

## INTRODUCTION

- Pediatric cancer protocols include highly emetogenic chemotherapy.
- Wood and colleagues (2011) describe Chemotherapy-Induced Nausea and Vomiting (CINV) as a common and troublesome problem.
- Baxter and colleagues (2011) developed a pictorial scale to assess nausea in children ages 7-18; Baxter Animated Retching Faces (BARF) scale.
- There is no standardized method for assessing patient perception of their nausea under the age of 7, hence, effectiveness of therapeutic measures to treat nausea is seldom able to be quantified.

## PURPOSE AND AIMS

- The purpose of this study was to evaluate whether the BARF scale is a valid measure for nausea in pediatric cancer patients aged 3-7 years.
- 1: Does the scale discriminate between nausea and no nausea in this population?
- 2: Do higher Oncology Nursing Society (ONS) scores correlate with higher nausea scores?

## CONCLUSIONS

- In this population, the children were able to discriminate nausea symptoms from age 3-6.99 using the BARF scale.
- ONS scores were not predictive of reported nausea.

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## METHODOLOGY

### Design:

- Retrospective Chart Review.
- Institutional Review Board (IRB) approval granted by University of California San Diego IRB.
- Data was collected retrospectively from July 1, 2016-December 31, 2016.
- Clarity report generated by electronic documentation system (EPIC) for data collection. ONS score calculated for medication.

### Sample:

- English speaking patients age 3-6.99 years admitted to the hospital for chemotherapy.

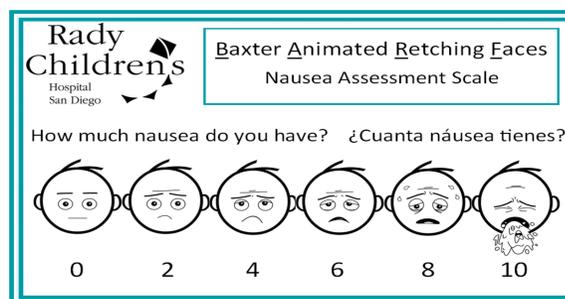
### Measurement:

- Baxter Animated Retching Faces (BARF)<sup>2</sup> (Figure 1).
- ONS Emetogenic Risk<sup>3</sup>.

### Analysis:

- Aim 1: Generalized Estimating Equation (GEE) to compare nausea scores before and after intervention (scores recorded 1 hour before intervention & scores recorded within 1 hour of successful intervention).
- Aim 2: repeated measures correlation coefficient<sup>1</sup> of ONS scores and the highest recorded nausea scores for each admission.

Figure 1



## RESULTS

- Data is available for n = 96 patients over 167 admissions.
- 1765 nausea scores documented using the BARF scale.
- Anti-emetics were the primary intervention used.

### Aim 1:

- 99.1% of children selected 0 on the BARF scale when not nauseated, and if reported nausea were able to discriminate between the faces based on symptoms. There was a significant decrease in nausea scores after any intervention (-0.749 points, 95% CI (-1.237, -0.262), p=0.003). Note: duplicate assessments were documented prior to the intervention.

Nausea Scores	Any Intervention	
	Pre (n = 123)	Post (n = 70)
0	93 (75.6%)	55 (78.6%)
2	10 (8.1%)	11 (15.7%)
4	5 (4.1%)	1 (1.4%)
6	3 (2.4%)	2 (2.9%)
8	7 (5.7%)	1 (1.4%)
10	5 (4.1%)	0 (0.0%)

### Aim 2:

- No significant correlation between ONS and nausea scores in either the whole cohort or subset by age.

## LIMITATIONS

- Convenience sample of patients in one institution.
- Sample may not be generalizable to other groups.
- Retrospective so may not reflect every episode of nausea or intervention.

## REFERENCES

1. Wood, J.M., Chapman, K., & Eilers, J. (Jan-Feb 2011). Tools for assessing nausea, vomiting, and retching. Cancer nursing, 34 (1), e14-24.
2. Baxter, A.L., Watcha, M.F., Baxter, W.V., Leong, T. & Wyatt, M.M. (June 2011). Development and validation of a pictorial nausea rating scale for children. Pediatrics, 127 (6).
3. Emetogenic risk of chemotherapy and biotherapy agents. Retrieved from [https://www.ons.org/sites/default/files/emetogenicity\\_tool.pdf](https://www.ons.org/sites/default/files/emetogenicity_tool.pdf).