

# Benefits and Feasibility of the Implementation of a Mucositis Screening Tool at an Outpatient Infusion Center

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## Background

- Oral mucositis (OM) is a frequent and highly symptomatic adverse effect of cancer treatment, especially prevalent in patients receiving cytotoxic drugs and head and neck radiation treatment. OM results in very painful ulcerations, infections, a decrease or discontinuation of oral intake leading to treatment delay and is potentially life threatening.
- While oral hygiene has been a part of nurse teaching at this outpatient infusion center, there was no formal toxicity screen performed addressing mucositis.

## Aim & Objectives

The aim of the project was to implement a systematic screening process for oral mucositis in an outpatient infusion center.

### Objectives:

- Identify a validated mucositis toxicity screen that is feasible for integration into the infusion center flowsheet.
- Develop a systematic screening process of oral mucositis.
- Increase awareness of the importance of oral status of chemotherapy patients.
- Increase nurse confidence of assessing for mucositis.
- Identify opportunities for intervention prior to serious infection by observing a toxicity grade each visit.

## Methods

The PDCA model was used for this project.

- The infusion nurses were given a pre and post survey about the Oral Assessment Guide (OAG).
- Education provided to RNs on how to use the OAG tool and laminated pocket cards and pen lights provided to all nurses.
- Worked with analyst to integrate the OAG into the electronic health record.
- Reviewed patient records (N=10) for OAG screening over a 2-month timeframe with an average scoring.

## Results

Sample of Drop-Down Grading Tool in Epic

Category	Grade 1	Grade 2	Grade 3
Voice	Normal	Deeper or raspy	Difficulty or painful
Swallow	Normal swallow	Pain with swallowing	Unable to swallow
Lips	Smooth, pink, and moist	Dry or cracked	Ulcerated or bleeding
Tongue	Pink and moist	Coated or shiny appearance	Blistered or cracked
Saliva	Watery	Thick or ropy	Absent
Mucous Membranes	Pink and moist	Reddened or coated (white) without ulcerations	Ulcerations present
Gingiva	Pink and firm	Edematous	Bleeding
Teeth	Clean and no debris	Plaque or debris between teeth or in localized areas	Plaque or debris generalized on teeth

**Grade 1 (1-8):** Normal oral assessment  
**Grade 2 (9-12):** Mild functional disturbance  
**Grade 3 (>13):** Moderate or severe functional disturbance

Figure 1: There are three grades for oral mucositis using the OAG assessment tool: grade 1 being a normal assessment, grade 2 being a mild functional disturbance, and a grade of 3 having a moderate to severe functional disturbance.

