**Name:** Mary S. Burr  
**Date of Project Presentation:** 4/12/16  
**Time of Project Presentation:** 12:00PM  
**Room:** 400

**Project Topic/Title:** Improving Provider Compliance with Glycemic Guidelines in Children with Type 1 Diabetes

### Scholarly Project Abstract:

**Background:** The serum glycated hemoglobin or hemoglobin A1c (HbA1c) measurement is the most important long-term measurement of glycemic control and treatment effect for the child with Type 1 diabetes mellitus (T1DM). The goal of treatment in diabetes is to maintain the patient’s blood glucose within a specific therapeutic range. A team of specialized providers is typically cares for these children, and continuity of the treatment among providers has been shown to improve glycemic control. Provision of guideline driven care has been shown to have positive outcomes in terms of therapeutic HbA1c measurement. In January 2015, The American Diabetes Association (ADA) released revised HbA1c guidelines for children with T1DM. Their recommendation was all children with T1DM should have an HbA1c level of < 7.5%. The goal of this quality improvement (QI) project was to promote and measure the level of provider compliance with 2015 ADA glycemic guidelines using a standardized phrase for documentation in the electronic medical record (EMR).

**Methods:** There were two phases to the project. The initial phase included completion of a pre-intervention provider survey to assess provider knowledge of current ADA guidelines. This was performed prior to a discussion addressing current glycemic guidelines with the providers. The second phase was the creation and implementation of a “smart phrase” for EMR documentation, which confirmed that HbA1c measurement and ADA guideline recommendations had been addressed with patients and families. At the completion of the intervention phase, the project leader performed a manual retrospective chart review, to collect nominal data needed to measure provider compliance in the use of the smart phrase.

**Results:** The project took place in a Diabetes and Endocrinology Center of a large urban academic medical center. The convenience sample of providers consisted of 9 pediatric diabetes providers who currently practice at the center: three pediatric endocrinologists, three pediatric nurse practitioners and three certified diabetes educators. The pre-intervention provider survey results indicated that 90% of the providers were aware of the current guideline recommendations, 80% consistently used the guideline recommendations in their treatment plan for patients with T1DM to set glycemic goals based on a perceived risk of hypoglycemia. Intervention data, which were measured as “phrase usage” was collected over a six-week period, capturing 122 patient visits. Overall, there was a 59% provider compliance rate with smart phrase usage; the group most compliant in smart phrase usage was the group of APRN providers, who used the phrase in 70% of patient visits.

**Conclusions:** When utilized, the EMR smart phrase was helpful in identifying provider compliance with discussing current ADA guidelines. Additionally, there was a significant difference between provider groups in the frequency of phrase usage. The pediatric nurse practitioners used the phrase more often than did both of the other groups combined (p=<.001). Consistent use of the smart phrase reflects guideline-driven care by diabetes providers and sends a clear message to families of patients with T1DM regarding the importance of glycemic control and improved patient outcomes.

<table>
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<tr>
<th>Scholarly Project Chair</th>
<th>Susan L. Bindon, DNP, RN-BC, CNE</th>
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<tr>
<td>Committee Member</td>
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