



**MHSPHP**

Military Health System Population Health Portal



# MHSPHP Metrics Forum

Agency for Healthcare Research and Quality  
(AHRQ) Quality Indicators™ (QI)

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- Understanding the 3 types of quality indicators
  - Patient Safety Indicators (PSI)
  - Inpatient Quality Indicators (IQI)
  - Prevention Quality Indicators (PQI)
- How to interpret the status and rates
  - Red, yellow , green status
  - Four types of rate:
    - Risk Adjusted
    - Observed
    - Count
    - Ratio
- How to identify patients included in the measures



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Data current as of: **July 2014**

### Recent Updates

*Updates made on 16 September 2014*

\*Addition of July 2014 data

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# 3 Types of Quality Indicators

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## Quality Indicators Reports

PATIENT SAFETY INDICATORS

INPATIENT QUALITY INDICATORS

PREVENTIVE QUALITY INDICATORS

### September 2014:

Quality Indicators are now calculated based on data for rolling-year quarters (i.e., listed quarter plus three preceding quarters), since individual quarters of MTF data do not evaluate for significant differences in performance due to small sample sizes and resulting wide confidence intervals. Therefore, each numerator, denominator, and rate are calculated based on a rolling-year period.

The Quality Indicator reports display rates and an associated status. The status is displayed as a color-coded image. The graphics below explain the significance of each image.

#### When lower is better

Yellow (rate and upper confidence interval)



Red (statistically significant difference)

#### When higher is better

Green star (statistically significant difference)





# Three Quality Indicator Types

- *Patient Safety Indicators*—Hospital level indicators that provide information on potential in-hospital complications and errors following surgeries, other procedures, and childbirth.
- *Prevention Quality Indicators*—Indicators representing hospital admission rates for common ambulatory care-sensitive conditions; hospitalization for these conditions can often be avoided with appropriate use of community-based primary care.
- *Inpatient Quality Indicators*—Hospital level indicators relating to utilization, mortality, and volume. Hospital-level indicators include in-hospital procedures for which outcomes can vary from hospital to hospital.



PSI NAME	RATE TYPE	COMPARISON	BENCHMARK
PSI 02 – Death In Low Mortality DRGs	RISK ADJUSTED	Lower is better	0.03
PSI 03 – Pressure Ulcer	RISK ADJUSTED	Lower is better	0.04
PSI 04 – Death Among Surgical Inpatients With Serious Treatable Complications	RISK ADJUSTED	Lower is better	11.86
PSI 05 – Foreign Body Left During Procedure	COUNT	Lower is better	0.00
PSI 06 – Iatrogenic Pneumothorax	RISK ADJUSTED	Lower is better	0.04
PSI 07 – Central Line–Associated Bloodstream Infections	RISK ADJUSTED	Lower is better	0.04
PSI 08 – Post–Op Hip Fracture	RISK ADJUSTED	Lower is better	0.00
PSI 09 – Peri–Op Hemorrhage Or Hematoma	RISK ADJUSTED	Lower is better	0.59
PSI 10 – Post–Op Physiologic And Metabolic Derangements	RISK ADJUSTED	Lower is better	0.05
PSI 11 – Post–Op Respiratory Failure	RISK ADJUSTED	Lower is better	0.86
PSI 12 – Peri–Op Pulmonary Embolism Or Deep Vein Thrombosis	RISK ADJUSTED	Lower is better	0.45
PSI 13 – Post–Op Sepsis	RISK ADJUSTED	Lower is better	1.20
PSI 14 – Post–Op Wound Dehiscence	RISK ADJUSTED	Lower is better	0.19
PSI 15 – Accidental Puncture Or Laceration	RISK ADJUSTED	Lower is better	0.25
PSI 16 – Transfusion Reaction	COUNT	Lower is better	0.00
PSI 17 – Birth Trauma – Injury to Neonate	OBSERVED	Lower is better	0.21
PSI 18 – Obstetric Trauma Vaginal with Instrument	OBSERVED	Lower is better	13.91
PSI 19 – Obstetric Trauma Vaginal without Instrument	OBSERVED	Lower is better	2.25
PSI 90 – Patient Safety for Selected Indicators	RATIO	Lower is better	1.00

*Patient Safety Indicators*—Hospital level indicators that provide information on potential in-hospital complications and errors following surgeries, other procedures, and childbirth.



<b>IQI NAME</b>	<b>RATE TYPE</b>	<b>COMPARISON</b>	<b>BENCHMARK</b>
<b>IQI 15 – AMI Mortality</b>	<b>RISK ADJUSTED</b>	<b>Lower is better</b>	<b>6.028</b>
<b>IQI 16 – CHF Mortality</b>	<b>RISK ADJUSTED</b>	<b>Lower is better</b>	<b>3.243</b>
<b>IQI 17 – Stroke Mortality</b>	<b>RISK ADJUSTED</b>	<b>Lower is better</b>	<b>9.038</b>
<b>IQI 20 – Pneumonia Mortality</b>	<b>RISK ADJUSTED</b>	<b>Lower is better</b>	<b>3.909</b>
<b>IQI 21 – Cesarean Delivery</b>	<b>OBSERVED</b>	<b>Lower is better</b>	<b>30.009</b>
<b>IQI 33 – Primary Cesarean Delivery</b>	<b>OBSERVED</b>	<b>Lower is better</b>	<b>17.961</b>
<b>IQI 34 – VBAC all</b>	<b>OBSERVED</b>	<b>Higher is better</b>	<b>9.021</b>
<b>IQI 90 – Mortality for Selected Procedures</b>	<b>RATIO</b>	<b>Lower is better</b>	<b>1</b>
<b>IQI 91 – Mortality for Selected Conditions</b>	<b>RATIO</b>	<b>Lower is better</b>	<b>1</b>

*Inpatient Quality Indicators*—Hospital level indicators relating to utilization, mortality, and volume. Hospital-level indicators include inpatient procedures for which outcomes can vary from hospital to hospital.



