Preventive Medicine Reports 6 (2017) 228–235

Contents lists available at ScienceDirect

Preventive Medicine Reports

journal homepage: http://ees.elsevier.com/pmedr

# Tobacco use and preferences for wellness programs among health aides and other employees of an Alaska Native Health Corporation in Western Alaska

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ARTICLE INFO

*Article history:*
Received 27 October 2016
Received in revised form 18 January 2017
Accepted 13 March 2017
Available online 18 March 2017

*Keywords:*
Alaska Native
Smoking
Tobacco
Wellness
Health
Employee

ABSTRACT

This study assessed health behaviors and preferences for wellness programs among employees of a worksite serving Alaska Native-people. Village-based Community Health Aides/Practitioners (CHA/Ps) were compared with all other employees on health indicators and program preferences. Using a cross-sectional design, all 1290 employees at the Yukon Kuskokwim Health Corporation (YKHC) in Western Alaska were invited in 2015 to participate in a 30-item online survey. Items assessed health behaviors, perceived stress, resiliency, and preferences for wellness topics and program delivery formats. Respondents (n = 429) were 77% female and 57% Alaska Natives. CHA/Ps (n = 46) were more likely than all other employees (n = 383) to currently use tobacco (59% vs. 36%; p = 0.003). After adjusting for covariates, greater stress levels were associated (p = 0.013) with increased likelihood of tobacco use. Employees reported lower than recommended levels of physical activity; 74% had a Body Mass Index (BMI) indicating overweight or obese. Top preferences for wellness topics were for eating healthy (55%), physical activity (50%), weight loss (49%), reducing stress (49%), and better sleep (41%). CHA/Ps reported greater interest in tobacco cessation than did other employees (37% vs. 21%; p = 0.016). Preferred program delivery format among employees was in-person (51%). The findings are important because tailored wellness programs have not been previously evaluated among employees of worksites serving Alaska Native people. Promoting healthy lifestyles among CHAP/s and other YKHC employees could ultimately have downstream effects on the health of Alaska Native patients and communities.



## 1. Introduction

In 2014, cigarette smoking prevalence in the United States (U.S.) population was higher among American Indian and Alaska Native (AI/AN) people (32%) and multiracial persons (25%) than White (22%), Black (21%), Hispanic (16%), or Asian (13%) adults (Jamal et al., 2015). Substantial evidence indicates that employee wellness promotion programs are cost-effective and can achieve positive health outcomes including smoking cessation (Allweiss et al., 2014; Goetzel et al., 2014). However, the efficacy of these programs among employees of worksites serving AI/AN people has not been well documented. Building on our long-standing tobacco control research partnership, this study represents an initial step in understanding health behaviors, primarily tobacco use, and preferences for wellness programs among employees of a worksite serving AN people.

The Yukon-Kuskokwim (Y-K) Delta region in Western Alaska comprises 58 tribes residing in 47 village locations with populations ranging from 28 to 1133. The Yukon-Kuskokwim Health Corporation (YKHC) is located in Bethel (the hub for all villages) and owns and operates the Y-K Delta Regional Hospital which provides health care for AN people. Employee wellness programs are not available and thus an opportunity exists to initiate such efforts.

About 66% of AN persons in the Y-K Delta region currently use some form of tobacco; one-third use smokeless tobacco (ST) – most often a homemade mixture of ash and tobacco leaves known as Iqmik (Dilley et al., 2013a, b; Hearn et al., 2013). Based on social ecological models of health behavior change (e.g., social cognitive theory), multilevel approaches targeting both intrapersonal influences and social-environmental factors could be effective for reducing tobacco use among AN people (Bandura, 2004; Sallis et al., 2008). Potentially, employees of

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http://dx.doi.org/10.1016/j.pmedr.2017.03.005

health care facilities serving ANs who are tobacco-free and have healthier lifestyles could serve as role models for patients and the general community (Balcazar et al., 2011; Frank et al., 2000; Plescia et al., 2008). Given the inter-connected relationship between work and family lives, a systems (ecological) approach addressing the interrelationship between work, family, and community could maximize benefits of employee health promotion programs for AN patients and communities (Allweiss et al., 2014).

The impetus for conducting this study was to develop tobacco cessation programs for the YKHC village-based Community Health Aides/Practitioners (CHA/Ps). CHA/Ps are primarily AN and are generally viewed as mentors for healthy lifestyles (Golnick et al., 2012). However, qualitative work (Renner et al., 2004; Patten et al., 2009) indicated people from this region perceived that many CHA/Ps use tobacco and thus lacked credibility to deliver cessation advice. Nonetheless, to address YKHC's interest in health and wellness for all employees, we included all workers, and compared CHA/Ps with all other employees. Moreover, obesity and physical activity were assessed. Data from the 2012 Alaska Behavioral Risk Factor Surveillance Study (BRFSS (State of Alaska, 2014)) indicated that compared with White adults obesity prevalence (Body Mass Index [BMI] ≥30.0) and low levels of aerobic activity was greater among ANs (27% vs. 30% and 39% vs. 48%, respectively). There are limited data on these health indicators among employees of worksites serving AN persons.

