



"Present on Admission (POA): Use and Validation"

Virginia Health Information
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Valid POA Codes (CMS)

Y = present at time of admission

N = not present at time of admission

U = insufficient documentation to determine if Y or N

W = provider unable to determine if Y or N

1 = diagnosis exempt from POA reporting

Quality Checks (Face Validity)

POA Distributions Multi-State

	New York+		California ***		Virginia**** (2008)		Minnesota		Florida**		Maryland	
	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
Principal DX Only												
Exempt (allows blank, 1, E, or Y)	101,117	2.97	74,179	1.85	38,170	10.98	33,523	14.06	130,282	9.76	113,823	14.76
Y	2,840,069	83.49	3,787,112	94.38	296,475	85.26	186,206	78.10	1,177,292	88.17	642,788	83.35
N	284,228	8.36	127,001	3.16	9,634	2.77	7,575	3.17	26,271	1.97	13,822	1.79
U	161,509	4.75	23,680	0.59	157	0.05	49	0.02	1,340	0.10	582	0.08
W	14,389	0.42	730	0.02	139	0.04	96	0.04	91	0.01	53	0.01
Missing (but not exempt)	-		-		3,101	0.89	4,332	1.82	-	0.00	141	0.02
Exempt (but miscoded, any value other than blank, 1, E, or Y)	189	0.01	72	0.00	39	0.01	33	0.02	-	0.00		
1 (not exempt)							6,612	2.77				
Total of Principal Diagnosis	3,401,501	100	4,012,774	100	347,715	100	238,426	100	1,335,276	100	771,209	100



Reporting (AHRQ Pilot)

Outcome Reports: AHRQ PSI

AHRQ - Hospital Patient Safety Indicators (PSI)

Printing Date

4/3/2009

1Q08 and 2Q08 Aggregated Data of 27 Pilot Hospitals

Indicator Number	Indicator Name	Numerator				Denominator				Rate			
		Pre-POA*		Post-POA**		Pre-POA		Post-POA		Pre-POA		Post-POA	
		Count	Count	Min	Max	Count	Count	Min	Max	Rate	Rate	Min	Max
1	Complications of anesthesia	29	27	0	5	53159	53,157	57	5677	0.5	0.5	0	4
2	Death in low mortality DRGs	36	36	0	7	52665	52,665	155	5333	0.7	0.7	0	1.8
3	Decubitus ulcer	1505	384	0	107	45401	44,280	332	4767	33.1	8.7	0	61.2
4	Death among surgical inpatients w/serious treatable comp.	239	165	0	21	1575	912	3	134	151.7	180.9	0	343.8
5	Foreign body left in during procedure, secondary DX field	0	5	1	2	0	5	1	2	0	1,000.0	1000	1000
6	Iatrogenic pneumothorax, secondary DX field	79	66	0	14	135227	135,214	641	12848	0.6	0.5	0	2.2
7	Selected infections due to medical care, secondary DX field	246	184	0	27	114326	114,264	562	10864	2.2	1.6	0	7.5
8	Post-operative hip fracture	8	2	0	1	27490	25,549	43	3181	0.3	0.1	0	7.2
9	Post-operative hemorrhage or hematoma	116	105	0	16	45112	45,047	56	5028	2.6	2.3	0	6.5
10	Post-operative physiologic and metabolic derangements	35	14	0	3	26408	26,187	15	2764	1.3	0.5	0	1.8
11	Post-operative respiratory failure	171	147	0	31	22097	22,073	12	2421	7.7	6.7	0	30.4
12	Post-operative pulmonary embolism or deep vein thrombosis	688	386	0	61	44708	44,406	56	4953	15.4	8.7	0	29.6
13	Post-operative sepsis	104	85	0	13	5736	5,337	3	709	18.1	15.9	0	48.9
14	Post-operative wound dehiscence	20	20	0	3	7380	7,380	8	752	2.7	2.7	0	37
15	Accidental puncture or laceration, secondary DX field	518	463	0	53	140704	140,649	646	13688	3.7	3.3	0	9.5
16	Transfusion reaction, secondary DX field	2	1	0	1	167766	167,765	646	16020	0	0.0	0	0.1
17	Birth trauma- Injury to Neonate	79	79	0	20	19969	19,969	235	1920	4	4.0	0	10.4
18	Obstetric trauma - vaginal delivery with instrument	162	162	1	24	1081	1,081	15	117	149.9	149.9	19.2	287.9
19	Obstetric trauma - vaginal delivery without instrument	389	389	3	41	12148	12,148	139	1191	32	32.0	17.6	60.3
20	Obstetric trauma - cesarean section	40	40	0	12	7339	7,339	77	685	5.5	5.5	0	20.4