PQI NAME	RATE TYPE	COMPARISON	BENCHMARK
PQI 01 – Diabetes Short-Term Complications	RISK ADJUSTED	Lower is better	1.54
PQI 02 – Perforated Appendix	RISK ADJUSTED	Lower is better	28.16
PQI 03 – Diabetes Long-Term Complications	RISK ADJUSTED	Lower is better	3.21
PQI 05 – COPD	RISK ADJUSTED	Lower is better	6.07
PQI 07 – Hypertension	RISK ADJUSTED	Lower is better	1.55
PQI 08 – Congestive Heart Failure	RISK ADJUSTED	Lower is better	9.96
PQI 10 – Dehydration	RISK ADJUSTED	Lower is better	2.77
PQI 11 – Bacterial Pneumonia	RISK ADJUSTED	Lower is better	9.01
PQI 12 – Urinary Infections	RISK ADJUSTED	Lower is better	5.14
PQI 13 – Angina without Procedure	RISK ADJUSTED	Lower is better	0.62
PQI 14 – Uncontrolled Diabetes	RISK ADJUSTED	Lower is better	0.58
PQI 15 – Adult Asthma	RISK ADJUSTED	Lower is better	3.23
PQI 16 – Lower Extremity AMP Among Patients with Diabetes	RISK ADJUSTED	Lower is better	0.9
PQI 90 – Overall PQI Composite	RISK ADJUSTED	Lower is better	45.3

*Prevention Quality Indicators*—Indicators representing hospital admission rates for common ambulatory care-sensitive conditions; hospitalization for these conditions can often be avoided with appropriate use of community-based primary care.



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# Exclusions

- An excluding condition is defined as a condition where the outcome of interest, if present, is more likely to be present on admission or less likely to be preventable.



# Benchmarks and Reference Population

- The benchmark rates are based on analysis of 44 states from the 2010 Agency for Healthcare Research and Quality's Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID).
- HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988.
- The SID contain all-payer, encounter-level information on inpatient discharges, including clinical and resource information typically found on a billing record, such as patient demographics, up to 30 ICD-9-CM diagnoses and procedures, length of stay (LOS), expected payer, admission and discharge dates and discharge disposition.
- In 2010, the HCUP databases represent more than 95 percent of all annual discharges in the U.S.
- The dataset analyzed to generate the benchmarks consists of the same hospital discharge records that comprise the reference population.
- [http://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V45/Version\\_45\\_Benchmark\\_Tables\\_IQI.pdf](http://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V45/Version_45_Benchmark_Tables_IQI.pdf)



# 4 types of measure Rates

- Risk Adjusted
- Observed: crude rate (numerator over denominator) percentage of all events
- Count: raw count
- Ratio: Composite measures that combine selected indicators and compare to the reference population combined score. Ratio should be at or less than one.



# What is Risk Adjusted?

- “The regression coefficients are used by the prediction module to calculate risk-adjusted rates that account for differences in patient populations across providers. Covariates that are considered as potential risk adjusters include gender and age, Major Diagnostic Categories (MDC), Modified Diagnosis-Related Group (MDRG) categories, comorbidities that were apparently present on admission, patient point-of-origin and whether they were transferred from another facility”

[http://qualityindicators.ahrq.gov/downloads/modules/igj/v45/parameter\\_estimates\\_igj\\_45.pdf](http://qualityindicators.ahrq.gov/downloads/modules/igj/v45/parameter_estimates_igj_45.pdf)

- Translation: adjusts the rate based on the risk of each discharged patient as compared to the risks of the general (benchmark) population based on variations in age, gender, diagnoses and comorbidities that were present on admission



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# How program calculates Risk Adjusted

$$\text{Observed Rate} = \frac{\text{Count of discharges of the outcome of interest}}{\text{Count of discharges in the population at risk}}$$

$$\text{Expected rate} = \frac{\text{Sum of the predicted rate for each discharge}}{\text{Count of discharges in the population at risk}}$$

$$\text{Risk adjusted Rate} = (\text{Observed Rate} \div \text{Expected Rate}) \\ * \text{Reference Population Rate}$$

- Predicted rate considers all the covariate information about each specific discharge
  - Even though denominator appears the same, it may not be the same patients as previous quarter—so the risk adjusted rate may change even when numerator and denominator don't