Another study objective was to assess current levels of perceived stress and resiliency and the relationship between these psychosocial factors and current tobacco use. Perceived stress and burnout are important factors influencing employee health and wellness (Clark et al., 2011) and elevations in perceived stress have been linked to tobacco use and difficulty quitting (Lawless et al., 2015). In addition, resilience-the ability to adapt in the face of adversity (Ong et al., 2006), has emerged as an important individual and AI/AN cultural protective factor for health and wellness (Ong et al., 2006; Schure et al., 2013; Tuefel-Shone et al., 2006).

We hypothesized that: (1) the prevalence of tobacco use would be higher among CHA/Ps compared to other employees, and (2) based on findings in other populations (Lawless et al., 2015) stress level would be associated with tobacco use.

## 2. Methods

This study was approved by the Alaska Area and Mayo Clinic Institutional Review Boards, and the YKHC Human Studies Committee. The work described was carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki). Informed consent was obtained. Data were collected in 2015 and analyzed in 2016.

### 2.1. Study design

Cross-sectional survey design including all YKHC employees.

### 2.2. Study setting

The Y-K Delta region is located approximately 400 air miles from Anchorage, with a population of about 25,000. Encompassing 75,289 mile$^2$ of coastal wetlands, tundra, and mountains, it includes the town of Bethel (population 6000) and 47 village locations along the coast of the Bering Sea and on the banks of the Yukon and Kuskokwim Rivers and their tributaries. Residents are primarily of Yupik, Cupik, or Athabascan ethnicity, and are fairly homogeneous with respect to culture and language. The population is of low socio-economic status and most maintain a subsistence lifestyle (Alaska Native Epidemiology Center, 2016). No roads connect the villages; residents travel by small plane, boat, or snow machine. A typical village has a K-12 school, a local tribal council, health clinic, store, post office, church, and community center.

YKHC supports 44 village-built clinics with CHA/Ps that provide acute, chronic, emergency, dental, behavioral health, and preventative health care services at the village level. There are 170 CHA/Ps with 1–8 per village, based on the village population, and are selected by and work in their home communities. CHA/Ps are ≥18 years of age, have a high school diploma/GED, and are required to undergo an intensive 15 week (600 h) basic medical training curriculum (Golnick et al., 2012).

YKHC has five sub-regional clinics with greater laboratory and x-ray capability than village clinics that staff CHA/Ps and mid-level providers. Bethel-based facilities include the Y-K Delta Regional Hospital, a 39-bed general acute care medical facility; Community Health Services; Prematernal Home; and long-term care facilities. Patients requiring tertiary or more complex care travel to the Alaska Native Medical Center located in Anchorage.

YKHC employs 1290 workers across the region. About 65% of employees are female; approximately 59% are AN, 30.4% Caucasian, 1.9% African American, and 2.6% Asian race.

### 2.3. Respondents

Eligible criteria were: (1) age ≥ 18 years, (2) employed at least part-time with YKHC, and (3) provided informed consent.

All employees were sent an email invitation, as even village-based workers have e-mail access. The study design anticipated a response rate of 30% (387/1290) based on participation with other web-based surveys reported in the literature (Cook et al., 2000; Sheehan, 2001). A sample size of 387 would provide over 80% power to detect differences between CHA/Ps and other employees in the proportion currently using tobacco of 0.25. The response rate was 36% (467/1290). Of these, 38 were excluded because they did not provide an occupation and left most items blank. The final sample of 429 employees formed the basis of this report.

### 2.4. Procedures

YKHC administrators sent an introductory e-mail to all employees, informing them about the project; and an article was placed in the employee newsletter. Employees were invited by e-mail in July of 2015 to complete an online, 30-item, English language survey which took about 10–15 min to complete. The invitation included a description of the project and information regarding privacy and consent that employees could print for their reference, and a link to the survey. Employees not wanting to participate could simply delete the email. Participants were given two weeks to complete the online survey; after one week, an automated e-mail reminder was sent. The survey was anonymous; no identifying information was collected or linked to survey responses. Respondents were offered a small incentive ($10 gift card); those interested were sent a separate email form – which was not linked to survey responses – to provide their name and work location for its delivery.

## 3. Measures

### 3.1. Survey development

The survey was developed by the researchers and local stakeholders comprising YKHC administrators, leadership, and managers. Telephone and on-site meetings were held in Bethel to draft survey content areas and determine study procedures. While several areas for health promotion were identified, it was decided the survey should focus on tobacco use as the most pressing issue for employees. The survey was piloted for content and duration with 19 research employees.