	Little River Healthcare - Cameron Hospital	973740	Iv	lv	7.05	0.17	Much lower than expected
Mitchell	Not Available	Mitchell County Hospital	075000	291	22	6.79	1.10	About as expected
Montague	Not Available	Nocona General Hospital	348000	lv	lv	8.40	0.94	About as expected
Montgomery	Houston-The	Apollo Hospital	973440	97	7	5.34	0.97	About as expected
	Woodlands- Sugar Land, TX	Conroe Regional Medical Center	508001	10,759	834	6.81	1.17	Higher than expected
		Kingwood Medical Center	675000	13,837	847	5.34	1.22	Higher than expected
		Memorial Hermann The Woodlands Hospital	615000	15,153	653	4.16	1.06	About as expected
		St Lukes Lakeside Hospital	923000	679	19	3.76	0.78	Lower than expected
		St Lukes The Woodlands Hospital	793100	10,071	610	5.05	1.10	About as expected
		Woodlands Specialty Hospital	974150	lv	lv	3.70	3.41	Much higher than expected
Moore	Dumas, TX	Memorial Hospital	199000	729	26	4.00	0.70	Much lower than expected
Nacogdoches	Nacogdoches, TX	Nacogdoches Medical Center	392000	3,433	190	5.52	1.03	About as expected
		Nacogdoches Memorial Hospital	478000	3,434	203	4.71	1.26	Much higher than expected
Navarro	Corsicana, TX	Navarro Regional Hospital	141000	2,549	148	5.58	0.99	About as expected

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Nueces	Corpus Christi, TX	CHRISTUS Spohn Hospital Corpus Christi	398000	5,691	430	7.88	0.95	About as expected
		CHRISTUS Spohn Hospital Corpus Christi- Shoreline	398001	11,024	1,149	8.82	1.13	Higher than expected
		CHRISTUS Spohn Hospital Corpus Christi- South	398002	7,972	224	2.89	0.85	Lower than expected
		Corpus Christi Medical Center-Bay Area	703000	9,094	141	1.66	0.97	About as expected
		Corpus Christi Medical Center-Doctors Regional	703002	4,285	260	8.25	0.66	Much lower than expected
		Corpus Christi Medical Center-Heart Hospital	703003	1,289	93	8.79	0.84	Lower than expected
		Driscoll Childrens Hospital	488000	2,936	125	4.93	1.10	About as expected
		South Texas Surgical Hospital	931000	1,001	32	3.86	0.68	Much lower than expected
Orange	Beaumont-Port Arthur, TX	Baptist Orange Hospital	121000	699	52	7.49	0.80	Lower than expected
Palo Pinto	Mineral Wells, TX	Palo Pinto General Hospital	034000	1,697	102	5.03	1.15	Higher than expected
Panola	Not Available	East Texas Medical Center-Carthage	484000	619	55	7.65	0.90	About as expected
Parker	Dallas-Fort Worth- Arlington, TX	Weatherford Regional Medical Center	844800	3,072	155	5.33	0.81	Lower than expected
Polk	Not Available	CHI St Lukes Health - Memorial Livingston	466000	2,026	83	5.11	0.65	Much lower than expected
Potter	Amarillo, TX	Baptist St Anthonys Hospital	001000	16,512	957	6.22	0.91	About as expected
		Northwest Texas Hospital	318000	15,548	1,112	6.08	1.06	About as expected