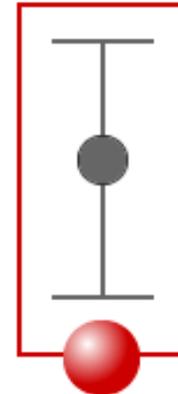


## When lower is better

**Yellow** - rate and upper bound are above benchmark and lower bound is below benchmark

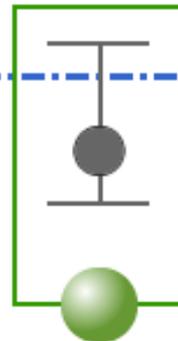


**Red (statistically significant)** - rate and lower bound are above benchmark

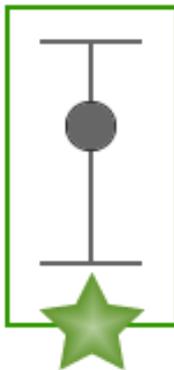


AHRQ Benchmark

**Green** - rate and lower bound are below benchmark and upper bound is above benchmark



**Green star (statistically significant)** - rate and upper bound are below benchmark





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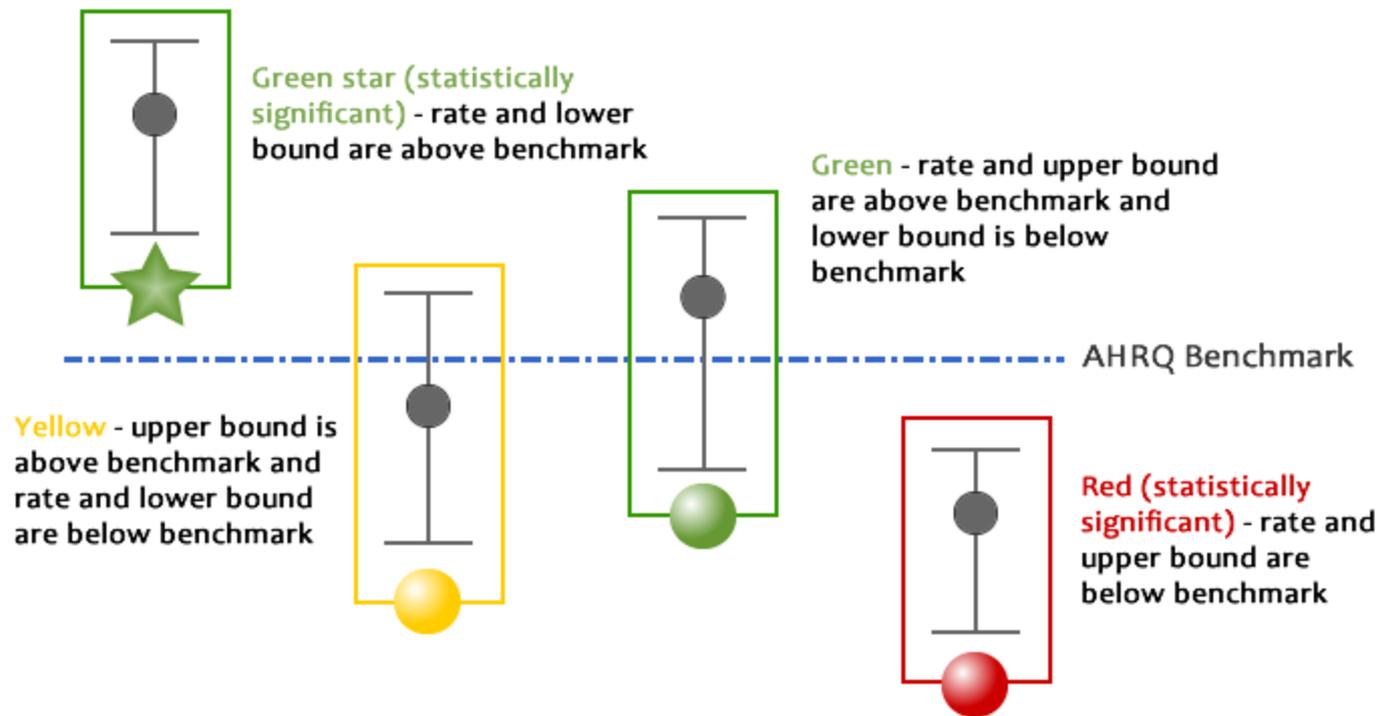
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# Risk Adjusted Rate Type: Confidence Interval

- A confidence interval is a range of values that describes the uncertainty surrounding an estimate.
- The RISK ADJUSTED rates for these measures are risk adjusted estimates applied to the total population
- The upper bound and lower bound for each rate are where the calculations show the range where the rate could fall with 95% confidence



## When higher is better





- Not estimates—these are actual
- No upper or lower bounds
- The status stoplight is based on comparison to benchmark
- Green for equal or better than benchmark
- Red for worse than benchmark

# How to see the most recent rates first

DOD

PSI NAME	CY QTR	COMPARISON	BENCHMARK	2009Q2				2009Q3			
				STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM	DENOM
PSI 02 – Death In Low Mortality DRGs		is better	0.03	●	0.01	2	81,089	●	0.00	1	81,396
PSI 03 – Pressure Ulcer		is better	0.04	●	0.12	11	23,111	●	0.03	3	23,040
PSI 04 – Death Among Surgical Inpatients With Serious Treatable Complications		is better	11.86	●	13.51	138	1,243	●	13.83	144	1,253
PSI 05 – Foreign Body Left During Procedure		is better	0.00	.	.	.	.	.	.	.	.
PSI 06 – Iatrogenic Pneumothorax		is better	0.04	●	0.18	30	128,997	●	0.18	30	129,229
PSI 07 – Central Line-Associated Bloodstream Infections		is better	0.04	●	0.31	31	112,602	●	0.30	29	112,649
PSI 08 – Post-Op Hip Fracture		is better	0.00	●	0.00	0	30,963	●	0.00	0	30,925
PSI 09 – Peri-Op Hemorrhage Or Hematoma		is better	0.59	●	0.68	294	44,161	●	0.71	305	43,976
PSI 10 – Post-Op Physiologic And Metabolic Derangements		is better	0.05	●	0.07	29	45,710	●	0.07	31	45,555
PSI 11 – Post-Op Respiratory Failure	RISK ADJUSTED	Lower is better	0.86	●	1.87	694	39,963	●	1.82	670	39,875
PSI 12 – Peri-Op Pulmonary Embolism Or Deep Vein Thrombosis	RISK ADJUSTED	Lower is better	0.45	●	0.73	217	45,585	●	0.78	228	45,416
PSI 13 – Post-Op Sepsis	RISK ADJUSTED	Lower is better	1.20	●	1.31	99	8,784	●	1.34	101	8,655
PSI 14 – Post-Op Wound Dehiscence	RISK ADJUSTED	Lower is better	0.19	●	0.37	20	7,236	●	0.38	20	7,055
PSI 15 – Accidental Puncture Or Laceration	RISK ADJUSTED	Lower is better	0.25	●	0.61	568	132,402	●	0.58	540	132,543
PSI 16 – Transfusion Reaction	COUNT	Lower is better	0.00	●	1.00	.	.	●	1.00	.	.
PSI 17 – Birth Trauma – Injury to Neonate	OBSERVED	Lower is better	0.21	●	0.40	195	49,007	●	0.39	194	49,266
PSI 18 – Obstetric Trauma Vaginal with Instrument	OBSERVED	Lower is better	13.91	●	15.60	377	2,417	●	15.11	354	2,343
PSI 19 – Obstetric Trauma Vaginal without Instrument	OBSERVED	Lower is better	2.25	●	2.02	688	34,010	●	2.02	689	34,101
PSI 90 – Patient Safety for Selected Indicators	RATIO	Lower is better	1.00	●	2.43	.	94,661	●	2.34	.	94,692

- Right click on CY QTR and select Sort Descending

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- PSI NUMBER
- PSI NAME
- RATE
- DENOM
- NUM
- LOWER LIMIT

## PSI - ALL MEASURES BY OVERALL SERVICE

Rates per 100 except for PSI 5 and 16, which show event counts (not rates)  
 Numerator / Denominator are estimated

**September 2014:** Quality Indicators are now calculated based on data for rolling-year quarters (i.e., listed quarter plus three preceding quarters), since in MTF discharge data are not large enough to evaluate for significant differences in performance due to small sample sizes and resulting wide confidence interval. Therefore, each numerator, denominator, and rate represents 4 quarters of data.

