Abstract #: 288 **Presented by: Nadia Etienne, MS, Graduate Student**

Nutritional Education

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Keywords: Occupational Health Nursing, Nutrition, Education

Objective: While most people know it is important to eat a healthy diet, it isn't always easy to sort through all of the information available about nutrition. Understanding nutrition is a fundamental step to good health and a productive lifestyle. A poor understanding of nutrition and a lack of exercise has lead millions of Americans to co-morbidities including heart disease, diabetes and cancer.

Methods: Review of Literature

Results: By implementation a workplace nutrition education program the Occupational Health Nurse can enable increase productivity, decrease absenteeism, dispel fallacies about nutrition and prevent chronic diseases among his/her workforce.

Conclusion: Occupational Health Nurses (OHN) are often the sole healthcare provided in many work facilities and therefore play a vital role in intersecting and/or impeding the incidence of nutrition illiteracy of the workforce.

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Abstract #: 289 **Presented by: Angel Ferrer, MS, Recent Graduate**

Comparison of WBGT and PHS Heat Exposure Assessment Methods

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Keywords: heat stress, exposure assessment, WBGT, PHS

Objective: Two methods for assessing heat stress in occupational settings are an empirical model based on the wet bulb globe temperature (WBGT) and the Predicted Heat Strain (PHS), which is a rational model based on biophysical models of heat exchange. Their purpose is to predict limiting thermal stress in order to be able to protect the exposed worker. The purpose of this effort was to compare decision outcomes based on PHS for a range of limiting WBGT conditions. That is, are they congruent exposure assessments.

Methods: Exposure scenarios were developed using all the combinations of metabolic rate, relative humidity and air speed at three levels each; two levels of radiant heat and four levels of clothing. The temperatures for all scenarios were calculated using an Excel macro that adjusted the temperatures until the WBGTeff reached the TLV. Once all data was computed, there were 216 distinct scenarios that predicted a sustainable exposure to heat stress based on WBGT. These data were used to calculate the PHS.

Results: Of the 216 scenarios, there were a total of 23 incongruent scenarios. These tended to occur with high metabolic rates and low air speeds. High evaporative resistance also contributed to the incongruent scenarios. In general, the agreement was excellent.

Conclusion: Although both methods are useful in assessing industrial heat stress, the added parameters of the PHS model may be a better predictor of sustainable heat stress in certain occupational settings. In these scenarios the rational PHS model yielded duration limitations even in cases where, according to the WBGT model, work would still be sustainable.

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