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Potter	Amarillo, TX	Physicians Surgical Hospital-Panhandle Campus	852901	583	14	2.82	0.67	Much lower than expected
		Physicians Surgical Hospital-Quail Creek	852900	855	15	3.13	0.60	Much lower than expected
Randall	Amarillo, TX	Northwest Texas Surgery Center	714000	lv	lv	3.11	0.20	Much lower than expected
Red River	Not Available	East Texas Medical Center-Clarksville	292000	434	31	6.56	1.06	About as expected
Rockwall	Dallas-Fort Worth- Arlington, TX	Baylor Emergency Medical Center at Rockwall	973610	lv	lv	3.96	0.00	Much lower than expected
		Baylor Scott & White Medical Center Lake Pointe	625000	5,776	314	4.01	1.24	Higher than expected
		Texas Health Presbyterian Hospital- Rockwall	859900	3,912	157	4.28	0.89	Lower than expected
Runnels	Not Available	Ballinger Memorial Hospital District	234000	lv	lv	10.60	0.23	Much lower than expected
Rusk	Longview, TX	East Texas Medical Center Henderson	248000	1,308	87	5.39	1.28	Much higher than expected
Sabine	Not Available	Sabine County Hospital	522000	177	12	6.33	0.91	About as expected
San Augustine	Not Available	CHI St Lukes Health Memorial San Augustine	072000	222	21	8.46	1.06	About as expected
San Patricio	Corpus Christi, TX	Care Regional Medical Center	239001	810	65	10.60	0.64	Much lower than expected
Schleicher	Not Available	Schleicher County Medical Center	136000	lv	lv	7.74	1.58	Much higher than expected
Smith	Tyler, TX	Christus Mother Frances Hospital Tyler	286000	19,398	1,228	6.42	1.00	About as expected
		East Texas Medical Center	410000	15,482	1,196	7.99	1.01	About as expected

Hospital County	Metropolitan/ Micropolitan Statistical Area (MSA)	Hospital Name	THCIC ID	Admissions At Risk ^a	Actual PPR Chains ^b	PPR Chains/ 100 Admits ^c	Actual- to- Expected Ratio ^d	Actual-to- Expected Ratio Interpretation
Smith	Tyler, TX	East Texas Medical Center Specialty Hospital	777000	Iv	lv	11.00	1.09	About as expected
		Texas Spine & Joint Hospital	790200	1,755	55	3.93	0.65	Much lower than expected
		UT Health Center – Tyler	000112	1,115	109	9.90	0.95	About as expected
Starr	Rio Grande City, TX	Starr County Memorial Hospital	393000	1,215	63	4.62	1.39	Much higher than expected
Sutton	Not Available	Lillian M Hudspeth Memorial Hospital	147000	Iv	lv	6.13	0.24	Much lower than expected
Tarrant	Dallas-Fort Worth- Arlington, TX	Baylor Emergency Medical Center	972420	lv	lv	6.51	0.00	Much lower than expected
		Baylor Emergency Medical Center	973920	Iv	lv	3.25	0.00	Much lower than expected
		Baylor Emergency Medical Center at Keller	973540	Iv	lv	4.30	1.68	Much higher than expected
		Baylor Orthopedic and Spine Hospital - Arlington	936000	1,037	31	3.28	0.87	Lower than expected
		Baylor Scott & White All Saints Medical Center- Fort Worth	363000	16,836	679	3.96	1.05	About as expected
		Baylor Scott & White Medical Center- Grapevine	513000	10,497	427	4.53	0.86	Lower than expected
		Baylor Surgical Hospital- Fort Worth	804500	830	13	3.11	0.46	Much lower than expected
		Cook Childrens Medical Center	332000	7,929	355	5.40	0.83	Lower than expected
		Cook Childrens Northeast Hospital	850200	lv	lv	1.62	0.00	Much lower than expected
		Forest Park Medical Center Southlake	973140	lv	lv	4.00	0.14	Much lower than expected

