Use of an Oral Mucositis Assessment Tool in Pediatric Patients

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Background

- Mucositis is a common side effect of cytotoxic cancer treatment and conditioning for hematopoietic stem cell transplants (HSCTs) involving the breakdown of mucous membranes of the alimentary tract[1-3, 6]
- Complications of mucositis include malnutrition, weight loss, and systemic infection[4]
- Adverse effects lead to longer hospitalizations, may limit future doses of chemotherapy/radiotherapy, and can cost $25,000 per individual[5,6]
- Identifying mucositis is challenging and inconsistent
- Children's International Mucositis Evaluation Scale (ChIMES) screens pediatric patients 0-18 years old for mucositis via functional impact and allows completion by proxy[7]
- The purpose of this project was to improve pediatric oral mucositis assessment by using a validated screening tool

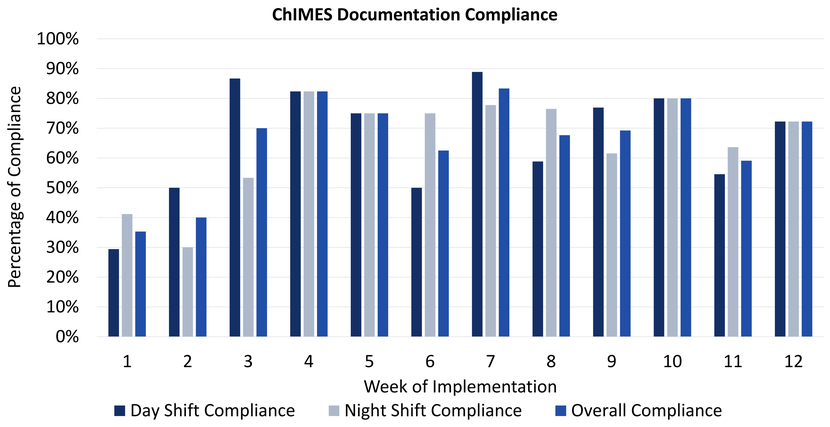
Project Aims

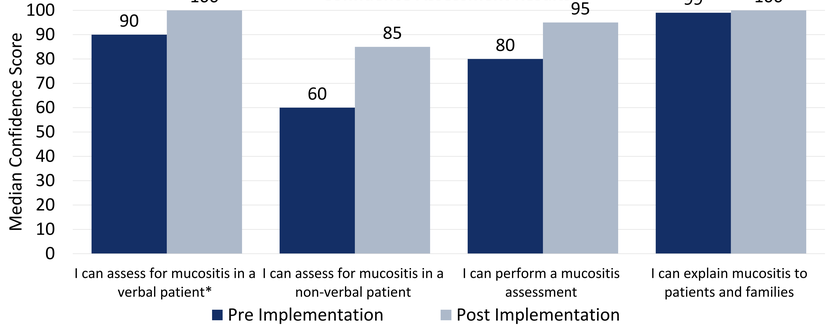
1. Ensure twice daily mucositis screening for pediatric oncology patients
2. Increase nursing staff confidence in assessing oral mucositis

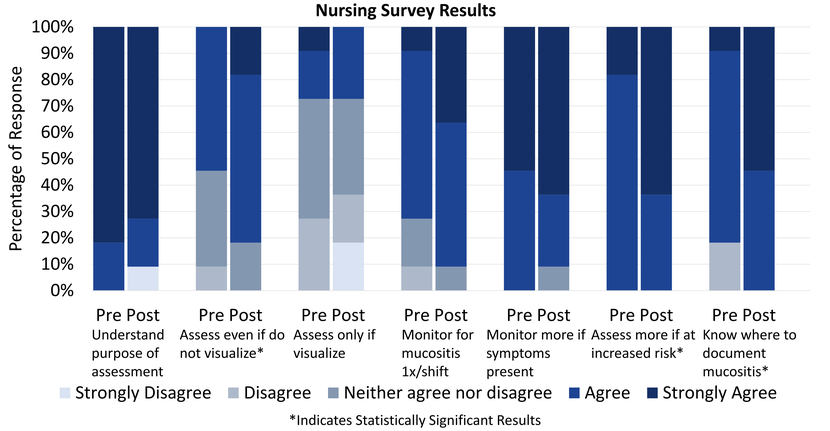
Methods

- Design and Setting: QI project with a pre-post design on a 20 bed inpatient pediatric oncology unit in an urban academic medical center in the northeastern United States
- Intervention:
  - Education on mucositis and ChIMES provided to nurses
  - ChIMES was added to the electronic health record (EHR)
- Measurement:
  - Weekly analysis of assessment completion
  - Pre and post surveys focused on confidence in mucositis assessment completed by nurses

Results







*Indicates Statistically Significant Results

ChIMES used with permission granted by Deborah Tomlinson and Lillian Sung on April 27,2021

Results Continued

- Percent change evaluating documentation compliance calculated over the 12-week period was found to be 105%.
- Results (n=11) demonstrated that there was a statistically significant improvement in nurses:
  - Ability to assess for mucositis in verbal patients (p=0.042)
  - Likelihood to assess for mucositis regardless of visible lesions (p=0.034)
  - Likelihood to assess for mucositis if the patient is at risk for mucositis at that time (p=0.025)
  - Knowledge of where to document mucositis in the EHR (p=0.034)
- 96% (n=26) of participants felt that ChIMES increased their awareness of assessing patients for mucositis
- 84% (n=26) of participants felt that ChIMES in the EHR was beneficial for patients

Conclusions and Implications

- Improved frequency of assessment as familiarity increased
- Nursing confidence increase was not statistically significant
- Survey results demonstrated utility of ChIMES in the EHR
- With ChIMES, nurses are more likely to assess for mucositis regardless of visible ulcerations and in patients who are verbal
- Increased knowledge of where to document mucositis in EHR
- ChIMES could be implemented on other pediatric units

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