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Health care providers' adherence to tobacco treatment for waterpipe, cigarette and dual users in Vietnam

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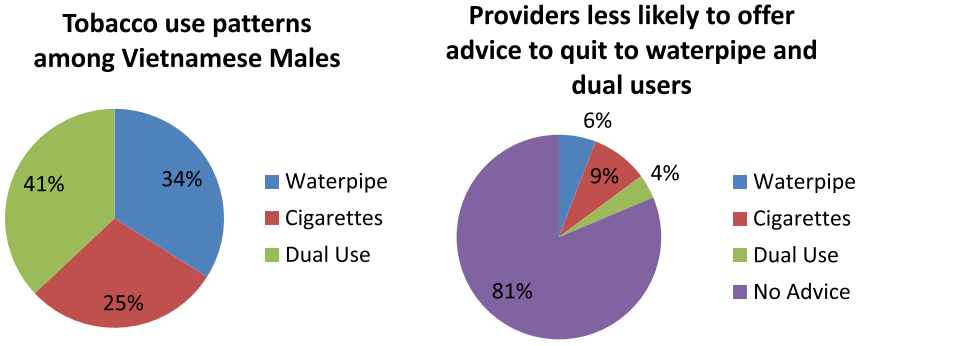
HIGHLIGHTS

- Thirty-four percent of smokers in Vietnam used cigarettes only, 25% used water pipe only, and 41% were dual users.
- Only 9% of current cigarette smokers received advice to quit compared to 6% of water pipe and 4% of dual users.
- Providers were significantly more likely to screen cigarette smokers compared with Water pipe users and more likely to offer advice to quit to cigarette smokers compared with dual users.
- Providers are not only missing opportunities to offer effective cessation treatment to cigarettes users but may be even less likely to address the use of alternative tobacco products.
- There is a need for provider training that includes education about the harms of water pipe use and how to screen and offer brief advice and counseling that can address tobacco use across the full range of products.

GRAPHICAL ABSTRACT



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ABSTRACT

Background: Almost half of adult men in Vietnam are current cigarette smokers. Recent surveys also suggest a high prevalence of water pipe use, particularly in rural areas. Yet services to treat tobacco dependence are not readily available. The purpose of this study was to characterize current tobacco use treatment patterns among Vietnamese health care providers and factors influencing adherence to recommended guidelines for tobacco use screening and cessation interventions for water pipe, cigarette and dual users.
Methods: We conducted cross sectional surveys of 929 male current tobacco users immediately after they completed a primary care visit at one of 18 community health centers.
Results: Thirty-four percent of smokers used cigarettes only, 24% water pipe only, and 42% were dual users. Overall 12% of patients reported that a provider asked them if they used tobacco products during the visit. Providers were significantly more likely to screen cigarette smokers compared with water pipe or dual users (16%, 9% and

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11% respectively). Similarly, 9% of current cigarette smokers received advice to quit compared to 6% of water pipe and 5% of dual users. No patients reported that their health care provider offered them assistance to quit (e.g., self-help materials, referral).

Conclusion: Despite ratifying the Framework Convention on Tobacco Control, Vietnam has not made progress in implementing policies and systems to ensure smokers are receiving evidence-based treatment. High rates of water pipe and dual use indicate a need for health care provider training and policy changes to facilitate treatment for both cigarette and water pipe use.

1. Background

According to the 2010 Global Adult Tobacco Survey (GATS) 47% of adult men in Vietnam are current cigarette smokers,(Global Adult Tobacco Survey Viet Nam, 2010) and 13% use waterpipes.(Xuan et al., 2013) The World Health Organization (WHO) endorsed guidelines for treating tobacco use provide strong evidence that cessation assistance offered by health care providers can significantly increase smoking abstinence rates.(Fiore, 2008; McRobbie, Raw, & Chan, 2013; World Health Organization (WHO), 2013) Informed by this evidence, Article 14 of the WHO Framework Convention (FCTC) in tobacco control obligates countries to provide treatment for tobacco dependence.(World Health Organization (WHO), 2005) Since ratifying the FCTC in 2004, Vietnam has made significant progress in implementing FCTC policies and programs including smoke free air laws, and counter advertising campaigns and drafted guidelines for treating tobacco use. However, as in other low-middle-income countries (LMICs), adoption of screening and cessation interventions into routine public health and clinical practice is suboptimal.(Centers for Disease Control and Prevention, 2014)