Hospital County	Metropolitan/ Micropolitan Statistical Area (MSA)	Hospital Name	THCIC ID	Admissions At Risk ^a	Actual PPR Chains ^b	PPR Chains/ 100 Admits ^c	Actual- to- Expected Ratio ^d	Actual-to- Expected Ratio Interpretation
Tarrant	Dallas-Fort Worth-	Forest Park Medical Center at Fort Worth	974230	lv	lv	4.94	0.00	Much lower than expected
	Arlington, TX	John Peter Smith Hospital	409000	13,745	606	5.80	0.82	Lower than expected
		Medical Center-Arlington	502000	14,155	632	4.19	1.15	Higher than expected
		Methodist Mansfield Medical Center	842800	8,892	476	4.79	1.03	About as expected
		North Hills Hospital	437000	5,045	335	6.93	0.97	About as expected
		Parkway Surgical and Cardiovascular Hospital	973840	lv	lv	4.12	0.60	Much lower than expected
		Plaza Medical Center- Fort Worth	477000	6,037	585	8.66	1.17	Higher than expected
		Texas General Hospital	115100	255	15	8.56	0.73	Much lower than expected
		Texas Health Arlington Memorial Hospital	422000	9,682	658	5.92	1.23	Higher than expected
		Texas Health Harris Methodist HEB	182000	9,355	453	5.46	0.84	Lower than expected
		Texas Health Harris Methodist Hospital Alliance	972900	3,785	112	3.77	0.77	Lower than expected
		Texas Health Harris Methodist Hospital Azle	469000	816	55	8.93	0.74	Much lower than expected
		Texas Health Harris Methodist Hospital Southlake	812800	757	6	3.32	0.18	Much lower than expected
		Texas Health Harris Methodist Hospital-Fort Worth	235000	24,107	1,465	6.29	0.89	Lower than expected

Hospital County	Metropolitan/ Micropolitan Statistical Area (MSA)	Hospital Name	THCIC ID	Admissions At Risk ^a	Actual PPR Chains ^b	PPR Chains/ 100 Admits ^c	Actual- to- Expected Ratio ^d	Actual-to- Expected Ratio Interpretation
Tarrant	Dallas-Fort Worth- Arlington, TX	Texas Health Harris Methodist Hospital- Southwest Fort Worth	627000	12,296	392	3.89	0.76	Lower than expected
		Texas Health Heart & Vascular Hospital	730001	931	88	9.09	1.05	About as expected
		Texas Health Huguley Hospital	047000	7,084	462	6.84	0.91	About as expected
		USMD Hospital Fort Worth	861400	353	6	3.44	0.58	Much lower than expected
		USMD Hospital-Arlington	799001	1,349	61	5.04	1.07	About as expected
		Victory Medical Center Mid-Cities	972990	196	6	4.15	0.48	Much lower than expected
Taylor	Abilene, TX	Abilene Regional Medical Center	091001	5,524	248	5.08	0.80	Lower than expected
		Hendrick Medical Center	500000	12,619	692	6.16	0.88	Lower than expected
Tom Green	San Angelo, TX	San Angelo Community Medical Center	056000	4,348	235	4.38	1.18	Higher than expected
		Shannon West Texas Memorial Hospital	168000	9,413	576	6.35	0.92	About as expected
Travis	Austin-Round Rock, TX	Arise Austin Medical Center	973290	709	11	3.53	0.44	Much lower than expected
		Dell Childrens Medical Center	852000	7,538	356	4.37	1.12	Higher than expected
		HealthSouth Rehabilitation Hospital of Austin	970800	lv	lv	7.15	0.28	Much lower than expected
		Heart Hospital-Austin	829000	2,232	180	9.27	0.75	Much lower than expected
		Lakeway Regional Medical Center	970200	1,868	117	5.55	1.11	Higher than expected

