## Background

Smoking continues to pose a huge cost to an individual's health and the healthcare economy. Healthcare professionals are known to have an authoritative influence over patients and are well placed to promote abstinence from tobacco. Indeed, Articles 12 and 14 of the Framework Convention on Tobacco Control (FCTC) make several recommendations concerning smoking behaviour and cessation training amongst healthcare professionals. The current study estimates the prevalence of smoking in healthcare students, healthcare professionals of the future, across the six World Health Organisation regions.

### Methods

Five databases (Medline, Embase, CINAHL, CAB abstracts, LilACS and the WHO Global Healthcare Professional Survey database) were searched to identify studies including any profession of healthcare students. Studies were published between January 2000 and March 2016, and no restrictions were placed on language of publication. Titles, abstracts and full texts were checked for eligibility independently by two authors and the quality of the included studies was assessed. Pooled prevalence with 95% confidence intervals (CI) were estimated using random effect models, with heterogeneity quantified using I².

### Results

417 papers were included: 214 studies and 203 Global Health Professional student surveys. Healthcare professions included medicine, nursing, dentistry, pharmacy, and mixed groups. The prevalence of smoking across all healthcare students was 19% (95% CI 17%–21%, I² 99.98%). Subgroup analysis by year shows the prevalence of smoking in healthcare students appears to be increasing; from 16% (95% CI 16%–17%), I² 99.23) up to and including 2010 to 19% (95% CI 6%–31%, I² 99.99) between 2011 and 2016. Pooled estimated smoking prevalence within the WHO regions for medical students ranged from 10% to 25%, and nursing students from 0% to 30%. Estimates for both were highest in Europe and lowest in Africa.

### Conclusion

Smoking prevalence among healthcare students varies widely across professions and WHO regions, however remains worryingly high in the light of the key role healthcare professionals play in tackling the global smoking epidemic. In order to continue to make progress with implementation of the FCTC, urgent efforts need to be made to reduce smoking behaviour amongst healthcare students, which will ultimately contribute to the reduction of smoking prevalence amongst their patients.

## Abstracts

### OP65

**A SYSTEMATIC REVIEW OF THE PREVALENCE OF SMOKING IN HEALTHCARE STUDENTS**

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Background Smoking continues to pose a huge cost to an individual's health and the healthcare economy. Healthcare professionals are known to have an authoritative influence over patients and are well placed to promote abstinence from tobacco. Indeed, Articles 12 and 14 of the Framework Convention on Tobacco Control (FCTC) make several recommendations concerning smoking behaviour and cessation training amongst healthcare professionals. The current study estimates the prevalence of smoking in healthcare students, healthcare professionals of the future, across the six World Health Organisation regions.

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Conclusion Smoking prevalence among healthcare students varies widely across professions and WHO regions, however remains worryingly high in the light of the key role healthcare professionals play in tackling the global smoking epidemic. In order to continue to make progress with implementation of the FCTC, urgent efforts need to be made to reduce smoking behaviour amongst healthcare students, which will ultimately contribute to the reduction of smoking prevalence amongst their patients.

### OP66

**MOTIVATION TO QUIT SMOKING AND CHANGES IN CIGARETTE CONSUMPTION, AMONG SMOKERS WHO USE E-CIGARETTES, FINDINGS FROM THE HEALTH SURVEY FOR ENGLAND**

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Background The majority of people who use e-cigarettes are dual users with tobacco cigarettes. E-cigarettes may aid smokers with their quit attempts and reduce cigarette consumption or reinforce nicotine addiction. This study explores the motivations for current and previous use of e-cigarettes, and whether use is associated with reporting lower or higher cigarette consumption than a year ago. It makes comparisons with other traditional nicotine delivery products (NDPs).