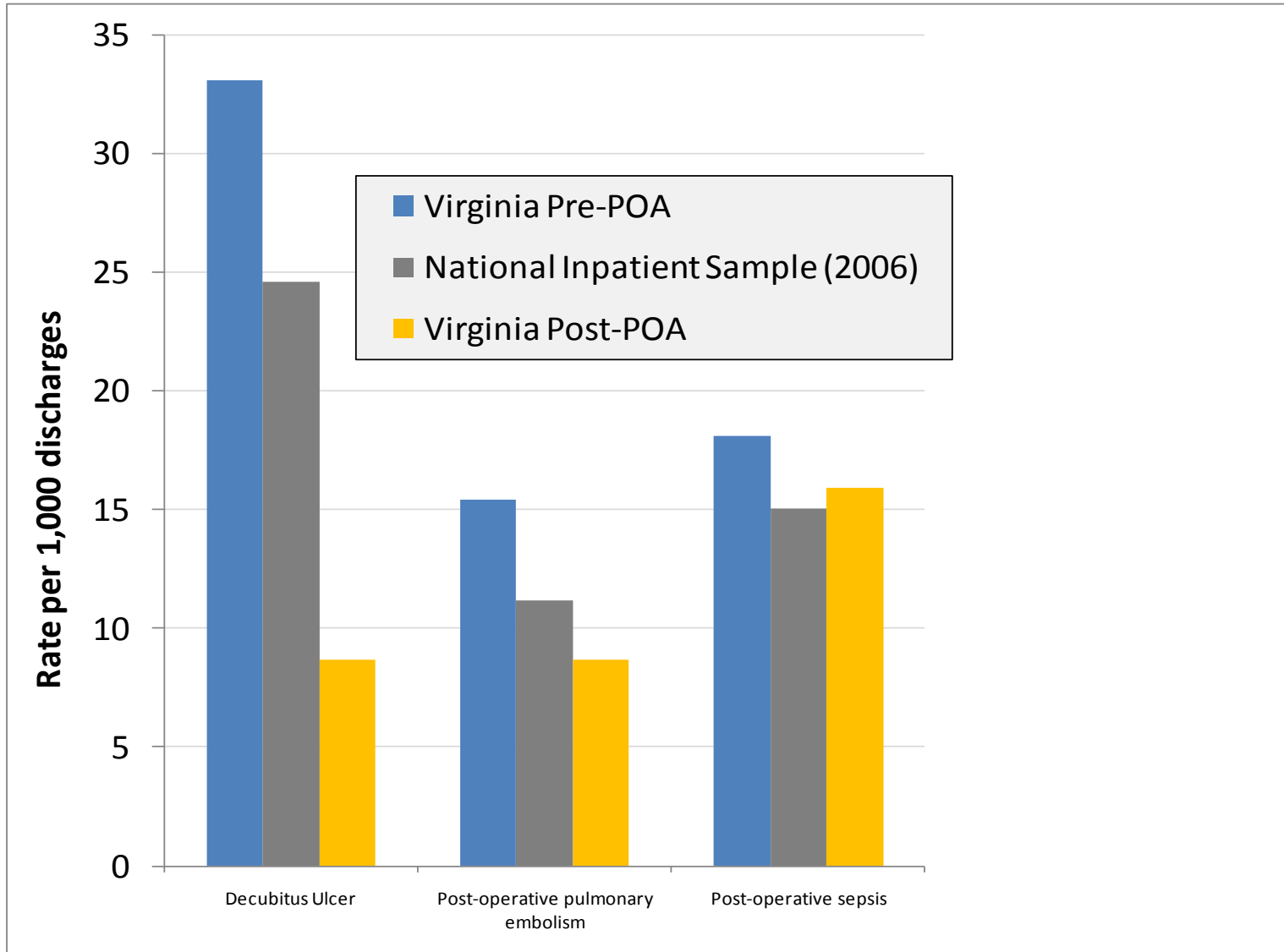
Rates are per 1000 eligible discharges. Quality Indicators Version 3.2a/apr (09/25/2008)

* Pre-POA - Quality Indicator results that DO NOT utilize present on admission information.