Hospital County	Metropolitan/ Micropolitan Statistical Area (MSA)	Hospital Name	THCIC ID	Admissions At Risk ^a	Actual PPR Chains ^b	PPR Chains/ 100 Admits ^c	Actual- to- Expected Ratio ^d	Actual-to- Expected Ratio Interpretation
Travis	Austin-Round Rock, TX	North Austin Medical Center	829900	17,871	596	3.25	0.97	About as expected
		Northwest Hills Surgical Hospital	794000	356	6	4.18	0.34	Much lower than expected
		Seton Medical Center	497000	18,712	890	4.94	0.93	About as expected
		Seton Northwest Hospital	797600	5,452	203	4.14	0.82	Expected Ratio Interpretation 2.97 About as expected 2.34 Much lower than expected 2.93 About as expected 2.82 Lower than expected 2.86 Lower than expected 3.15 Higher than expected 3.09 About as expected 3.09 About as expected 3.09 Much higher than expected 3.09 Much lower than expected
		Seton Southwest Hospital	797500	1,509	14	1.01	0.86	
		St Davids Hospital	035000	15,423	674	4.27	1.15	
		St Davids South Austin Hospital	602000	11,320	771	6.35	1.03	About as expected
		University Medical Center-Brackenridge	335000	10,380	602	6.06	0.90	About as expected
		Westlake Medical Center	822800	818	50	4.81	1.69	
Trinity	Huntsville, TX	East Texas Medical Center-Trinity	287000	284	22	8.48	0.79	
Upshur	Longview, TX	East Texas Medical Center-Gilmer	806800	285	21	11.10	0.56	
Uvalde	Uvalde, TX	Uvalde Memorial Hospital	063000	1,523	64	4.89	0.67	
Val Verde	Del Rio, TX	Val Verde Regional Medical Center	462000	2,659	60	3.46	0.49	
Victoria	Victoria, TX	Citizens Medical Center	064000	6,084	331	6.00	0.84	
		DeTar Hospital-Navarro	453000	7,054	409	5.08	0.98	About as expected
Walker	Huntsville, TX	Huntsville Memorial Hospital	061000	3,606	277	5.92	1.19	Higher than expected
Washington	Brenham, TX	Baylor Scott & White Hospital-Brenham	066000	871	16	3.70	0.54	Much lower than expected

Hospital County	Metropolitan/ Micropolitan Statistical Area (MSA)	Hospital Name	THCIC ID	Admissions At Risk ^a	Actual PPR Chains ^b	PPR Chains/ 100 Admits ^c	Actual- to- Expected Ratio ^d	Actual-to- Expected Ratio Interpretation
Webb	Laredo, TX	Doctors Hospital-Laredo	301000	8,373	256	3.45	0.89	Lower than expected
		Laredo Medical Center	207001	13,126	600	4.40	1.16	Higher than expected
Wharton	El Campo, TX	El Campo Memorial Hospital	426000	230	17	7.58	0.86	Lower than expected
		Gulf Coast Medical Center	833000	741	76	10.00	0.94	About as expected
Wichita	Wichita Falls, TX	Electra Memorial Hospital	490000	279	34	7.74	1.59	Much higher than expected
		Kell West Regional Hospital	681400	704	16	4.30	0.81	Lower than expected
		United Regional Health Care System	417000	12,604	718	6.38	0.81	Lower than expected
Williamson	Austin-Round Rock, TX	Baylor Scott & White Emergency Hospital Cedar Park	101200	lv	lv	4.07	0.00	Much lower than expected
		Baylor Scott & White Medical Center Round Rock	852600	3,444	60	6.40	0.21	Much lower than expected
		Baylor Scott & White Medical Center Taylor	044000	230	28	8.95	1.18	Higher than expected
		Cedar Park Regional Medical Center	858300	3,633	162	3.95	0.92	About as expected
		Round Rock Medical Center	608000	7,072	269	4.53	0.91	About as expected
		Seton Medical Center Williamson	861700	5,190	363	7.11	0.94	About as expected
		St Davids Georgetown Hospital	835700	3,829	130	3.41	0.96	About as expected
Wilson	San Antonio- New Braunfels, TX	Connally Memorial Medical Center	433000	587	57	7.75	0.97	About as expected

Hospital County	Metropolitan/ Micropolitan Statistical Area (MSA)	Hospital Name	THCIC ID	Admissions At Risk ^a	Actual PPR Chains ^b	PPR Chains/ 100 Admits ^c	Actual- to- Expected Ratio ^d	Actual-to- Expected Ratio Interpretation
Winkler	Not Available	Winkler County Memorial Hospital	062000	77	5	7.23	0.60	Much lower than expected
Wise	Dallas-Fort Worth- Arlington, TX	Wise Health System (Medical Center Drive)	254001	3,397	187	6.15	0.91	About as expected
Wood	Wood Not Available	Christus Mother Frances Hospital Winnsboro	446001	433	40	7.28	1.23	Higher than expected
		East Texas Medical Center-Quitman	411000	630	56	7.10	1.00	About as expected

Source: Texas Hospital Inpatient Discharge Research Data File, 2014. Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. August, 2015.

