

**School of Public Health
Department of Environmental and Occupational Health**

In partial fulfillment of the requirements for the degree of
Doctorate of Public Health

**Julia Lorraine Anderson**will defend her dissertation:

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**Factors associated with Eosinophilic Esophagitis in Nevada
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Eosinophilic esophagitis (EoE) is a rare immune-mediated illness with symptoms that range from difficulty swallowing to food impaction of the esophagus. Most published studies have been documented among patients residing in cool regions with significant annual rainfall. No published studies to our knowledge have been performed examining the healthcare utilization trends of EoE in Nevada. Utilizing two unique databases, the factors associated with EoE healthcare utilization patterns in Nevada were examined. All analyses were performed in R version 3.5.1. This study included a demographic and regional analysis identifying risk factors associated with having an EoE healthcare visit in Nevada. Several trends complemented those seen in other EoE studies including increased utilization among male and pediatric subgroups, as well as those of Caucasian descent. In the second part of the study, clinical EoE comorbidities among subgroups were identified. While this disease typically has a well-documented relationship with atopic illness, the comorbidities identified in Nevada were largely gastric in nature; indicating a trend of late-stage diagnoses of the disease. Treatment by region differed significantly, pointing to a lack of consistency of EoE knowledge among healthcare providers. Data from a small cohort of EoE positive pediatric patients from a local clinic (n=59) were also obtained. This clinical EoE subset was used to complement the hospital utilization database in order to identify common sensitization patterns among the pediatric population. Surprisingly, this population was largely sensitized to aeroallergens, as opposed to the common food allergens reported in the literature. This indicates that treatment approaches for this condition in Nevada may be unique to those found in other regions. The final part of this study examined the financial impact of EoE healthcare utilization in Nevada. The cost of EoE was significantly greater for the pediatric subgroup as well as those receiving treatment in the Southern Nevada region. Lastly, in order to gain a better understanding of cost relative to similar chronic inflammatory diseases, a comparison was performed between EoE, Crohn’s disease and Celiac disease. Significant differences in cost and utilization patterns existed by gender, age and healthcare setting. Findings from this study fill an important gap in EoE knowledge in this region. Improved physician and public health education for treatment is critical as the sensitization patterns in Nevada appear unique relative to other regions. Early identification of EoE diagnosis may improve knowledge and treatment among patients and providers in Nevada.

Date: Tuesday June 11th, 2019

Time: 12:00pm

Location: BHS 131

Faculty, students, and the general public are invited.

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