# **UC San Diego**

## **UC San Diego Previously Published Works**

### **Title**

Quitting Smoking by Age 35 Years—A Goal for Reducing Mortality

### **Permalink**

https://escholarship.org/uc/item/5rt5s4gz

## **Journal**

JAMA Network Open, 5(10)

#### **ISSN**

2574-3805

### **Author**

Pierce, John P

### **Publication Date**

2022-10-03

### DOI

10.1001/jamanetworkopen.2022.31487

Peer reviewed





#### **Invited Commentary** | Public Health

## Quitting Smoking by Age 35 Years—A Goal for Reducing Mortality

John P. Pierce, PhD

Thomson et al<sup>1</sup> reported that there were almost 75 000 deaths by the end of 2019 among 551 338 respondents to the US National Health Interview Survey from 1997 to 2018. Their findings showed that cigarette smoking was associated with earlier death overall and increased mortality from cancer, heart disease, and lower respiratory disease. In their study, the excess mortality associated with smoking was higher among women than men. The study, to my knowledge, is the first to estimate risk of mortality associated with smoking among race and ethnicity subgroups of the US population. The authors found that compared with the non-Hispanic White population, Hispanic and non-Hispanic Black individuals had lower frequency and intensity of smoking and began smoking at older ages, although the mortality associated with smoking was still substantial. These results remind us that reducing smoking intensity (cigarettes per day) should be one of the goals for tobacco control programs.

The findings of Thomson et al<sup>1</sup> support the importance of lifetime exposure to smoking cigarettes in determining the level of health risk and reiterate that the benefits of successfully quitting smoking may accrue to all smokers, whatever their age. In the study, among participants who had ever smoked, 54% reported that they had already quit, and the mean age of quitting was 38 years. Quitting smoking before age 44 years was associated with a reduction in mortality that was 21% higher than that associated with never smoking, and this was consistent across all sociodemographic groups studied. For smokers who quit between ages 45 and 54 years, the smoking-associated mortality rate was 47% higher than that among never smokers. Quitting at these ages was associated with a substantial benefit compared with continuing smoking.

Is there anything in the findings of Thomson et all that can be used to help increase the rate of successfully quitting smoking? It is well known that most smokers have considerable difficulty preventing relapse through the period when they experience craving and withdrawal symptoms. This is particularly the case if they started their quit attempt with less than optimal motivational levels. Although approximately 30% to 50% of US smokers make a quit attempt in any given year, success rates are low, with only 7.5% managing to succeed.<sup>2</sup> Recent data show that younger smokers are more likely to report quit attempts than older smokers, but they appear to have the same low success rate.3 Healthy People 20304 sets goals for both getting more smokers to attempt quitting and getting more of those attempting to quit to receive counseling or use smoking cessation aids approved by the US Food and Drug Administration in their quit attempts. The benefit (shown in clinical trials) of using pharmaceutical cessation aids in attempts to quit smoking has been questioned by population data. Studies on use of these aids in population samples have consistently reported much lower success rates than the doubling suggested in clinical trials. 5 Most attempts to quit smoking result in early relapse (less than 8 days for unassisted quitters<sup>6</sup>). Ecological momentary assessment studies have shown that smokers who are able to sustain high levels of motivation through the discomfort of craving and withdrawal are less likely to relapse.<sup>7</sup> However, Healthy People 2030 is silent on the need to increase motivation levels and help smokers who are starting a quit attempt.

Concern about the health consequences of smoking is an important motivator to get smokers to try to quit, and the Centers for Disease Control and Prevention, among others, has used this message in national advertising campaigns promoting quitting. However, the distal nature of the health consequences for young smokers is a challenge for professionals trying to motivate quitting in younger age groups. Without a proximal goal, it is tempting for smokers to abandon a quit attempt

Open Access. This is an open access article distributed under the terms of the CC-BY License.

