Dear the AHNS Prevention & Early Detection Committee,

Please find below our project proposal entitled, “Improving Awareness and Understanding of Betel Quid Use and Oral Cancer in a High-Risk Refugee Community in the United States,” which we are submitting for consideration for the 2017 AHNS Community Service and HNCA International Outreach Cancer Prevention Grants.

Recreational use of betel nut (BN) is common worldwide. A 2012 review by the World Health Organization (WHO) estimated that 10-20% of the world population have chewed BN in their lifetimes, making it the fourth most commonly used psychoactive substance in the world. Its usage is most common in areas of Southeastern Asia, including Burma, India, and China; for these cultures, BN is used not only for the stimulant effects it produces, but also for the significant role it plays in tradition. However, BN use raises the risk of many health problems, including oral leukoplakia, oral submucous fibrosis, periodontal disease, and dental staining. Perhaps the most concerning of these is oral squamous cell carcinoma (OSCC), for which incidence among individuals who regularly chew BN can be nearly three times that of non-chewing individuals. A monograph from the International Agency for Research on Cancer declared that BN was carcinogenic in humans, finding that more than 50% of OSCC globally occurred in areas of Southeast Asia where usage was most prevalent.

While the link between BN use and OSCC is well-established in the medical community, these risks are less known by the public. A survey of Cambodian women in the United States found that while the association between smoking tobacco and lung cancer was accepted, none of the participants were aware of a correlation between BN and oral lesions. Similarly, a group of Burmese refugees in Australia viewed BN as a benign alternative to tobacco. The lack of knowledge is in part due to the paucity of initiatives aimed to promote BN cessation. A cross-sectional survey of dentists in London, UK found that the majority of practitioners did not have sufficient training to provide adequate counsel on the risks of BN use. With the health burden that growing BN usage poses, the healthcare community must make efforts towards interventions to improve patient education, cessation, and outcomes.

This proposal is an effort to improve patient awareness regarding the health risks associated with chronic BN usage among residents of Clarkston, GA, a community that is home to one of the largest refugee resettlement areas in the United States. Many of its residents emigrated from countries with a high prevalence of BN usage, and our target population includes members of all ages from this community. Especially in a population that is already faced with many healthcare barriers, such as diabetes, mood disorders, and cardiovascular disease, chronic BN use adds another layer of complexity to their health profile. The purpose of this project is to implement an educational initiative that will foster a better understanding of the hazardous effects of BN use for individuals in this high-risk refugee community.

To achieve our goals, we will design an informational brochure to be printed into both poster and 1-page deliverable format and distribute them at free clinics and community centers in Clarkston, GA. The information we communicate is three-fold: (1) to make evident the connection between BN use and OSCC, (2) to convey the many health risks that are associated with BN use, and (3) to illustrate the subtle symptoms of OSCC and the aggressively malignant potential of the disease. In addition, we will be administering a survey to collect information on the community’s usage pattern for BN, as well as a pre-
and post-test for each participant to assess the effectiveness of our initiative. To overcome barriers of language and illiteracy, our brochure and survey uses a novel approach that relies on simple, image-based explanations with minimal text to convey our message.

Our pilot study for this project has already uncovered significant results on BN usage patterns, risk awareness, and the effectiveness of our educational initiative among members of the Clarkston community. We surveyed 48 patients at a community free clinic who were familiar with BN usage. 36.4% reported daily use of BN, with the most common reasons being taste, enjoyment, and addiction. In our cohort, while 75% of patients believed BN usage was harmful for health, only 29.3% cited carcinogenesis as a reason for this belief. Other commonly stated reasons included teeth discoloration and tobacco contents. Accordingly, only 52.3% of participants believed regular usage of BN alone could cause OSCC compared to 100% who believed tobacco could cause OSCC. Following our educational intervention, patient knowledge that BN usage was harmful improved significantly (100%, p=0.011), as did awareness that BN alone could cause OSCC (87.5%, p=0.0005). Patients were more capable of identifying OSCC on an image (p=0.011). Our pilot findings illustrate the gaps in awareness regarding the health consequences of chronic BN mastication in this population and demonstrate the efficacy of a visually-guided educational brochure in improving patient knowledge.

In a short time frame, our project has already proven to be effective in improving individual patient awareness regarding the health risks associated with chronic BN usage, as well as symptoms and warning signs of oral dysplasia and malignancy. In addition, our study can expand on the scant literature that exists concerning BN usage and risk factors. In order to reach more of our target population in Clarkston, GA and beyond, we hope to continue our efforts in printing, distributing, and administering our educational initiative. We anticipate that the financial requirements will total to $1000, which would include poster printing, color brochure printing, video design & editing, funds for interpretative services, and travel costs. This project is currently partially funded by the Emory University Urban Health Initiative SIGnature Grant.

We believe this project targets a unique and underrepresented community health issue that can greatly impact public awareness and early detection of oral cancer. In the long-term, our project may help promote cessation of BN usage, encourage healthier lifestyles, and limit disease prevalence in this high-risk refugee community. Like the tobacco initiatives that came before it, our project may set a precedent for future endeavors aimed to promote cessation of BN usage, a recreational substance that is often abused but infrequently discussed. In addition, our project represents an important, novel initiative to provide health education for low-literacy immigrants in the United States. Thank you for your consideration of our proposal.

Sincerely,

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