Methods This study uses a sample of current smokers aged 16 + (n=3,039) from the nationally representative, cross-sectional Health Survey for England, HSE2013–2014, (HSE2015 data will be included when archived). Firstly, multinomial logistic regression models were conducted on the odds of a) Never use of e-cigarettes versus b) Current use of e-cigarettes c) Previous (not current) use of e-cigarettes, and key exposure included the intentions to quit smoking scale (No intention/ Preparation/ Preparation/ Preparation (within next 3 months)). Secondly multinomial logistic regression was carried out on the odds of reporting smoking a) the same number of cigarettes versus b) more c) fewer than a year ago. Models were repeated using never, current and previous use of other NDPs. All models adjusted for sex, age-group, highest qualification and cigarette consumption. Analyses were conducted using Stata.

Results 12% were current users, and 20% previous users of e-cigarettes. Compared with never use of e-cigarettes, no association was found with age and current use, while being younger was associated with previous use (45–54 v. 16–34 years, OR=0.68 [95%CI 0.46–0.79]). Conversely, current and previous users of NDPs were more likely to be older than never users of NDPs (45–54 years 2.07 [1.29–3.30]). Quit intentions had a dose response relationship with the odds of current e-cigarette use (e.g. Preparation versus No intention (3.14 [2.24–4.42]); for previous e-cigarette users the magnitude was smaller (1.39 [1.04–1.87]). However, ‘Preparation’ had stronger associations with other NDPs, for both current (8.93 [5.54–14.40]), and previous use (3.18 [2.47–4.09]). Being a current user of e-cigarettes (1.77 [1.36–2.30]) or other NDPs (1.72 [1.19–2.50]) increased the odds of reporting smoking fewer cigarettes than the previous year; previous use was not significant. E-cigarette use was not associated with reporting smoking more than the previous year, however current use of NDPs was (1.84 [1.13–3.01]).

Conclusion Current or previous e-cigarette use is unlikely to increase consumption of cigarettes compared with a year ago, but smokers who used them had weaker intentions to quit smoking than smokers who used other NDPs. Longitudinal research is needed to track changes in consumption involving duration of e-cigarette use to further verify findings.

### OP67

**ACTIVITY LEVELS IN MOTHERS AND CHILDREN DURING THE TRANSITION TO PRIMARY SCHOOL: FINDINGS FROM THE SOUTHAMPTON WOMEN’S SURVEY**

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**Background** The majority of people who use e-cigarettes are dual users with tobacco cigarettes. E-cigarettes may aid smokers with their quit attempts and reduce cigarette consumption or reinforce nicotine addiction. This study explores the motivations for current and previous use of e-cigarettes, and whether use is associated with reporting lower or higher cigarette consumption than a year ago. It makes comparisons with other traditional nicotine delivery products (NDPs).

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**Results** 12% were current users, and 20% previous users of e-cigarettes. Compared with never use of e-cigarettes, no association was found with age and current use, while being younger was associated with previous use (45–54 v. 16–34 years, OR=0.68 [95%CI 0.46–0.79]). Conversely, current and previous users of NDPs were more likely to be older than never users of NDPs (45–54 years 2.07 [1.29–3.30]). Quit intentions had a dose response relationship with the odds of current e-cigarette use (e.g. Preparation versus No intention (3.14 [2.24–4.42]); for previous e-cigarette users the magnitude was smaller (1.39 [1.04–1.87]). However, ‘Preparation’ had stronger associations with other NDPs, for both current (8.93 [5.54–14.40]), and previous use (3.18 [2.47–4.09]). Being a current user of e-cigarettes (1.77 [1.36–2.30]) or other NDPs (1.72 [1.19–2.50]) increased the odds of reporting smoking fewer cigarettes than the previous year; previous use was not significant. E-cigarette use was not associated with reporting smoking more than the previous year, however current use of NDPs was (1.84 [1.13–3.01]).

**Conclusion** Current or previous e-cigarette use is unlikely to increase consumption of cigarettes compared with a year ago, but smokers who used them had weaker intentions to quit smoking than smokers who used other NDPs. Longitudinal research is needed to track changes in consumption involving duration of e-cigarette use to further verify findings.