

Changes in E-Cigarette Availability Over Time in the United States: 2010-2012

This brief examines the trends in e-cigarette availability between 2010 and 2012 in 6,998 retail stores selling food and tobacco across the United States. Trained data collectors gathered annual data on the availability of e-cigarettes in cross-sectional samples of various retail outlets located in 468 public middle and high school enrollment areas. This brief shows the changes in e-cigarette availability over time, and more specifically looks at these trends within retail outlet and by the racial/ethnic composition of the neighborhoods where e-cigarettes are sold.

Introduction

Smoking is the leading risk factor for preventable death in the United States, expected to be responsible for nearly one-half million premature adult deaths this year alone.¹ These health concerns have led to comprehensive tobacco control policies including limiting places where people can smoke cigarettes, increasing cigarette excise taxes, and promoting safer nicotine delivery products to encourage smoking cessation.

One of the most recent products on the market is the electronic cigarette (e-cigarette), a nicotine delivery device that simulates tobacco cigarettes by vaporizing nicotine and other chemicals into an inhalable, vaporized liquid. Smokers now have access to e-cigarettes in retail outlets where cigarettes have been traditionally purchased.^{2,3}

This brief describes the rising trends in availability of e-cigarettes in retail stores in the United States sampled from 2010 to 2012 as part of the Bridging the Gap Community Obesity Measures Project (BTG-COMP), a large-scale effort to identify local policy and environmental factors likely to be important determinants of healthy eating, physical activity and obesity.

Key Findings

The overall availability of e-cigarettes has gone up rapidly among BTG-COMP retail stores selling any tobacco products between 2010 and 2012 (See Figures 1 and 2).

- Only 3% of BTG-COMP retailers sold e-cigarettes in 2010; the percentage of stores selling e-cigarette more than doubled to 7% in 2011 and then quadrupled to 30% in 2012.
- Drug and convenience stores were most likely to sell e-cigarettes among the BTG-COMP retailers in each of the three years.
 - Half (50%) of drug stores sold e-cigarettes in 2012, rising from 3% in 2011 and 2% in 2010.
 - Almost one-third (31%) of convenience stores sold e-cigarettes in 2012, rising from 9% in 2011 and 4% in 2010.
 - Supermarkets also greatly increased their availability of e-cigarettes, from 1% or less of stores in 2010 and 2011 to almost one-quarter of stores (23%) in 2012.

FIGURE 1 E-Cigarette Availability among BTG-COMP Retail Stores Selling Tobacco Products, 2010-2012

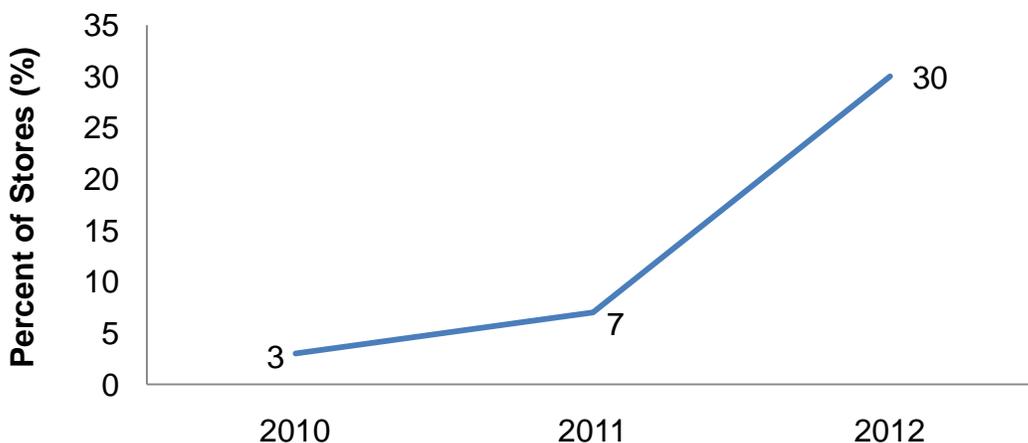
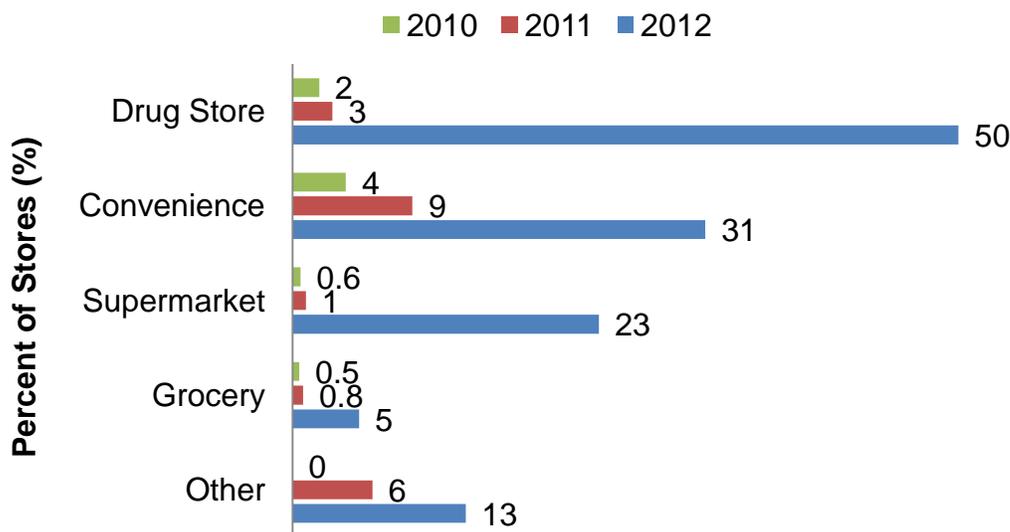