** Post-POA - Quality Indicator results that DO utilize present on admission information.

The Min and Max give the range of Post-POA values submitted/calculated for each hospital.

POA Reporting- Select AHRQ Patient Safety Indicators



Record
Layouts/Edits
Face Validity
Checks

Processing: Top Secondary Diagnoses- Not Present on Admission*

ICD9- CM	Description	NY (2006 RANK)	VA (2008 RANK)
5990	Urinary Tract Infection, Site not specified	1	2
2768	Hypopotassemia	2	4
2851	Acute Posthemorrhagic anemia	3	1
51881	Acute Respiratory Failure	4	5
5849	Acute Renal Failure, Unspecified	5	3
486	Pneumonia, organism unspecified	6	8
42731	Atrial Fibrillation	7	12

* Excludes liveborns, fetal/neonatal jaundice, vcodes for hearing exams, etc.

Processing: Preliminary POA Indicator Distribution CMS Hospital Acquired Conditions (HAC)

HAC Category	POA Indicator				
	N		Y		TOTAL
	n	%	n	%	N
Falls and Trauma-Fracture	106	1.3	7,844	98.2	7,983
Falls and Trauma-Intracranial Injury	17	1.8	881	97.1	907
Catheter-Associated Urinary Tract Infection (UTI)	112	18.8	478	80.6	593
Manifestations of Poor Glycemic Control	23	4.1	533	95.8	556
Vascular Catheter-Associated Infection	193	47.6	211	52.1	405
Falls and Trauma-Burn	10	3.4	277	95.8	289
Pressure Ulcer Stages III & IV	7	2.4	280	97.5	287
Falls and Trauma-Electric Shock	19	8.4	207	91.5	226
Falls and Trauma-Dislocation	5	3.0	156	95.7	163
Falls and Trauma-Crushing Injury	0	0.0	11	100.0	11
Foreign Object Retained After Surgery	5	50.0	5	50.0	10
Air Embolism	2	40.0	3	60.0	5
Blood Incompatibility	0	0.0	1	100.0	1
TOTAL	499	4.3	10,887	95.2	11,436

Quality Checks (Clinical Validity)