Author affiliations and article information are listed at the end of this article.

with cognitions such as "I don't really need to do it just now." The study by Thomson et al<sup>1</sup> provides needed data to set a motivating proximate goal of quitting smoking before age 35 years. To my knowledge, it is the third large cohort study to find that smokers who quit before they reach 35 years of age have mortality rates that are not different than those of never smokers. Health professionals and public health campaigns could incorporate this target age for quitting in their efforts to motivate young smokers to try to quit. Young smokers may want to avoid the health consequences of smoking. Now there is a proximal target age for them to achieve a successful quit attempt, and their motivation to try to quit may likely increase as they approach this age. There is already evidence that it is possible to significantly increase the proportion of young smokers who quit. Indeed, compared with the rest of the US, the California Tobacco Control Program's social norm campaign was associated with increased quitting only in this youngest group of smokers. 8 It has been known for a long time that the earlier a smoker quits, the better. However, it is now possible to be more specific with respect to the age that a smoker quits. It is time to incorporate "quit by 35" into the Healthy People objectives for the nation so that quitting smoking becomes another indicator of the transition out of the young adult years. The California data<sup>8</sup> suggest that targeting 50% of smokers to quit successfully before age 35 years may be challenging yet achievable.

#### ARTICLE INFORMATION

Published: October 24, 2022. doi:10.1001/jamanetworkopen.2022.31487

**Open Access:** This is an open access article distributed under the terms of the CC-BY License. © 2022 Pierce JP. *JAMA Network Open*.

Corresponding Author: John P. Pierce, PhD, Cancer Control Program, Moores Cancer Center, 3855 Health Sciences Dr, La Jolla, CA 92093 (jppierce@ucsd.edu).

**Author Affiliation:** Herbert Wertheim School of Public Health and Human Longevity Science, Moores Cancer Center, University of California, San Diego, La Jolla, California.

**Conflict of Interest Disclosures:** Dr Pierce reported receiving grants from University of California during the conduct of the study.

**Funding/Support:** This work was supported by grant T31IR1584 from the University of California's Tobaccorelated Disease Research Program.

**Role of the Funder/Sponsor:** The funder had no role in the analysis and interpretation of the data; preparation, review, or approval of the manuscript: and decision to submit the manuscript for publication.

**Additional Contributions:** David Strong, PhD (Herbert Wertheim School of Public Health and Human Longevity Science), and Sheila Kealey, MPH (Moores Cancer Center, University of California, San Diego), provided comments on this article; Ms Kealy received compensation.

#### REFERENCES

- 1. Thomson B, Emberson J, Lacey B, et al. Association between smoking, smoking cessation, and mortality by race, ethnicity, and sex among US adults. *JAMA Netw Open*. 2022;5(10):e2231480. doi:10.1001/jamanetworkopen. 2022.31480
- 2. Centers for Disease Control and Prevention. Smoking cessation: fast facts. Accessed July 22, 2022. https://www.cdc.gov/tobacco/data\_statistics/fact\_sheets/cessation/smoking-cessation-fast-facts/index.html
- 3. Watkins SL, Thrul J, Max W, Ling PM. Real-world effectiveness of smoking cessation strategies for young and older adults: findings from a nationally representative cohort. *Nicotine Tob Res.* 2020;22(9):1560-1568. doi:10. 1093/ntr/ntz223
- **4**. US Department of Health and Human Services. Healthy People 2030. Accessed July 22, 2022. https://health.gov/healthypeople
- 5. Chen R, Pierce JP, Leas EC, et al. Effectiveness of e-cigarettes as aids for smoking cessation: evidence from the PATH Study cohort, 2017-2019. *Tob Control*. Published online February 27, 2022. doi:10.1136/tobaccocontrol-2021-056901
- **6**. Hughes JR, Keely J, Naud S. Shape of the relapse curve and long-term abstinence among untreated smokers. *Addiction*. 2004;99(1):29-38. doi:10.1111/j.1360-0443.2004.00540.x

- 7. Minami H, Yeh VM, Bold KW, Chapman GB, McCarthy DE. Relations among affect, abstinence motivation and confidence, and daily smoking lapse risk. *Psychol Addict Behav.* 2014;28(2):376-388. doi:10.1037/a0034445
- **8**. Pierce JP, Shi Y, McMenamin SB, et al. Trends in lung cancer and cigarette smoking: California compared to the rest of the United States. *Cancer Prev Res (Phila)*. 2019;12(1):3-12. doi:10.1158/1940-6207.CAPR-18-0341