[PSI Technical Specifications](#)

[PSIs by Year](#)

### DOD

SERVICE NAME				2014Q1			2013Q4			
CY QTR				STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM
PSI NAME	RATE TYPE	COMPARISON	BENCHMARK							
PSI 02 – Death In Low Mortality DRGs	RISK ADJUSTED	Lower is better	0.03	★	0.01	4	77,654	★	0.01	
PSI 03 – Pressure Ulcer	RISK ADJUSTED	Lower is better	0.04	●	0.05	11	20,084	●	0.04	1
PSI 04 – Death Among Surgical Inpatients With Serious Treatable Complications	RISK ADJUSTED	Lower is better	11.86	●	15.39	98	761	●	16.06	10
PSI 05 – Foreign Body Left During Procedure	COUNT	Lower is better	0.00	●	11.00	.	.	●	10.00	
PSI 06 – Iatrogenic Pneumothorax	RISK ADJUSTED	Lower is better	0.04	●	0.02	17	121,450	●	0.03	1
PSI 07 – Central Line–Associated Bloodstream Infections	RISK ADJUSTED	Lower is better	0.04	★	0.00	3	103,477	★	0.01	
PSI 08 – Post–Op Hip Fracture	RISK ADJUSTED	Lower is better	0.00	●	0.00	1	27,927	●	0.00	
PSI 09 – Peri–Op Hemorrhage Or Hematoma	RISK ADJUSTED	Lower is better	0.59	●	0.59	226	39,409	●	0.57	22
PSI 10 – Post–Op Physiologic And Metabolic Derangements	RISK ADJUSTED	Lower is better	0.05	★	0.02	10	40,891	★	0.02	
PSI 11 – Post–Op Respiratory Failure	RISK ADJUSTED	Lower is better	0.86	●	0.82	209	35,946	●	0.85	22
PSI 12 – Peri–Op Pulmonary Embolism Or Deep Vein Thrombosis	RISK ADJUSTED	Lower is better	0.45	★	0.26	68	40,870	★	0.32	8
PSI 13 – Post–Op Sepsis	RISK ADJUSTED	Lower is better	1.20	★	0.62	38	6,574	★	0.65	4
PSI 14 – Post–Op Wound Dehiscence	RISK ADJUSTED	Lower is better	0.19	●	0.19	8	5,585	●	0.22	1
PSI 15 – Accidental Puncture Or Laceration	RISK ADJUSTED	Lower is better	0.25	●	0.26	346	123,556	●	0.27	36
PSI 16 – Transfusion Reaction	COUNT	Lower is better	0.00							
PSI 17 – Birth Trauma – Injury to Neonate	OBSERVED	Lower is better	0.21	●	0.45	221	48,679	●	0.44	21
PSI 18 – Obstetric Trauma Vaginal with Instrument	OBSERVED	Lower is better	13.91	●	15.07	284	1,885	●	14.67	29
PSI 19 – Obstetric Trauma Vaginal without Instrument	OBSERVED	Lower is better	2.25	●	1.80	613	34,026	●	1.78	61
PSI 90 – Patient Safety for Selected Indicators	RATIO	Lower is better	1.00	★	0.83	.	87,703	★	0.89	



- **“September 2014:** Quality Indicators are now calculated based on data for rolling-year quarters (i.e., listed quarter plus three preceding quarters), since individual quarters of MTF discharge data are not large enough to evaluate for significant differences in performance due to small sample sizes and resulting wide confidence intervals.”
- Therefore, each numerator, denominator, and rate represents year of data.

## PSI – ALL MEASURES BY OVERALL SERVICE BY CALENDAR YEAR

Rates per 100 except for PSI 5 and 16, which show event counts (not rates)  
 Numerator / Denominator are estimated

[PSI Technical Specifications](#)