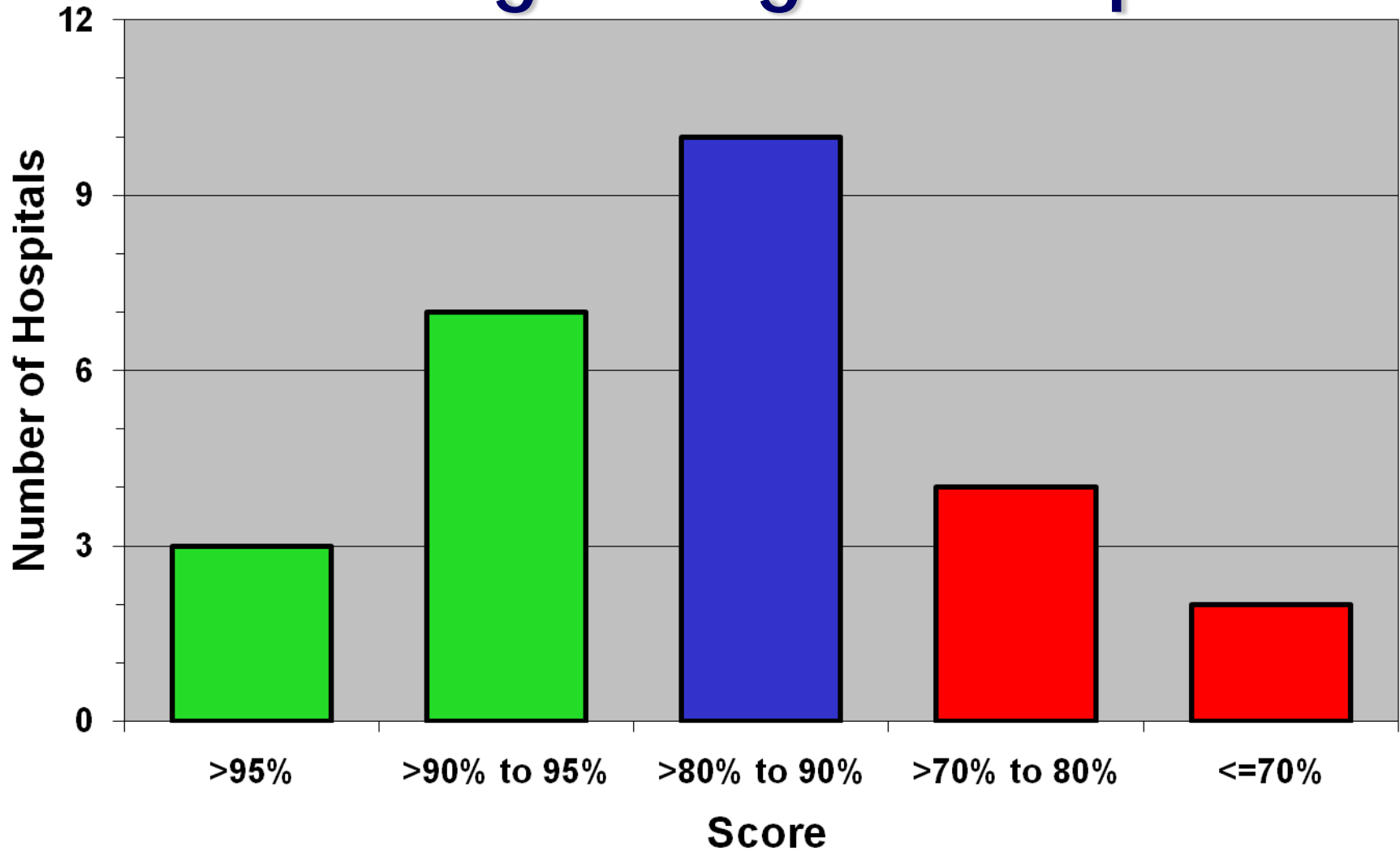
Quality of POA Coding

- ◆ Accurate distinction between hospital-acquired complications and comorbidities that were present on admission is essential to ensure validity of estimates of predicted mortality rates.
- ◆ Quality of POA coding was measured using 15 screens applied to high risk medical, elective surgical, and obstetrical cases.
- ◆ Predictive models were derived using only data from hospitals with acceptable POA coding.

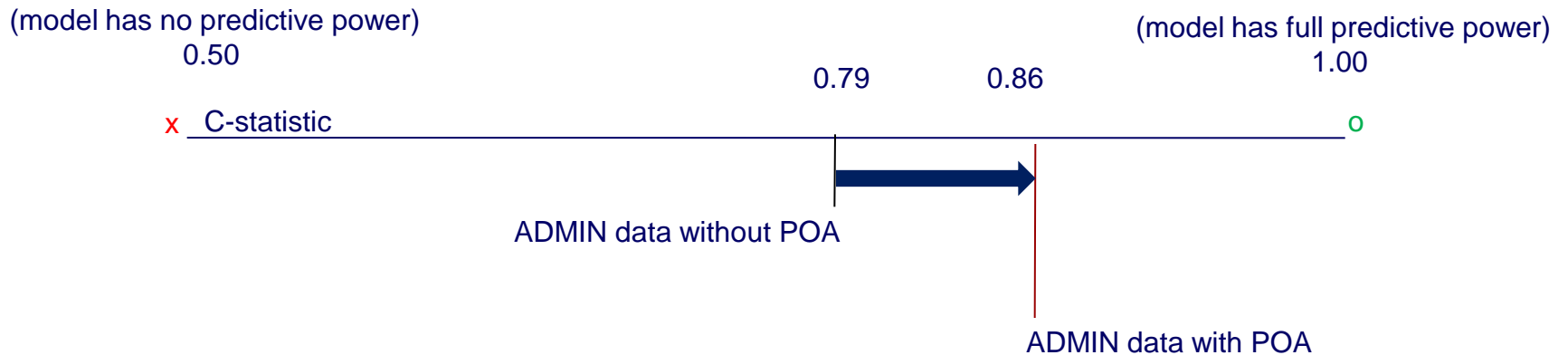
Clinical Quality Screen example

- A patient is admitted to the hospital for high-risk pneumonia.
- The patient also has lung cancer which gets coded. (a chronic condition that should almost never be coded as hospital-acquired.)
- The POA indicator on the ICD9 code for the lung cancer should be a "Y" for "yes, the condition was present on admission."

POA Coding at Virginia Hospitals



Predictive Power of POA Data



Interpreted from "Impact of Medical Errors on Costs and Outcomes", Encinosa and Hellinger, *Health Services Research*, 2008