Introduction

• Heated tobacco products (HTPs) rapidly emerged in Japan, which provides a unique case study of their potential harm reduction role.

• The rapid rise in HTP sales in Japan since 2014 accompanied an accelerated decline in cigarette sales.

Research Questions: What is the role of HTPs with respect to cigarettes? Reductions in cigarette sales resulted from smokers switching to HTPs but continuing smoking as dual users or from smokers completely quitting cigarettes?

Like e-cigarettes, HTPs are inhaled and have similar sensorimotor experiences and “throat-hit” to cigarettes, but they heat treated tobacco leaves rather than vaporize a nicotine solution.

Methods

• The literature on recent HTP and cigarette use trends was reviewed, including studies on sales and nationwide in-person and online surveys.

• Inclusion criteria: studies of cigarette or HTP prevalence rates, prevalence trends, sales trends, or transitions, such as initiation, cessation, or switching rates between products.

• Exclusion criteria: clinical trials, modeling, and simulation studies focusing on the health impacts of HTP/cigarette use, analyses of biomarkers and toxicity, studies that only consider data pre-2010, countries other than Japan, or tobacco products other than cigarettes and HTPs.

Results

• Sales studies: the rate of decline in smoking prevalence increased after 2014, especially in 2016 and 2017.

• Studies using in-person surveys: decreasing smoking prevalence post-introduction of HTPs.

• Industry-affiliated studies: reducing cigarette use from 2014-2018 as HTP use increased.

• Online surveys:
  • A rapid increase in HTP use after its introduction to the Japanese market
  • High rates of dual cigarette-HP use among HTP users.
  • HTPs (since about 2018) may be associated with increased cigarette use.

Conclusions

• The role of HTPs with respect to cigarette use may have changed over time.

• HTPs may have initially impacted those most likely to quit smoking cigarettes, leaving smokers less inclined to completely switch to HTPs in later years.

• Weak smoke-free laws have impacted the relationship between HTP and cigarette use.

• Increases in the price of cigarettes and HTPs in 2018 and 2020 were also associated with a reduction in smoking initiation and relapse and an increase in cessation.

• Other influential factors include:
  ▪ The COVID pandemic
  ▪ Industry marketing strategies

• Differences in study results also may stem from:
  ▪ The timing of the studies
  ▪ Different survey types
  ▪ Different tobacco use measures
  ▪ Types of questions asked