### DOD

PSI NAME	RATE TYPE	COMPARISON	BENCHMARK	2009				2010				DOD 2011				2012				2013				
				STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM	DENOM	
PSI 02 – Death In Low Mortality DRGs	RISK ADJUSTED	Lower is better	0.03	●	0.01	2	82,143	●	0.01	3	83,780	★	0.01	4	83,079	★	0.01	4	83,882	★	0.01	4	77,732	
PSI 03 – Pressure Ulcer	RISK ADJUSTED	Lower is better	0.04	●	0.03	3	22,778	●	0.03	4	22,239	●	0.03	8	21,804	●	0.03	6	21,420	●	0.04	9	19,922	
PSI 04 – Death Among Surgical Inpatients With Serious Treatable Complications	RISK ADJUSTED	Lower is better	11.86	●	13.72	138	1,208	●	14.34	128	1,045	●	13.77	108	955	●	13.00	90	814	●	15.82	100	740	
PSI 05 – Foreign Body Left During Procedure	COUNT	Lower is better	0.00	●	0.19	32	129,857	●	1.00	41	131,348	●	6.00	43	131,902	●	9.00	29	130,812	●	10.00	16	120,873	
PSI 06 – Iatrogenic Pneumothorax	RISK ADJUSTED	Lower is better	0.04	●	0.29	29	113,082	●	0.13	40	113,578	●	0.04	35	110,854	★	0.02	20	110,245	★	0.01	7	103,131	
PSI 07 – Central Line-Associated Bloodstream Infections	RISK ADJUSTED	Lower is better	0.04	●	0.00	0	30,861	●	0.00	1	31,298	●	0.00	0	30,927	●	0.00	0	30,181	●	0.00	1	27,671	
PSI 08 – Post-Op Hip Fracture	RISK ADJUSTED	Lower is better	0.00	●	0.72	310	43,787	●	0.65	285	43,464	●	0.65	282	42,864	●	0.64	288	42,175	●	0.57	217	38,967	
PSI 09 – Peri-Op Hemorrhage Or Hematoma	RISK ADJUSTED	Lower is better	0.05	●	0.09	39	45,399	●	0.06	27	45,008	●	0.03	13	44,303	●	0.04	17	43,758	●	0.02	8	40,398	
PSI 10 – Post-Op Physiologic And Metabolic Derangements	RISK ADJUSTED	Lower is better	0.86	●	1.84	868	39,759	●	1.63	567	39,165	●	1.06	288	38,612	●	0.98	289	38,415	●	0.85	211	35,416	
PSI 11 – Post-Op Respiratory Failure	RISK ADJUSTED	Lower is better	0.45	●	0.67	196	45,289	●	0.44	132	44,989	●	0.50	144	44,257	★	0.34	97	43,759	★	0.29	74	40,382	
PSI 12 – Peri-Op Pulmonary Embolism Or Deep Vein Thrombosis	RISK ADJUSTED	Lower is better	1.20	●	1.39	104	8,545	●	1.32	100	8,421	★	0.85	58	7,778	★	0.76	52	7,473	★	0.70	42	6,533	
PSI 13 – Post-Op Sepsis	RISK ADJUSTED	Lower is better	0.19	●	0.47	25	6,995	●	0.23	12	6,759	●	0.19	10	6,588	●	0.28	13	6,045	●	0.21	9	5,505	
PSI 14 – Post-Op Wound Dehiscence	RISK ADJUSTED	Lower is better	0.25	●	0.58	541	132,858	●	0.50	520	134,555	●	0.26	379	134,823	●	0.24	344	132,827	●	0.27	353	122,962	
PSI 15 – Accidental Puncture Or Laceration	RISK ADJUSTED	Lower is better	0.00	●	1.00	190	49,610	●	2.00	194	51,088	●	1.00	243	50,074	●	2.00	199	51,157	●	0.43	215	49,666	
PSI 16 – Transfusion Reaction	COUNT	Lower is better	0.21	●	0.38	190	49,610	●	0.38	194	51,088	●	0.49	243	50,074	●	0.39	199	51,157	●	0.43	215	49,666	
PSI 17 – Birth Trauma – Injury to Neonate	OBSERVED	Lower is better	0.21	●	0.38	190	49,610	●	0.38	194	51,088	●	0.49	243	50,074	●	0.39	199	51,157	●	0.43	215	49,666	
PSI 18 – Obstetric Trauma Vaginal with Instrument	OBSERVED	Lower is better	13.91	●	15.14	366	2,418	●	15.84	388	2,437	●	15.58	380	2,310	●	17.83	387	2,171	●	14.64	286	1,954	
PSI 19 – Obstetric Trauma Vaginal without Instrument	OBSERVED	Lower is better	2.25	●	1.99	679	34,205	●	1.92	680	35,470	●	1.96	681	34,832	●	1.97	705	35,850	●	1.75	596	34,018	
PSI 90 – Patient Safety for Selected Indicators	RATIO	Lower is better	1.00	●	2.28	94,851	●	1.73	95,741	●	1.06	95,387	★	0.88	94,203	●	0.87	87,213	●	0.87	87,213	●	0.87	87,213

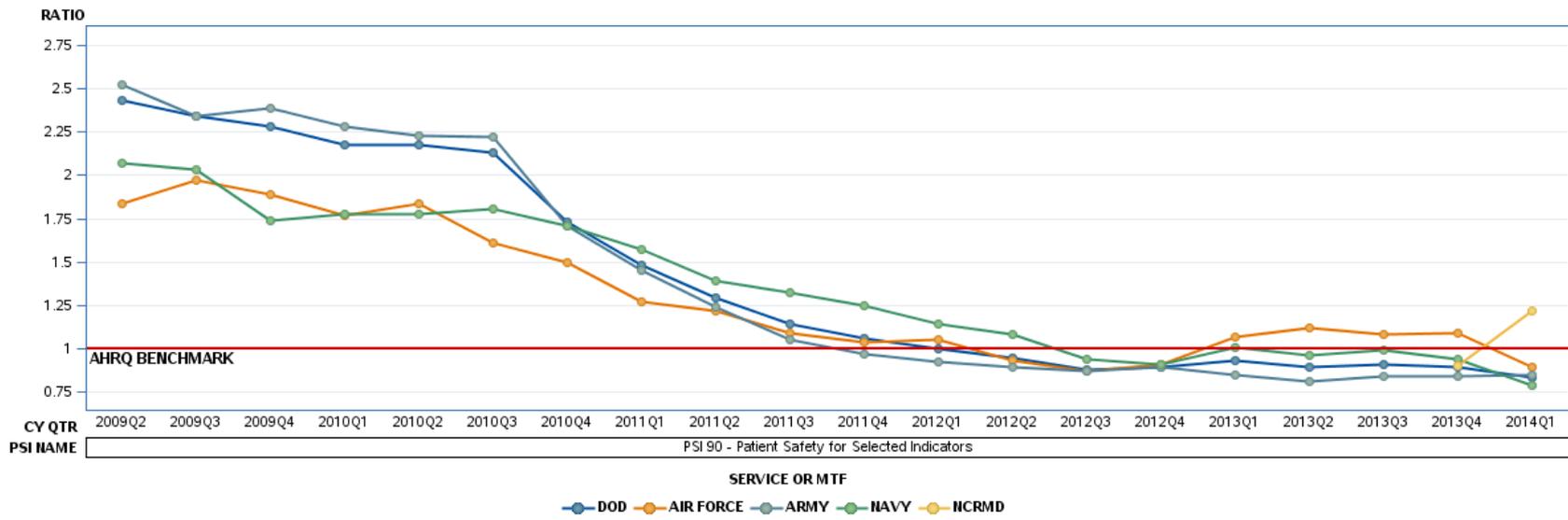
This is updated with the quarterly updates as updates to inpatient records can occur.

# Military Health System Review Recommendation on PSI

## ► Recommendation Regarding Use of PSI #90 in the MHS

**Consider PSI #90 composite utilization as a component of a comprehensive safety measure set within the MHS and develop an education plan to support its implementation.**

- What is PSI#90?
  - An aggregation of select PSIs for eight frequently observed patient safety problems in the inpatient setting
  - The scores for each PSI is weighted in the final ratio score



- Weighted combination score

PSI Name	PSI 90 Weight
PSI 03 - Pressure Ulcer	0.0226
PSI 06 - Iatrogenic Pneumothorax	0.0708
PSI 07 - Central Venous Catheter-Related Blood Stream Infection	0.0652
PSI 08 - Postoperative Hip Fracture	0.0011
PSI 12 - Perioperative PE or DVT	0.2579
PSI 13 - Postoperative Sepsis	0.0742
PSI 14 - Postoperative Wound Dehiscence	0.0165
PSI 15 - Accidental Puncture or Laceration	0.4917

# Inpatient Quality Indicators (IQI)

## IQI – ALL MEASURES BY OVERALL SERVICE Rates per 100

**September 2014:** Quality Indicators are now calculated based on data for rolling-year quarters (i.e., listed quarter plus three preceding quarters), since individual quarters of MTF discharge data are not large enough to evaluate for significant differences in performance due to small sample sizes and resulting wide confidence intervals. Therefore, each numerator, denominator, and rate represents 4 quarters of data.