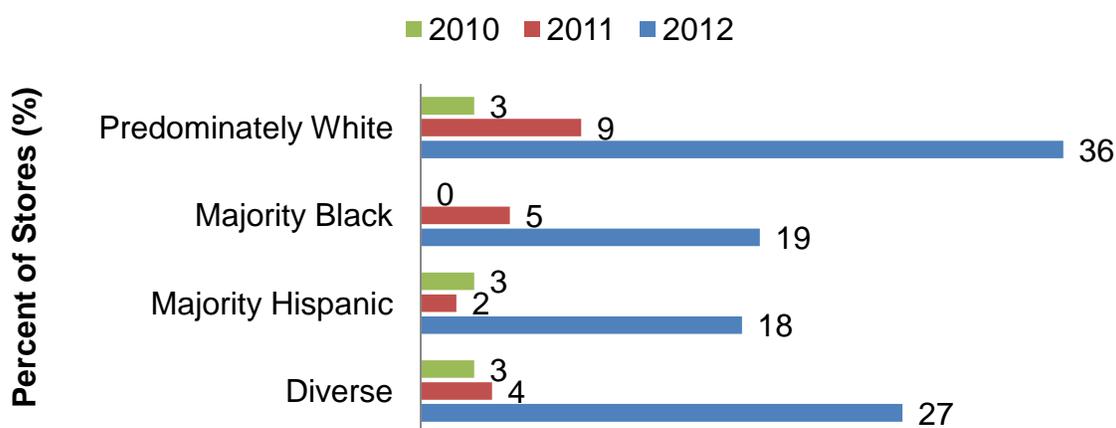
FIGURE 2 E-Cigarette Availability among BTG-COMP Retail Stores Selling Tobacco Products, by Store Type, 2010-2012



E-cigarettes are more prominent in BTG-COMP retail stores located in neighborhoods where the residents are predominantly White (See Figure 3).

- By 2012, over one-third (36%) of BTG-COMP retail stores in the predominately White neighborhoods sold e-cigarettes.
- None of the BTG-COMP retail stores located in majority Black neighborhoods in 2010 sold e-cigarettes. This quickly changed by 2012 when almost one-fifth (19%) of BTG-COMP retail stores in the majority Black neighborhoods sold e-cigarettes.
- A similar increase occurred among BTG-COMP retail stores in the majority Hispanic neighborhoods where 18% of retailers sold e-cigarettes in 2012, up from 3% in 2010.