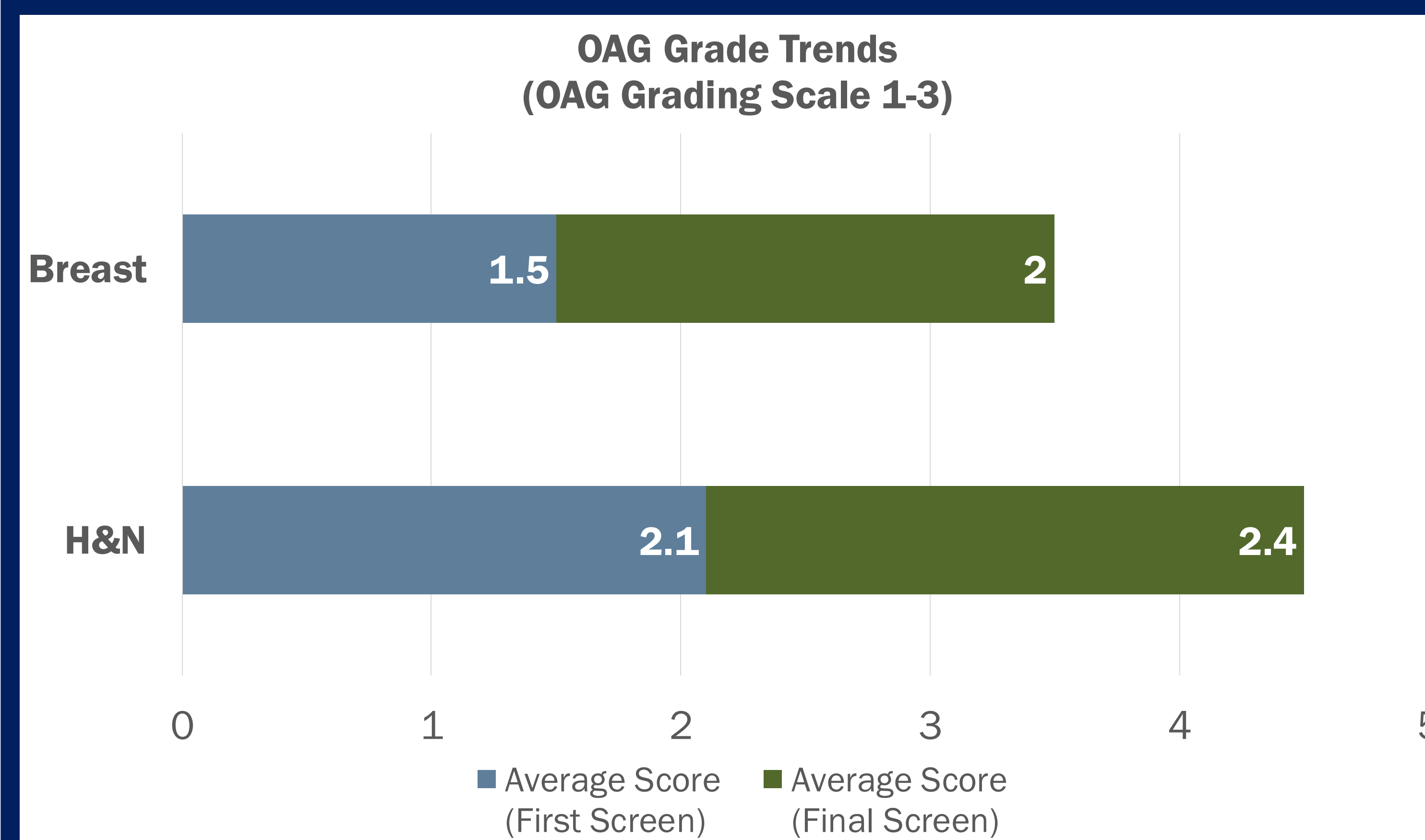


Figure 2: A review of Oral Assessment G assessments completed over two months in two high-risk mucositis cancer populations reported average scores of 2 on the initial OAG assessment, with an increase in the average score to 2.3 as the patient progressed in the chemotherapy treatment course.

## Results

- The Oral Assessment Guide is now integrated into the electronic health record system for assessments for the infusion center nurses documentation.
- A review of OAG assessments completed over two months in two high-risk mucositis cancer populations reported 100% OAG assessment and documentation compliance.
- An increase in the toxicity grade among the majority of the patients surveyed provided insight on the magnitude of this complication at the infusion center.
- The significance of this project is that the infusion center now has a systematic process for assessing and grading oral mucositis.
- After assessing at risk patients at the infusion center, the patients are experiencing moderate to severe mucositis.
- The comparison of the pre and post surveys collected show infusion center nurses have an increase in knowledge regarding the OAG and oral mucositis following education and implementation of the tool.

## Future Actions

- Implementing a mucositis grading scale for all patients receiving cytotoxic medications is feasible and essential to assess patients receiving cytotoxic medication adequately.
- Future process improvement and quality improvement projects are warranted for all patients receiving cytotoxic medications with interdisciplinary collaboration for treatment plans when patients have an OAG assessment in grades 2 to 3.

## Acknowledgments

Thank you to the Houston Methodist The Woodlands Outpatient Infusion Center leadership and nurses for your support, engagement, and participation. Thank you to the IT team for collaborating to integrate the assessment in the EHR.

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