Appendix B: Methods

B.1 Data

The data source for this report is the Texas Hospital Inpatient Discharge Research Data File, 2014 (Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. August, 2015). The data elements used in this analysis include patient date of birth, admission and discharge dates, diagnoses and procedures, sources and types of admissions, length of stay, and patient discharge status.

B.2 Identifying Admissions at Risk and PPRs

Admissions at risk and PPRs were identified using the 3M™ Core Grouping Software package. Admissions with missing or invalid identifying information were excluded prior to data analysis, because the 3M™ Core Grouping Software package requires these elements in order to process records. During data processing, the 3M™ software systematically excludes certain admissions from consideration as either admissions at risk or PPRs, due to their clinical complexity, likelihood of extensive follow-up care, or difficulty in determining whether admissions were clinically related. Records with data problems, such as mismatched birth dates or admission and discharge dates out of order are also excluded. Examples of admissions excluded by the 3M™ Core Grouping Software are:

- Admissions considered non-events, including admissions to hospital based hospice, long-term care, hospital based skilled nursing facilities, and admissions to acute-care hospitals for sub- or non-acute care conditions including hospital based rehabilitation;
- All other non-acute care admissions;
- Same-day transfers to an acute care hospital for non-acute care (e.g., hospice care);

- Pediatric admissions with certain diagnosis codes, such as seizures, poisoning, and certain infections;
- Admissions with chemotherapy or radiotherapy procedure codes, connective tissue disorders, coagulation/platelet disorders, or major/metastatic malignancy/advanced cancer diagnoses;
- Admissions with leukemia and lymphoma diagnoses;
- Admissions with a diagnosis of end stage chronic kidney disease; and
- Admissions with a discharge status of "left against medical advice or discontinued care," because the intended care could not be completed.

Admissions that were transferred to another hospital for acute care could be considered PPRs, but are excluded from consideration as admissions at risk because the patient's subsequent care was no longer under the control of the transferring hospital. Finally, admissions with a discharge status of "expired" are eligible to be PPRs, but are excluded from consideration as admissions at risk, because deceased patients cannot be readmitted.

B.3 PPR Methodology

Calculation of PPRs, including adjustment for case mix, was conducted following logic recommended by $3M^{\text{TM}}$. In calculating PPR statistics, PPR chains rather than individual readmissions were used as the numerator. The number of PPR chains was defined as the number of initial admissions that were followed by one or more clinically related readmissions (PPR events) for the same patient, with the first clinically related readmission occurring within a 30-day window and subsequent clinically related readmissions occurring at any time. The number of admissions at risk was defined as the total number of acute-care inpatient hospital admissions, not counting PPRs and excluded admissions, such as those listed in the methods section above. Admissions at risk were used as the denominator.

As per the 3M[™] PPR methodology, the PPR summary statistic is expressed as a percentage (i.e., occurrences per 100 events) and is calculated by dividing the actual number of PPR chains by the number of admissions at risk and multiplying by 100.

For example, if in a given year, 100 non-excluded admissions occurred in a certain hospital and five (5) were followed by one or more non-excluded clinically-related readmissions within a 30-day interval, then at 30-day readmission interval, the number of PPR chains per 100 at-risk admissions for the hospital would be $(5/100) \times 100 = 5.0$.