FIGURE 3 E-Cigarette Availability among BTG-COMP Retail Stores Selling Tobacco Products, by Neighborhood Racial/Ethnic Composition, 2010-2012



Conclusions and Policy Implications

Overall, sales of e-cigarettes in the United States have increased from 750,000 in 2010 to 3.5 million in 2012.⁴ In 2011, about 6% of all adults had tried an e-cigarette, almost twice as many as in 2010.⁵ Among youth, the number of high school and middle school students who reported ever using an e-cigarette more than doubled from 4.7% in 2011 to 10.0% in 2012 totaling more than 1.78 million students nationwide.⁶ The rise in use of e-cigarettes parallels the rise in availability of these products in retail stores that sell tobacco products. This study finds that the availability of e-cigarettes increased more than ten-fold from 2010 to 2012, with nearly one-third of BTG-COMP retail stores selling e-cigarettes in 2012. Their availability is greatest in drug stores and convenience stores^a

^a In 2012, stand-alone tobacco stores were added as a supplemental sample to the Bridging the Gap Community Obesity Measures Project (BTG-COMP) data collection. These stores were not included in this analysis. An analysis of the 2012 BTG-COMP retailer data that includes these tobacco stores shows overall e-cigarette availability of 31%

and those located in predominantly White neighborhoods. Continued research on e-cigarette availability and its relationship to e-cigarette use is needed.

Study Overview

The findings from this brief were derived from the Bridging the Gap Community Obesity Measures Project (BTG-COMP) data. The research team identifies local policy and environmental factors that are likely determinants of health outcomes and collects, analyzes and shares data about these characteristics. In this study, data were collected from 6,998 BTG-COMP retail stores that sold food and tobacco products located within school enrollment zones for nationally representative cross sectional samples of 8th, 10th, and 12th grade students attending traditional public schools in the

across all stores, with tobacco stores indicating highest availability of these products at 73%.

continental U.S. in 2010, 2011, and 2012. Retail outlets were classified as supermarkets (sell fresh meat, have 2+ service counters and have 4+ cash registers), grocery stores (sell fresh meat and do not meet the supermarket criteria), convenience stores (do not sell fresh meat and sell a selection of staple groceries often including milk), drug stores (do not sell fresh meat and sell prescription and OTC medication), or other stores that sold beverages and snacks (e.g. small discount, liquor, ethnic, and general merchandise). Neighborhoods (i.e., school enrollment zones) were classified into four mutually exclusive race/ethnic categories according to the racial/ethnic composition of the community. They were classified as predominantly White (>66% White residents), majority Black (>50% Black residents), majority Hispanic (>50% Hispanic residents), or Diverse composition (no clear majority of White, Black or Hispanic residents).

Suggested Citation

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About Bridging the Gap

Bridging the Gap is a nationally recognized research program of the Robert Wood Johnson Foundation dedicated to improving the understanding of how policies and environmental factors influence diet, physical activity and obesity among youth, as well as youth tobacco use. The program identifies and tracks information at the state, community and school levels; measures change over time; and shares findings that will help advance effective solutions for reversing the childhood obesity epidemic and preventing young people from smoking. Bridging the Gap is a joint project of the University of Illinois at Chicago's Institute for Health Research and Policy and the University of Michigan's Institute for Social Research. For more information, visit www.bridgingthegapresearch.org.

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Endnotes

1. A Report of the Surgeon General. The Health Consequences of Smoking—50 Years of Progress: Executive Summary. U.S. Department of Health and Human Services, Office of the Surgeon General 2014. <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/exec-summary.pdf>. Accessed February 3, 2014.
2. Etter J, Bullen C. Electronic cigarette: Users profile, utilization, satisfaction and perceived efficacy. *Addiction* 2011; 106(11): 2017-2028.
3. Yamin C, Bitton A, Bates D. E-cigarettes: A rapidly growing internet phenomenon. *Ann Intern Med* 2010; 153(9): 607-609.
4. Koch W. E-cigarettes: No smoke, but fiery debate over safety. *USA Today* 2012; <http://usatoday30.usatoday.com/news/health/story/2012-08-18/electronic-cigarettes-smokeless-vaping-risks/57121894/1>. Accessed November 21, 2013.
5. Centers for Disease Control and Prevention. About one in five US adult cigarette smokers have tried an electronic cigarette. 2013; http://www.cdc.gov/media/releases/2013/p0228_electronic_cigarettes.html. Accessed November 21, 2013.
6. Centers for Disease Control and Prevention. E-cigarette use more than doubles among US middle and high school students from 2011-2012. 2013; <http://www.cdc.gov/media/releases/2013/p0905-ecigarette-use.html>. Accessed November 21, 2013.
7. Rose SW, Barker DC, D'Angelo H, Khan T, Huang J, Chaloupka, FJ, Ribisl KM. The availability of electronic cigarettes in US retail outlets, 2012: Results of two national studies. *Tob Control* (under review).