

# Quality Improvement Programs: Do They Make A Difference In The Immediate Post-Stroke Phase?

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**Background:** Quality improvement initiatives for acute stroke patients may result in better outcomes. The Paul Coverdell National Acute Stroke Registry (PCNASR) monitors quality of care provided to patients having an acute stroke or TIA, based on currently accepted stroke performance measures.

**Methods:** Four in-hospital stroke care performance measures were calculated as received, not received, or not indicated for all patients clinically diagnosed with stroke or TIA. The four performance measures studied are those that acute stroke patients should receive within the hyperacute and acute post-stroke period: tPA given by 3 hours from symptom onset, DVT prophylaxis and antithrombotic therapy within 48 hours of admission, and dysphagia screening performed prior to any oral intake. Using a logistic regression model, survival was modeled to proportion of patient-appropriate performance measures (PAPMs) received per patient, controlling for age and severity of stroke as determined by NIH Stroke Scale score (NIHSS). Log of NIHSS was used due to the distribution of NIHSS. This study included 22,282 patients, entered into PCNASR from January 2005 through September 2006 who qualified for at least one PAPM in Georgia, Illinois, Massachusetts, and North Carolina.\*

**Results:** 6.3% of patients died in-hospital (11.7% of those receiving no PAPMs, 4.8% of those receiving some PAPMs, and 6.2% of those receiving all PAPMs). 60.6% of 22,282 patients received all PAPMs, 30.3% received some PAPMs, and 9.1% of patients received no PAPMs. Patients not receiving any of the four performance measures, where appropriate, were 2.04 (CI 1.75, 2.38) times as likely to die in hospital (UB-92 discharge code=20, 41) compared to those receiving all of the appropriate measures of care, controlling for age. Controlling for age and stroke severity as measured by NIHSS, patients not receiving any of the four performance measures, where appropriate, were 2.10 (CI 1.26, 3.53) times as likely to die in hospital in a subset of 6229 patients with NIHSS collected.

**Conclusion:** Receipt of no PAPMs shows a significant association with increased in-hospital death following acute stroke or TIA.

\*Of 1750 stroke patients not qualifying for any PAPMs, 16.9% died.

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