[IQI Technical Specifications](#)

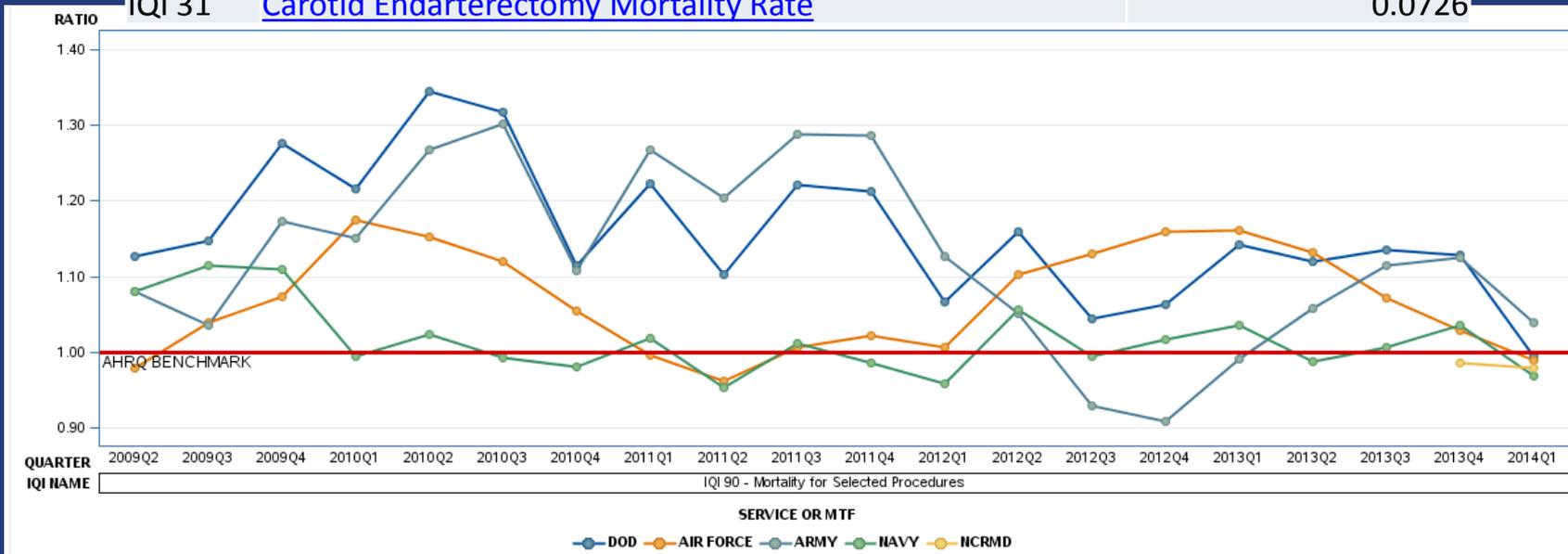
### DOD

SERVICE NAME				2014Q1			2013Q4			2013Q3			STATUS	R		
QUARTER				STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM	DENOM	STATUS			RATE	NUM
IQI NAME	RATE TYPE	COMPARISON	BENCHMARK													
IQI 15 – AMI Mortality	RISK ADJUSTED	Lower is better	6.028	★	3.60	23	881	●	4.97	32	925	●	5.30	36	930	●
IQI 16 – CHF Mortality	RISK ADJUSTED	Lower is better	3.243	●	3.19	52	2,465	●	2.97	48	2,559	●	3.10	49	2,595	●
IQI 17 – Stroke Mortality	RISK ADJUSTED	Lower is better	9.038	●	7.26	40	804	●	8.09	47	826	●	8.48	48	859	●
IQI 20 – Pneumonia Mortality	RISK ADJUSTED	Lower is better	3.909	★	2.84	41	2,766	●	3.66	56	3,016	●	4.09	63	3,101	●
IQI 21 – Cesarean Delivery	OBSERVED	Lower is better	30.009	●	23.33	10,459	44,833	●	23.34	10,571	45,295	●	23.35	10,706	45,846	●
IQI 33 – Primary Cesarean Delivery	OBSERVED	Lower is better	17.961	●	14.02	5,438	38,797	●	14.01	5,492	39,196	●	14.01	5,552	39,640	●
IQI 34 – VBAC all	OBSERVED	Higher is better	9.021	●	16.56	1,090	6,583	●	16.35	1,087	6,649	●	16.49	1,115	6,761	●
IQI 90 – Mortality for Selected Procedures	RATIO	Lower is better	1	●	0.99	.	.	●	1.13	.	.	●	1.14	.	.	●
IQI 91 – Mortality for Selected Conditions	RATIO	Lower is better	1	★	0.87	.	.	●	0.95	.	.	●	0.99	.	.	●

