

Raising Awareness of the Cancer Burden in Appalachia

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Appalachian/rural Kentucky, like other Appalachian regions in the United States, has been identified as an underserved region in terms of healthcare due to limited access to tertiary healthcare centers, low levels of literacy and poor socio-economic conditions.¹ The cancer burden in Appalachian Kentucky has been a serious ongoing issue for many years, with the region demonstrating a high incidence of lung, colorectal, breast and head and neck cancers (HNC). With an annual incidence of 14.01 per 100,000, the state of Kentucky has one of the highest incidences of HNC in the United States.² More alarming is the rising trend in the incidence of these cancers.² While the national trend shows an overall increase of 0.3%, Kentucky shows an increase of 2.17% of head and neck cancers since 2001.²

Head and neck cancers are a diverse group of malignant lesions that involve the oral cavity, pharynx, nasopharynx, larynx, thyroid, skull base and sinus tumors.³ These cancers and their treatment are frequently associated with high morbidity and significantly deterring effects on an individual's swallowing, voice and basic overall communication abilities. It would be fair to say HNC can have devastating effects on an individual's quality of life. The most common type of head and neck cancer is squamous cell carcinoma, which comprises almost 95% of all head and neck cancers.⁴ One of the main causal or risk factors for developing head and neck squamous cell carcinoma is prolonged and regular exposure to tobacco and/or ethanol.⁵ In fact, a combination of tobacco smoking

and alcohol is said to increase the risk of HNC by ten fold.⁴ It is well known that Kentucky ranks second in terms of nationwide tobacco production.⁶ Consequently, it is not surprising that Kentucky also leads the U.S. in smoking prevalence with a rate of 29% in adults and 24% in high school students.⁷ Though squamous cell carcinomas of the head and neck regions are slow growing and normally are identified in the fifth and sixth decades of life, the high prevalence of high school smokers can result in Kentuckians developing cancers of the head and neck earlier than the national average.

As a speech-language pathologist at the UK Voice and Swallow Clinic serving the Markey Cancer Center at the University of Kentucky, my interest is to understand the HNC population of our state. To that end, we conducted a study to characterize and investigate distribution trends in the treatment seeking population for head and neck cancers at the UK Head and Neck Cancer Clinic from 2007 to 2010. The study categorized the patient population by site and stage of cancer, type of treatment(s), basic patient demographics and the county wise distribution. Through this study we found comparable numbers of HNC in both Appalachian and non-Appalachian counties. A majority of the patients seeking treatment, both rural and urban, also had advanced disease stages. These results were consistent with state head and neck cancer statistics that demonstrate that rural/Appalachian regions of Kentucky have a higher incidence of HNC as well as cancer related mortality as compared to urban regions.⁸ Fifty-four of Kentucky's 120 counties are included in the Appalachian region. According to the present

census report, urban counties have a larger population count, almost double, as compared to the rural/Appalachian regions.⁹ However, with respect to head and neck cancer incidence, the numbers are comparable. Due to educational, economic and geographic challenges, Appalachian regions in Kentucky are disproportionately faced with health disparities as compared to urban counties. These disparities often result in limited public awareness of basic health information and delayed or limited access to health care. Consequently, the people of rural Kentucky face widespread and life threatening health challenges that are often not detected or treated until the later disease stages.

Efforts are being made to reduce health care disparities and to improve the health of all Kentuckians. For example, the Appalachia Community Cancer Network (ACCN) presently has programs in place for prevention and treatment of lung, cervical and colorectal cancers. Considering the high incidence of HNC, similar efforts are needed to reduce the incidence, increase awareness and improve the overall treatment outcomes for head and neck cancers.

Like most cancers, head and neck cancers are best treated in their early stages. Treatment in early stages not only improves chances of survival but also minimizes the level of treatment-associated morbidity. In fact, five year survival outcomes for treatment for early stages of head and neck cancers vary between 90-95%, which are very encouraging statistics to seek treatment early. Unlike lung cancer, breast cancer, or colorectal cancers, detection techniques for HNC are

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fairly accessible and require little use of sophisticated instruments. A routine head and neck examination as performed regularly by a primary care physician, otolaryngologist, dentist, physician's assistant, or nurse practitioner can help detect HNC. The decreased need for sophisticated instrumentation to screen for HNC makes planning outreach programs less challenging. Health professionals involved in screening can travel to underserved regions to reach out to individuals who may not otherwise have the means or the resources to seek medical help. With early identification, these individuals can be successfully treated, thus minimizing health care costs by preventing long-term health issues related to cancer treatment.

One example of a head and neck cancer screening initiative is the annual screening at the NASCAR races at the Kentucky Speedway. Sponsored by UK Healthcare, the UK Departments of Rehabilitation Sciences and Clinical Sciences, in conjunction with the Voice for Hope and volunteers from the UK Department of Otolaryngology, the UK Voice and Swallow Clinic and other professionals from the community, a head and neck cancer screening was

conducted at the NASCAR race at the Kentucky Speedway in Sparta, Kentucky in June, 2013. The head and neck screening team included head and neck surgeons, speech language pathologist, nurses, administrative personnel and student volunteers who helped with the process, screened over 200 people at the event. With the success of the screenings last year, screenings will be arranged this year at the NASCAR races as well. This initiative is one of many small steps towards tackling a significantly large and growing health issue. The hope is to work with local healthcare professionals to organize periodic screenings in underserved communities as we continue to identify and characterize specific health issues in these regions. The ongoing support towards such screening programs is promising and will lead to not only early detection, but also prevention of this serious disease.

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