The Impact of Concurrent Review on Stroke Center Measures at The Miriam Hospital

Celia Gomes McGillivary, MPH, BSN RN, CHES; Jason T. Machan Ph.D.

Rationale

The Miriam Hospital (TMH), certified three times as a primary stroke center, is committed to providing the highest quality stroke care, work with the community and emergency medical services, to improve issues that affect the rapid recognition and response to acute stroke patients. The hospital used a quantitative measure to assess the impact of concurrent review on stroke center measures.

Background

Little research has been published about which interventions can influence physician and nurse practice patterns such that stroke measures have been impacted. Evidence from this project supports that concurrent review (also known as performance and feedback, served as a mechanism to impact overall stroke performance at TMH. Hospitals examine their quality improvement data to evaluate systems of care, benchmark against other organizations, and make necessary modifications that can support clinician decisions.

Objective

Evaluate the effect of concurrent review on stroke measures.

Methods

A pre/post test design was used to evaluate the effectiveness of concurrent review. Concurrent review in this project, is defined as a process where a stroke nurse quality improvement coordinator reviewed all daily admission reports, examined the medical record, and determined which elements of the stroke patient care management were missing. The coordinator would communicate recommendations to the physician and registered nurse caring for patient. TMH tracked a number of stroke measures including the composite index because it's value is derived from all stroke core measures. This index is calculated as the proportion of patients who received specific interventions for which they were eligible. Pre-intervention data (Jan 06 – May 08); and post-intervention data (June 08 - Dec 09) was examined.

Results

The stroke composite index score for TMH reached signification improvement post intervention. (p=0.0013) as compared to pre-intervention results(p<0001). Month to month fluctuations occurred, but composite scores plotted in a trend line, showed significantly increased trends in the composite score (0.61% per month pre-intervention increasing to 0.95% post-intervention.

Conclusions

This data shows that concurrent review appears to provide an advantage for improving stroke measures over time. The study did not examine other interventions that may have been implemented during the same time period. More research needs to be conducted.

References (abbreviated list)

Darmody, J., Pawlak, R., Hook, M., Semeniuk, Y., Westpbal, J., Murray, M. E., & Henriques, J. (2007). Substitution of Hospital Staff in Concurrent Utilization Review *Journal of Nursing Care Quality*, *July/September*, 239-246.

Davis, D. A., Thomson, M. A., Oxman, A. D., & Haynes, B. R. (n.d.). Changing Physician Performance: A Systematic Review of the Effect of Continuing Medical Education Strategies. Http://gateway.ut.ovid.com/gw2/ovidweb.cgi. http://www.ncbi.nlm.nih.gov/pubmed/7650822

Day, T., Iles, N., & Griffith, P. (february 2009). Effect of performance feedback on tracheal suctioning knowledge and skills: randomized controlled trial. *Journal of advanced nursing*, *65*(7), 1423-1431. doi: 10.1111/j.1365-2648.2009.04997.x

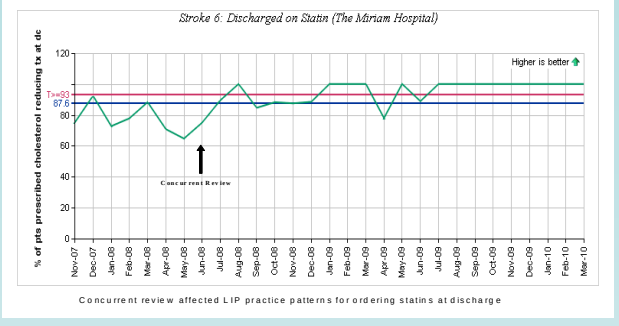
Heinemann, A. W., Roth, E. J., Rychlik, K., Pe, K., King, C., & Clumpner, J. (2002). The Impact of Stroke Practice Guidelines on Knowledge and Practice Patterns of Acute Health Professionals. *Journal of Evaluation in Clinical Practice*, *9*(2), 203-212.

Kumana, C. R., Ching, T., Cheung, E., Kong, Y., Kou, M., Chan, C., Lam, S. (1998). Antiulcer drug prescribing in hospital successfully influenced by immediate feedback. [Abstract]. *Clinical Pharmacology & Therapeutics*, *64*(5), 569-574.

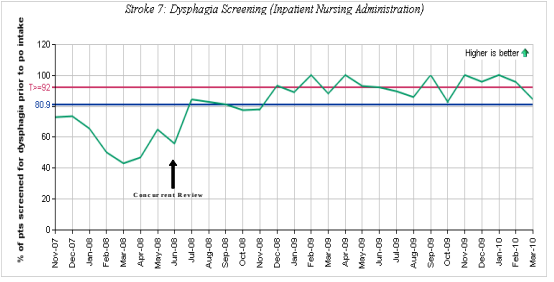
Ryan, A. M. Effects of the Premier Hospital Quality Incentive Demonstration W*iley Online Library*. DOI:10.1111/j.1475-6773.2009.00956.x on Medicare Patient Mortality and Cost - Ryan - 2009 - Health Services Research.

The primary stroke center (PSC) composite index was generated by using "This Get With The Guidelines SM (GWTG) Aggregate Data report using the Outcome TM PMT R system. Copy or distribution of the GWTG Aggregate data is prohibited without the prior written consent of the American Heart Association and Outcome Sciences, Inc. (Outcome). "The Get With The Guidelines®–Stroke (GWTG-Stroke) program is provided by the American Heart Association/American Stroke Association. The GWTG-Stroke program is currently supported in part by a charitable contribution from Bristol-Myers Squib/Sanofi Pharmaceutical Partnership and the American Heart Association Pharmaceutical Roundtable. GWTG-Stroke has been funded in the past through support from Boeringher-Ingelheim and Merck."

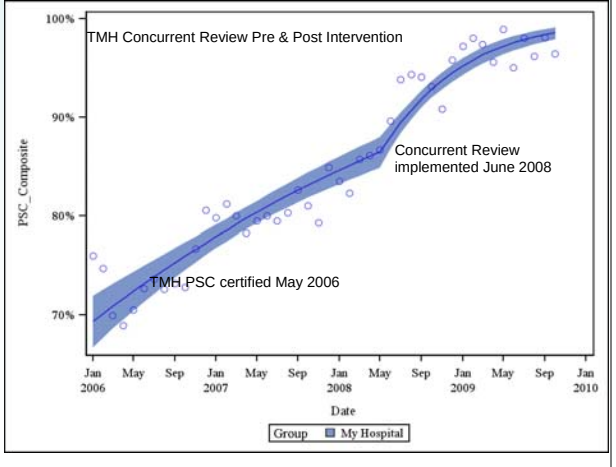
Support given by TMH. Institutional Review Board approval received.
Acknowledgements – Jessica Brier, Fred Griffith, Carol Lamoureux, Todd Seigel, Diana Wantoch.



Concurrent review affected LIP practice patterns for ordering statins at discharge



Concurrent review affected nursing patterns to conduct dysphagia screening



Stroke composite index improved over time. Concurrent review implemented June 2008.