- IQI 90 and IQI 91 are combination scores

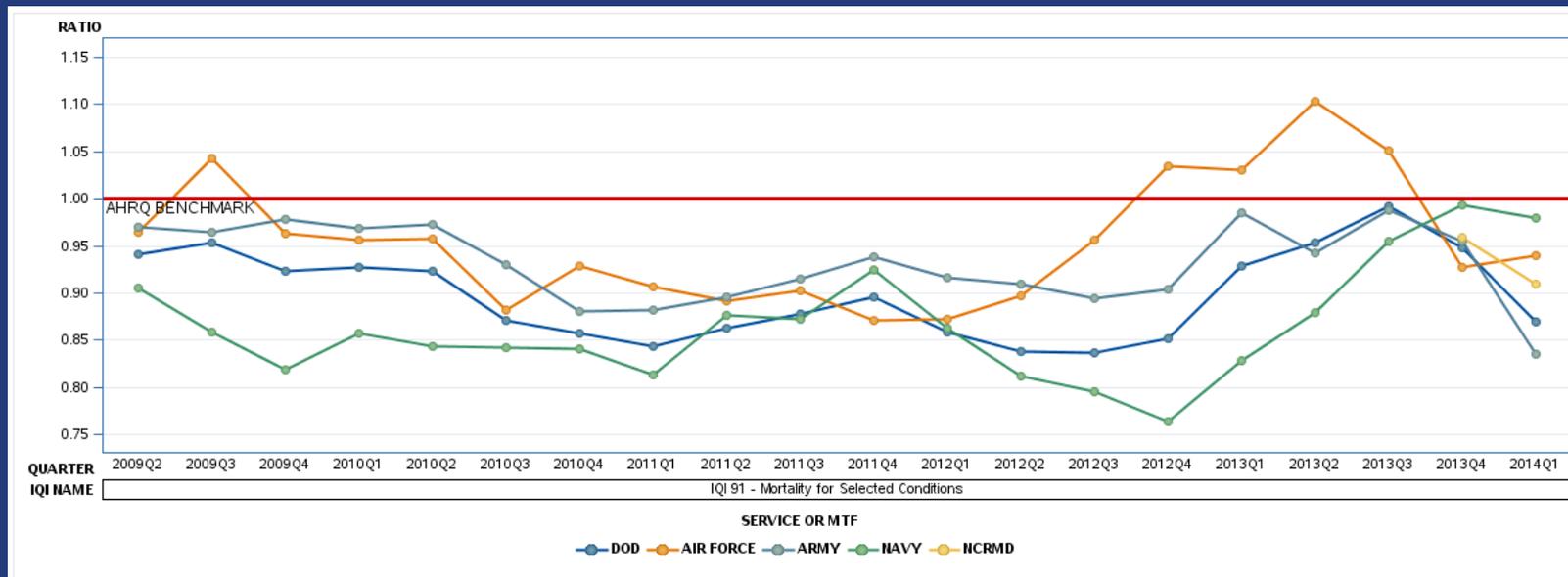


IQI	IQI label	Composite measure weight
IQI 08	<a href="#">Esophageal Resection Mortality Rate</a>	0.0033
IQI 09	<a href="#">Pancreatic Resection Mortality Rate</a>	0.0117
IQI 11	<a href="#">Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate</a>	0.0293
IQI 12	<a href="#">Coronary Artery Bypass Graft (CABG) Mortality Rate</a>	0.1616
IQI 13	<a href="#">Craniotomy Mortality Rate</a>	0.0971
IQI 14	<a href="#">Hip Replacement Mortality Rate</a>	0.1945
IQI 30	<a href="#">Percutaneous Coronary Intervention (PCI) Mortality Rate</a>	0.4299
IQI 31	<a href="#">Carotid Endarterectomy Mortality Rate</a>	0.0726





IQI #	IQI label	Composite measure weight
	<u>Acute Myocardial Infarction (AMI)</u>	
IQI 15	<u>Mortality Rate</u>	0.1463
IQI 16	<u>Heart Failure Mortality Rate</u>	0.2681
IQI 17	<u>Acute Stroke Mortality Rate</u>	0.1445
	<u>Gastrointestinal Hemorrhage</u>	
IQI 18	<u>Mortality Rate</u>	0.1325
IQI 19	<u>Hip Fracture Mortality Rate</u>	0.0683
IQI 20	<u>Pneumonia Mortality Rate</u>	0.2403



# Prevention Quality Indicators (PQI)

Table of Contents

Options

PQI - ALL I

PQI - ALL MEASURES BY OVERALL SERVICE

- PQI - ALL MEASURES BY MTF
- PQI 1 - Diabetes Short-Term Complications
- PQI2 - Perforated Appendix
- PQI 3 - Diabetes Long-Term Complications
- PQI 5 - COPD
- PQI 7 - Hypertension
- PQI 8 - Congestive Heart Failure
- PQI 10 - Dehydration
- PSI 11 - Bacterial Pneumonia
- PQI 12 - Urinary Infections
- PQI 13 - Angina without Procedure
- PQI 14 - Uncontrolled Diabetes
- PQI 15 - Adult Asthma
- PQI 16 - Lower Extremity AMP Among Patients with Diabetes
- PQI 90 - Overall PQI Composite

[PQI Technical Specifications](#)

**DOD**

PQI NAME	RATE TYPE	COMPARISON	BENCHMARK	2013Q1				2012Q4				2012Q3			
				STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM	DENOM	STATUS	RATE	NUM	DENOM
PQI 01 - Diabetes Short-Term Complications	RISK ADJUSTED	Lower is better	1.54	★	0.64	216	3,498,446	★	0.66	224	3,549,560	★	0.49	159	3,087
PQI 02 - Perforated Appendix	RISK ADJUSTED	Lower is better	28.16	★	21.73	116	656	★	18.55	96	699	★	21.80	133	
PQI 03 - Diabetes Long-Term Complications	RISK ADJUSTED	Lower is better	3.21	★	1.16	187	3,498,446	★	0.92	143	3,549,560	★	1.01	157	3,087
PQI 05 - COPD	RISK ADJUSTED	Lower is better	6.07	★	1.35	715	3,498,446	★	1.05	567	3,549,560	★	0.79	424	3,087
PQI 07 - Hypertension	RISK ADJUSTED	Lower is better	1.55	●	1.33	189	3,498,446	●	1.16	170	3,549,560	●	1.36	200	3,087
PQI 08 - Congestive Heart Failure	RISK ADJUSTED	Lower is better	9.96	★	5.84	637	3,498,446	★	4.90	535	3,549,560	★	4.48	487	3,087
PQI 10 - Dehydration	RISK ADJUSTED	Lower is better	2.77	★	2.05	295	3,498,446	★	1.61	241	3,549,560	★	2.15	311	3,087
PQI 11 - Bacterial Pneumonia	RISK ADJUSTED	Lower is better	9.01	★	7.13	939	3,498,446	★	5.23	691	3,549,560	★	4.66	604	3,087
PQI 12 - Urinary Infections	RISK ADJUSTED	Lower is better	5.14	★	3.24	441	3,498,446	★	3.17	428	3,549,560	★	3.82	517	3,087
PQI 13 - Angina without Procedure	RISK ADJUSTED	Lower is better	0.62	●	0.67	94	3,498,446	●	0.68	94	3,549,560	●	0.92	129	3,087
PQI 14 - Uncontrolled Diabetes	RISK ADJUSTED	Lower is better	0.58	★	0.19	35	3,498,446	★	0.14	24	3,549,560	★	0.11	22	3,087
PQI 15 - Adult Asthma	RISK ADJUSTED	Lower is better	3.23	★	0.27	71	3,498,446	★	0.32	87	3,549,560	★	0.28	74	3,087
PQI 16 - Lower Extremity AMP Among Patients with Diabetes	RISK ADJUSTED	Lower is better	0.9	★	0.13	16	3,498,446	★	0.09	12	3,549,560	★	0.06	8	3,087
PQI 90 - Overall PQI Composite	RISK ADJUSTED	Lower is better	45.3	★	27.43	3,830	3,498,446	★	22.89	3,211	3,549,560	★	22.27	3,087	3,087