A number of surveys have explored tobacco-related provider practice patterns and barriers to implementing evidence-based intervention in developed countries, but in LMICs cessation practices of health care providers are understudied.(McRobbie et al., 2013; Jamal, Dube, & King, 2015; Asfar, Al-Ali, Ward, Vander Weg, & Maziak, 2011; Shelley et al., 2014) The Global Adult Tobacco Survey (GATS) does not ask smokers if they have received advice or assistance to quit.(Global Adult Tobacco Survey Viet Nam, 2010) Moreover, despite the spread of water pipe use globally, we are not aware of any studies, including the GATS, that assess how providers apply treatment guidelines to patients who are water pipe and dual cigarette and water pipe users.

This paper presents the first analysis of data from patient exit interviews (PEI), brief surveys conducted immediately after a primary care visit that assessed provider adherence to guidelines for tobacco use treatment, including water pipe and dual use.(Conroy, Majchrzak, Silverman, et al., 2005; Stange, Zyzanski, Smith, et al., 1998; Pbert et al., 1999) The aim of this paper is to characterize current tobacco use treatment patterns among patients visiting community health centers (CHCs) in Vietnam and factors that may influence provider adherence to recommended guidelines for treating water pipe, cigarette and dual use among health care providers working in these CHCs.

2. Methods

2.1. Study design

We conducted cross sectional PEIs among 972 current tobacco users who had an appointment with a provider in one of 18 community health centers (CHCs) (approximately 50 surveys per center) in a rural district north of Hanoi. The surveys were part of a baseline assessment of provider practice patterns for a cluster randomized controlled trial which is assessing strategies for improving tobacco use treatment within the public health system in Vietnam.(Shelley, VanDevanter, Cleland, Nguyen, & Nguyen, 2015). Sites are enrolled and randomized in waves. These data are from baseline surveys from patients with visits at CHCs in wave one and two. Therefore, the data was collected in two time periods, August 2014 and August 2015, corresponding with the start of each of these two waves. Patients were screened in the waiting room to assess eligibility, which included current tobacco use and age ≥ 18. Eligible patients were then asked if they would be willing to complete a PEI immediately after their visit. We obtained written consent before conducting the interviews. PEIs are considered to be the optimal non-observational method for measuring provider delivery of outpatient treatment (Conroy et al., 2005; Stange et al., 1998; Pbert et al., 1999). This research was approved by the New York University School of Medicine and Institute for Social Medical Studies Institutional Review Boards.

2.2. Measures

Provider adherence to guideline recommended tobacco use treatment was measured by asking patients if at that visit they were asked about tobacco use, advised to quit, assessed for readiness to quit and offered assistance (e.g., referral and/or prescription). Patients responded either yes or no. The PEI also assessed demographic characteristics and type of tobacco use. Current tobacco users were classified as those who smoked cigarettes only, water pipe only and dual users (cigarettes and water pipe) in the past 7 days.

2.3. Data analysis

Data were analyzed with the R statistical computing environment. (Core Team, 2016) Bivariate analyses (chi-squared) were conducted to assess relationships between patient characteristics and type of tobacco use and between patient characteristics and provider practice patterns. Unique associations between patient and provider characteristics and provider practice patterns were estimated in multivariable logistic regression models. In separate models, provider asking the patient about tobacco use and advising the patient to quit tobacco use were regressed on education level, age, type of smoker, type of provider seen, reason for visit, and any quit attempts in the past year. Frequency of water pipe and cigarette smoking were not included in these models since these were partly redundant with the simpler type of smoker variable. All tests of statistical significance were two-tailed, and $p < 0.05$ was considered significant.

3. Results

3.1. Patient characteristics and tobacco use behavior

We achieved a 97% response rate (i.e., 972/1005 approached to complete the survey agreed). Study participants were almost exclusively male (964/972 = 99.2%), which is similar to results from the 2010 GATS (1.8% prevalence among women); therefore, we did not include women (n = 8) in the analysis. A small number of male participants <25 years of age (n = 37) also were not included in analysis, resulting in an analysis sample size of 927 male smokers at least 25 years old (Table 1). Thirty-four percent of smokers used cigarettes only, 25%