# Cardiac Care Readmission Reporting Methodology (EXAMPLE)

Note: This EXAMPLE only uses 2 severity levels for the sake of brevity. Actually, there are 4 severity levels assigned to APRDRGs. The APRDRG number in the example does not correspond to an actual APRDRG for this report. The severity level is assigned during data processing using grouping software provided by 3M. The calculations below are performed by VHI.

**1) This step calculated at the STATE-level**

| APRDRG (1601)-Severity Level 1 | Adjusted Volume* | Total 30-day Related Readmissions** |
|---|---|---|
| Patient 1 | 1 | 1 |
| Patient 2 | 1 | 0 |
| Patient 3 | 1 | 0 |
| Patient 4 | 1 | 0 |
| Patient 5 | 1 | 0 |
| Patient 6 | 1 | 0 |
| Patient 7 | 1 | 0 |
| Patient 8 | 1 | 1 |
| Patient 9 | 1 | 0 |
| Patient 10 | 1 | 0 |

| | | | |
|---|---|---|---|
| | | | Total 30-day Related Readmission Rate expected for severity level 1 or 2/10 |
| Total | 10 | 2 | 0.20 |

| APRDRG (1601)-Severity Level 2 | Adjusted Volume | Total 30-day Related Readmissions |
|---|---|---|
| Patient 1 | 1 | 1 |
| Patient 2 | 1 | 0 |
| Patient 3 | 1 | 0 |
| Patient 4 | 1 | 0 |
| Patient 5 | 1 | 0 |
| Patient 6 | 1 | 0 |
| Patient 7 | 1 | 0 |
| Patient 8 | 1 | 0 |
| Patient 9 | 1 | 0 |
| Patient 10 | 1 | 0 |
| Patient 11 | 1 | 1 |
| Patient 12 | 1 | 0 |
| Patient 13 | 1 | 0 |
| Patient 14 | 1 | 1 |
| Patient 15 | 1 | 1 |

| | | | |
|---|---|---|---|
| | | | Total 30-day Related Readmission Rate Expected for severity level 2 or 4/15 |
| Totals | 15 | 4 | 0.27 |

**2) This step calculated at the HOSPITAL-level**

| APRDRG (1601)-Severity Level 1 | Adjusted Volume | Total 30-day Related Readmissions |
|---|---|---|
| Patient 1 | 1 | 1 |
| Patient 2 | 1 | 0 |
| Patient 3 | 1 | 0 |
| Patient 4 | 1 | 0 |
| Patient 5 | 1 | 0 |
| Patient 6 | 1 | 0 |
| Total | 6 | 1 |

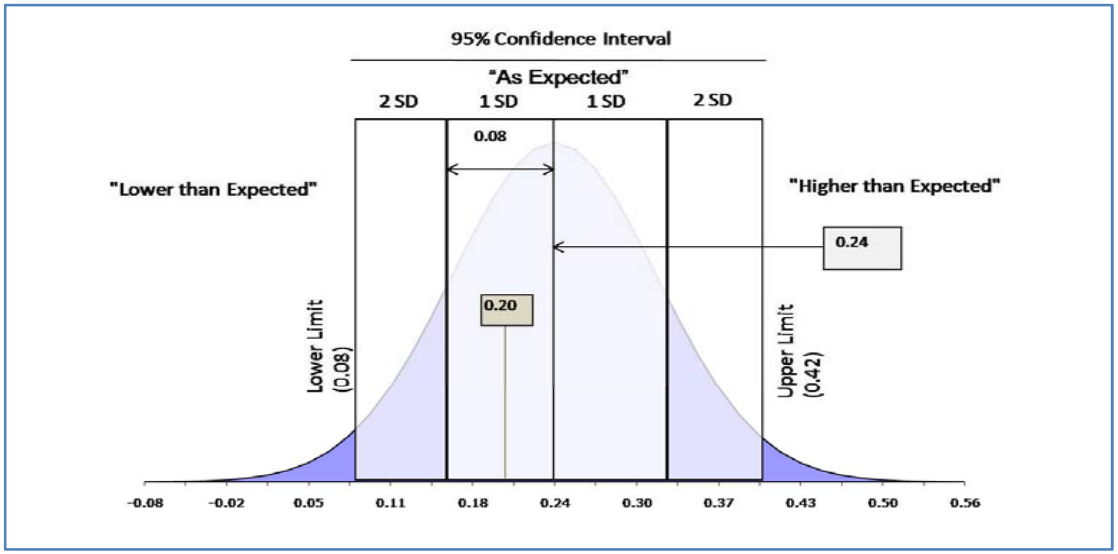
| APRDRG (1602)-Severity Level 2 | Adjusted Volume | Total 30-day Related Readmissions |
|---|---|---|
| Patient 1 | 1 | 1 |
| Patient 2 | 1 | 0 |
| Patient 3 | 1 | 1 |
| Patient 4 | 1 | 0 |
| Patient 5 | 1 | 0 |
| Patient 6 | 1 | 0 |
| Patient 7 | 1 | 0 |
| Patient 8 | 1 | 0 |
| Patient 9 | 1 | 0 |
| Total | 9 | 2 |

**3) Calculating Hospital Total 30-day Related Readmission Rates and Expected Hospital Total 30-day Related Readmission Rates**

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| | Adjusted Volume** | Hospital Total 30-day Related Readmissions | Hospital Total 30-day Related Readmission Rate (B/A) or 3/15) | Expected Total 30-day Related Readmission Rate (from STATE-level above) | Expected Total 30-day Related Hospital Readmissions (D*A) | Expected Hospital Total 30-day Related Readmission Rate (E/A or 3.63/15) |
| APRDRG (1601)-Severity Level 1 | 6 | 1 | | 0.20 | 1.2 | |
| APRDRG (1601)-Severity Level 2 | 9 | 2 | | 0.27 | 2.43 | |
| Service Line Totals | 15 | **3** | **0.20** | | **3.63** | **0.24** |
| | | ↓ | | | ↓ | |
| | | (This figure represents number of patients) | Total 30-day Related Readmission Rate | | (This figure represents number of patients) | Expected Total 30-day Related Readmission Rate |

## 4) Statistical Testing

| C (from step 3 above) | F (from step 3 above) | G | Confidence Interval (CI)**** | |
|---|---|---|---|---|
| Hospital Total 30-day Related Readmission Rate | Expected Hospital Total 30-day Related Readmission Rate | Standard Deviation*** | LOWER (F-G) | UPPER (F+G) |
| 0.20 | 0.24 | 0.08 | 0.08 | 0.42 |




**Interpretation: The hospital rate falls within the confidence interval [0.08,0.42] so, although it has a lower rate (C) than the expected rate (F), the difference is not statistically significant. The hospital's rating would be "AS EXPECTED."**

Technical Notes:

* Adjusted volume is all inpatient hospital discharges excluding 1) patients transferred to another facility or 2) patients that died.

** VHI uses a "relatedness" table to determine if the readmission APRDRG is related to the admission APRDRG. "1" in this example means the readmission was related, "0" means the readmission was not related or there was no readmission.

*** Standard deviation is defined as SQRT([Expected Rate*(1-Expected Rate)]/Adjusted Volume) or SQRT([F*(1-F)]/B)

Please note that the adjusted volume is very low in this example. In actuality, VHI requires at least n=30 for the adjusted volume to calculate. The SD calculations presented here uses n=30 for illustration.

**** The confidence interval is defined as Expected Rate±(1.96*Standard Deviation) or F±(1.96*G)