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# Different views of the metrics

- Command
- MTF
- All indicators
- Individual indicators
- Quarterly observed report (raw numerator numbers)
- PSI anon chart



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Military Health System Population Health Portal

# Recommendations

- Analyze the indicators that you have challenges with
  - Look for trends or outliers on the graphs
  - Review patient charts for numerator patients for quality issues or opportunities for process improvements



- Quality Indicators
- All PSI and IQI numerator and denominator patients in the most recent measurement year
- All PQI numerator patients in the most recent measurement year (beginning with next data update)

The screenshot shows the CarePoint software interface. At the top, there is a navigation bar with tabs for Home, Overview, [Patient Management] (selected), Administration, Reporting, and Methods. Below the navigation bar, a dropdown menu is open for Patient Management, listing various options: ACTION LISTS, PREVALENCE REPORTS, OTHER LISTS, and Export Status. A secondary menu is visible to the right of the dropdown, listing specific patient categories and reports such as Asthma Medications, Antidepressant Med Mgt, Back Pain, Acute, Back Pain, Recurrent, Low Back Pain Imaging, Cardiovascular Disease Risk, CHF, Cholesterol in CVD, Diabetes MicroAlbumins, High Utilizers, High Utilizers Summary, Hypertension, Quick Look, COPD, Depression, Lipid Panel, Well Child, Children with Pharyngitis, Children with URI, Duplicate PCMs, Health Services, and Quality Indicators. A dark banner at the bottom of the interface reads "FOR OFFICIAL USE ONLY (FOUO) - Privacy Act of 1974".

# Quality Indicators List

Indicator Description	Numerator Flagged	Treatment DMIS	Patient Register Number	Discharge Calendar Year	Discharge Quarter	Product Line
PSI #3 Pressure Ulcer Rate	NO	0095	527051	2013	2	M
PSI #7 Central Venous Catheter-Related Blood Stream Infection Rate	NO	0095	527051	2013	2	M
PSI #15 Accidental Puncture or Laceration Rate	NO	0095	527051	2013	2	M
IQI #20 Pneumonia Mortality Rate	NO	0095	527051	2013	2	M
PSI #3 Pressure Ulcer Rate	NO	0095	527072	2013	2	M

MS DRG	MS DRG Description	Admitting Time	Admitting Date	Discharge Date	Length of Stay	Disposition Status	Age
194	SIMPLE PNEUMONIA & PLEURISY AGE >17 W CC	1331	03/21/2013	04/01/2013	11	01	85
194	SIMPLE PNEUMONIA & PLEURISY AGE >17 W CC	1331	03/21/2013	04/01/2013	11	01	85
194	SIMPLE PNEUMONIA & PLEURISY AGE >17 W CC	1331	03/21/2013	04/01/2013	11	01	85
194	SIMPLE PNEUMONIA & PLEURISY AGE >17 W CC	1331	03/21/2013	04/01/2013	11	01	85

Diagnosis   POA	Procedure   Procedure Day
486 Y 5849 Y 5119 Y 42832 Y 78097 Y 79902 Y 41400 Y 4280 Y 2753 N 42731 Y 4019 Y 2724 Y 4928 Y 60000 Y 25000 Y 42789 Y 29420 Y V4581 E V5867 E V1582 E	
486 Y 5849 Y 5119 Y 42832 Y 78097 Y 79902 Y 41400 Y 4280 Y 2753 N 42731 Y 4019 Y 2724 Y 4928 Y 60000 Y 25000 Y 42789 Y 29420 Y V4581 E V5867 E V1582 E	
5363 Y 25000 Y 2768 N 56400 Y 2468 Y	4516 5 4311 7 9957 5 4513 7 4632 14 3897 1
5363 Y 25000 Y 2768 N 56400 Y 2468 Y	4516 5 4311 7 9957 5 4513 7 4632 14 3897 1

**Displayed Columns** ✕

- Indicator Name
- Indicator Description
- Numerator Flagged
- Treatment DMIS
- Patient Register Number
- Discharge Calendar Year
- Discharge Quarter
- Product Line
- MS DRG
- MS DRG Description
- Admitting Time
- Admitting Date
- Discharge Date
- Length of Stay
- Disposition Status
- Age
- DOB
- Gender
- Patient Category
- Admitting Provider NPI
- Attending Provider NPI
- Diagnosis | POA
- Procedure | Procedure Day
- EDIPN

- Filter numerator flagged to contains YES to find the numerator patients
- Filter to the specific PSI, IQI, PQI :
  - Ex: Contains PSI #15



- Y = diagnosis was present at time of admission
- N = diagnosis was not present at time of admission
- U = insufficient documentation to determine if POA
- W = provider unable to clinically determine if POA
- E = exempt from POA reporting
- 1 = exempt from POA reporting



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# Reference Websites

- <http://qualityindicators.ahrq.gov/Modules/Default.aspx>
- [http://qualityindicators.ahrq.gov/Modules/psi\\_resources.aspx](http://qualityindicators.ahrq.gov/Modules/psi_resources.aspx)
- [http://qualityindicators.ahrq.gov/Modules/pqi\\_resources.aspx](http://qualityindicators.ahrq.gov/Modules/pqi_resources.aspx)
- [http://qualityindicators.ahrq.gov/Modules/iqi\\_resources.aspx](http://qualityindicators.ahrq.gov/Modules/iqi_resources.aspx)



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Questions?