B.4 Expected Hospital PPR Chains

In addition to actual PPR chains, expected PPR chains for each hospital were calculated. These are estimates of how many PPR chains a hospital could be expected to have, taking into account its particular case mix (a combination of APR-DRG, severity of illness [SOI], patient age groups, and mental health/substance abuse [MH/SA] comorbidity). Expected PPR chains were calculated using indirect standardization, based on the experience of Texas hospitals as a whole. First, a state norm was calculated for each APR-DRG and severity of illness category by summing the number of PPR chains in each category at the state level and dividing by the statewide sum of admissions at risk within the same category. Adjustment factors were then calculated for each MH/SA and age group as the ratio of actual to expected PPR chains in each group, based on the previously calculated APR-DRG and severity of illness norms. Next, for each hospital, the number of admissions at risk occurring within each APR-DRG and severity of illness category was multiplied by the corresponding state norm and an adjustment factor based on the number of admissions at risk occurring within each age group and MH/SA category. Finally, the number of expected PPR chains within each hospital was calculated by summing PPR chains across all APR-DRGs and severity of illness levels. The risk-adjusted PPR summary statistic for each hospital was calculated by dividing this sum by the number of admissions at risk in each hospital and multiplying by 100.

B.5 Actual-to-Expected Ratio

To enable comparisons among hospitals, a PPR performance ratio was calculated for each hospital as the ratio of actual to expected PPR chains.

The Actual-to-Expected (A/E) ratio was calculated for each hospital as the actual hospital PPR chains divided by the expected hospital PPR chains.

The A/E ratio compares the actual number of PPR chains against the expected number of PPR chains in each hospital. Hospitals with an A/E ratio less than 1.0 had a number of PPR chains that was lower than expected based on their case mix, whereas hospitals with an A/E ratio greater than 1.0 had a number of PPR chains that was higher than expected, given their particular mix of cases.

Appendix C: Definitions

Actual-to-expected (A/E) Ratio — The ratio of actual to expected PPR chains. The expected PPR chains were derived from base APR-DRG, severity of illness, patient age, and the presence or absence of a major mental health or substance abuse diagnosis.

Admissions at risk — All initial admissions that are at risk for potentially preventable readmissions, excluding admissions meeting the criteria for exclusion as listed in the 3M PPR Methodology.

APR-DRG — A 3M[™] All Patient Refined Diagnosis Related Group classification system that classifies patients according to reason for admission, severity of illness (4 levels), and patient characteristics. The APR-DRG classification system is designed for use with all types of patients, and is formatted as, for example, 000-0, where the first three digits indicate the base Diagnosis Related Group (DRG) and the fourth digit indicates the severity of illness.

Case mix — A mix of patients treated during the reporting time period. The mix considers patient age groups, severity of illness, and mental health status/substance abuse as defined by $3M^{TM}$.

Clinically related — A requirement that the underlying reason for admission or readmission be related to the care rendered or diagnosis identified during a prior hospital admission.

Hospital readmission — A return hospitalization to an acute care hospital that occurs shortly after a discharge from another or same hospital. Readmission is most often measured within specific number of days (seven, 15 or 30 days), and may be a result of problems inadequately addressed in the prior hospitalization.

Mental health status – A 3M[™] calculated variable which contains major mental health and/or substance abuse diagnoses codes as defined by 3M[™] (2011).

Norm – Standard or average level of performance.

Potentially preventable readmission — A return admission that occurs within a readmission interval, and is clinically related to a prior admission. The readmission may be for the same or a related condition. If the readmission was planned (e.g., major metastatic cancer), unavoidable (e.g. HIV/AIDS), involves patient compliance issues (e.g. left without medical advice), or was clearly unrelated (e.g., hip fracture after heart attack), the readmission is not considered to be a PPR.

Readmission interval — The maximum number of days allowed between the discharge date of an initial inpatient admission and the admission date of next inpatient admission.

Severity of illness (SOI) — The extent of physiologic or functional deterioration of a working structure or system. For each base APR-DRG, SOI is indicated by values from 1 to 4, such that an APR-DRG-4 is more likely to be readmitted than a patient with an APR-DRG-1. In addition, SOI describes the seriousness of the patients' illnesses and the risk of adverse outcome to treatment choices. The levels of severity are: 1 - Minor, 2 - Moderate, 3 - Major and 4 - Extreme.

Appendix D: References

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