PCI volume—both institution and operator—has been determined to be an important indicator of quality of care and outcomes. (Antman EM, 2008), (Khumbhani D, 2009), (Jollis JG, 2009), (Srinivas V, 2009) For that reason it has been used as one indicator to categorize capacity of the differing levels of STEMI centers in Missouri’s proposed regulations.

In order to accurately and reliably count the volume in institutional settings the Department met with data experts and clinicians to identify the criteria that should be used. An important quality measure is the door to balloon time (D2B). In order to standardize this benchmark measure, CMS, the Joint Commission and ACC/AHA have established exclusion criteria for what should count and these variables have been thoroughly reviewed. (Masoudi FA, 2008) The measurement of the quality of reperfusion therapy involves greater complexity than many other process measures. (Krumholz HM, 2008) There are several national registries that collect these indicators. The exclusion criteria used to inform the data submitted are used to assure that there is a consistent population being compared for benchmark and quality improvement purposes.

For total volume purposes, the Department wants to define primary PCIs in a manner that reflects the institution’s total experience performing PCIs for a STEMI patient. For that reason, sub-populations of patients that would be excluded in existing national data collection systems (e.g. CMS) would be included in the primary PCI count to determine total volume. Specifically, the following patients would be included in the count of primary PCIs:

1. STEMI diagnosis – ST elevation or new LBBB- (ECG at some point)
2. PCI done within 24 hours of diagnosis
3. ICD-9-CM procedure code of PCI
4. ICD-9-CM Acute MI diagnosis code on discharge diagnosis list

These sub-populations of STEMI patients that met the top 4 criteria would be included¹:

5. Patients who have failed lytics- rescue- (continue to have signs/symptoms of ischemia and/or continued ischemic ECG changes)
6. Patients who “failed” initial primary PCI (continue to have signs/symptoms of ischemia and/or continued ischemic ECG changes)
7. All patients, any age (CMS excludes those < 18 y.o.)
8. All patients, any length of stay applicable (CMS excludes stays >120 days)
9. Patients enrolled in clinical trials
10. Patients received as a transfer from an acute care facility where they were an inpatient or outpatient
11. Patients received as a transfer from one distinct unit of the hospital to another distinct unit of the same hospital
12. Patients received as a transfer from the emergency department of another hospital
13. Patients administered fibrinolytic agent prior to PCI (see number 5 above for clarification)
14. PCI described as non-primary by a physician/APN/PA

¹ CMS excludes these sub-groups of STEMI patients
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15. Patients who did not receive PCI within 90 minutes and had a reason for delay documented by a physician/APN/PA (e.g., social, religious, initial concern or refusal, cardiopulmonary arrest, balloon pump insertion, cardiopulmonary arrest)
16. Patients with a documented reason for no aspirin on arrival
17. Patients discharged/transferred to a federal health care facility on day of or day after arrival
18. Patients who expired on day of or day after arrival
19. Patients who left against medical advice or discontinued care on day of or day after arrival
20. Patients discharge/transferred to another hospital for inpatient care on day of or day after arrival
21. Patients discharge on day of arrival
22. Patients with comfort measures only documented on day of or day after arrival

An elective PCI is any procedure not counted as primary (i.e. not done emergently for STEMI).

The number of Primary PCI and Elective PCI will be counted by the number of patients going through the cath lab for either elective or primary PCI.

Bibliography:


