Research on Early Mobilization Following Stroke

The Problem

The early mobilization of patients with acute stroke is recommended to prevent musculoskeletal compromise, pulmonary and integumentary impairments, and to initiate the rehabilitation process. A delay between the time at which a patient with acute stroke is admitted and the time at which a physical therapy consult is generated has been identified as a pertinent problem by the Inpatient Rehab Services team.

Aim/Goal

The goal of this project is to examine BIDMC's current rehabilitation practice for patients following acute stroke and compare patients who were seen earlier in their stay to those that were seen later. This is being done using a retrospective research study in which the following questions are examined:

- How early are patients currently being seen following acute stroke at the BIDMC?
- Do patients who are examined earlier reach functional milestones sooner?
- Do patients who are evaluated earlier have more adverse treatment effects?

The Team

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- Lisa Azzam, PT, DPT, NCS
- Shannon Carthas, PT, MSPT
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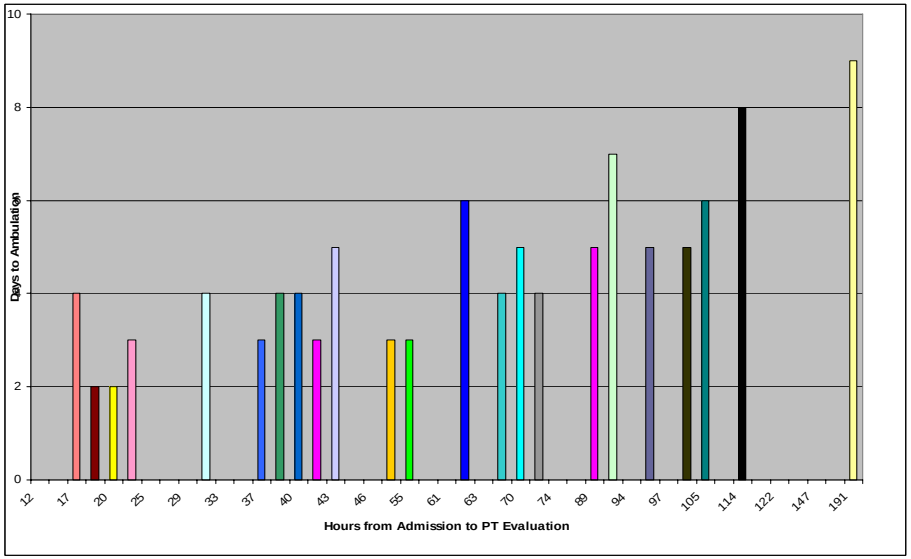
The Study

The Study Team performed a literature review to examine the current evidence available on early mobilization and treatment of patients following acute stroke. This was used to develop a research protocol for the study. After obtaining IRB approval, the team initiated performance of retrospective chart reviews on patients who met established inclusion criteria. Information is collected on the patient's baseline functional status, stroke location, functional status on exam, adverse treatment reactions, course complications, time to PT order placement, time to evaluation, and time to achievement of established functional milestones.

The Results

Up to this point, 50 patients have been included in the study with a final inclusion goal of 80. Data analysis for these patients shows an average dosing of PT was 79 minutes over an average of 2 visits per stay. The average LOS was 8 days. Only six subjects (12%) were examined by PT within 24 hours of admission. The mean time from admission to PT consult (in POE) was 36 hours and the mean time until PT examination was 67 hours. A trend in the data suggests patient examined earlier demonstrated an earlier achievement of functional milestones. Also, patients seen at an earlier time did not show any increase in adverse effects.

Time to Achievement of Ambulation based on Initiation of PT



Lessons Learned

Current literature supports initiation of physical therapy and mobilization within 24 hours of acute stroke. The preliminary results of the study show that patients seen earlier in their stay did not have an increase in adverse effects and may have benefited from earlier treatment initiation, as they demonstrated earlier achievement of functional skills. Our study also demonstrates that there is a delay in initiation of physical therapy compared to that recommended by the current literature.

Next Steps

- Complete data collection and data analysis for all 80 patients
- Examine current system to establish reason for delay in initiation of PT
- Implement new system to achieve earlier initiation of PT
- Repeat study once new system in place to compare to current results

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