

## Monitoring U.S. Tobacco Product Sales: National and State Trends Methods

### Data Source

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Tobacco product sales data were acquired by the CDC Foundation from Circana (formerly known as IRI) ([www.circana.com/en-US](http://www.circana.com/en-US)), a major commercial aggregator of retail sales data. Data are representative of the total marketplace (excluding vape shops, tobacco specialty stores and online sales) as a combination of census reporting retailers and projections for non-participating retailers.

Circana sales data provide information on Universal Product Code (UPC) sales from two main channels: convenience and multi-outlet. The convenience channel includes convenience stores and gas stations (e.g., 7 Eleven and Circle K). Multi-outlet includes food stores (e.g., Harris Teeter, Shaw's and Wegmans), drug stores (all national chain and independent drug stores, excluding Rx sales), mass merchandiser outlets (e.g., Walmart), club stores (BJ's and Sam's club), dollar stores (Dollar General and Family Dollar) and military sales (e.g., Defense Commissary Agency). Circana provides sales data for the multi-outlet channel in addition to food stores and drug stores, separately. Since multi-outlet data include food and drug stores, in addition to the other outlets listed above, analyses were restricted to multi-outlet and convenience channel data to ensure that all channels were captured but not duplicated. Sales from online retailers and tobacco specialty stores, including vape shops, were not available.

### E-Cigarettes

#### Measures

Data from Circana consists of unit sales, dollar sales, and product characteristics for each UPC, such as product description, product type (i.e., whether a product is a device or an accessory and whether it is disposable or rechargeable), type of devices, type of accessories, flavor, nicotine strength, e-liquid capacity and number of items per unit.

E-cigarette products were categorized as one of the following product types: prefilled cartridges, disposable devices and e-liquids. Prefilled cartridges include tanks, cartridges and pods used in rechargeable and reusable e-cigarette devices; the cartridges are not intended to be refilled after the liquid has been depleted. Disposable devices include non-rechargeable and non-reusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; the device is disposed of once the e-liquid has been consumed. E-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine and flavoring. E-cigarette accessories and devices sold without e-liquids were excluded (1.5% of total dollar sales in 2024).

Products that contained cannabidiol (CBD) but did not contain nicotine were excluded

from analysis.

All e-cigarette products were assigned to one of the following flavor categories: tobacco, menthol, mint, clear/other cooling, all other flavors and unknown. E-cigarette products were classified as tobacco-flavored if tobacco or a descriptor (e.g., traditional, original, classic, bold, blend) was explicitly mentioned in the name of the product's flavor. E-cigarettes with an explicit menthol cooling sensation, such as "frost menthol" and "cool menthol," were classified as menthol. Mint-flavored e-cigarettes, such as "peppermint" and "wintergreen," were classified as mint. E-cigarette products sorted into the "all other flavors" category included flavors such as fruit, clove/spice, candy/desserts/other sweets, chocolate, alcoholic drinks (e.g., wine, cognac, margarita or other cocktails) and non-alcoholic drinks. E-cigarettes that combined mint and menthol (e.g., "minty menthol") were assigned to the mint flavor category; flavors that combined tobacco and menthol (e.g., "tobacco menthol") were assigned to the menthol flavor category. E-cigarettes that combined tobacco, menthol or mint with some other flavor (e.g., berry mint) were assigned to the "all other flavors" category. E-cigarettes that were marketed as unflavored (e.g., Clear, Clear Ice, Naked) but described cooling sensations through flavor profile descriptions, marketing or customer reviews were coded as "Clear/Other Cooling." Ambiguous or concept flavors that could not be readily identified (e.g., "fusion") were searched online using relevant information on brands and product characteristics. These ambiguous flavors were then assigned to flavor categories based on their descriptions. Products with unknown flavor types or assorted flavors in a single package were categorized as "unknown." Two researchers independently assigned e-cigarette products to one of five flavor categories and subsequently compared results. When disagreement occurred, a third researcher reviewed product descriptions from the manufacturer's website or from online retailers to classify flavors accordingly.

### Analyses

Analyses were performed for total unit sales, the proportion of total unit sales by product type and flavor, dollar sales and total nicotine sold (in milligrams) using Stata (version 19.5; StataCorp). All estimates presented in the data briefs were independently checked by a second analyst.

E-cigarette unit sales were standardized and aggregated in 4-week periods. A standardized unit was equal to: 5 prefilled cartridges; 1 disposable device; 1 e-liquid bottle.

Total nicotine sold (mg) was calculated for each product by multiplying the e-liquid volume (mL) by the nicotine concentration (mg/mL) and the unit sales, then summing the results across all e-cigarette products sold.

### **Cigarettes**

#### Measures

Data from Circana consists of unit sales, dollar sales and product characteristics for each

UPC, such as product description, flavor and number of cigarettes per pack.

All cigarette products were assigned to one of the following flavor categories: nonmenthol, menthol, nonmenthol cooling/other flavors and unknown. Nonmenthol Cooling/Other Flavors included products confirmed by independent chemical testing to contain synthetic cooling ingredients, such as WS-3 or WS-23, and/or other flavorants, such as ethylvanillin.

### Analyses

Cigarette unit sales were standardized to 20 cigarettes per pack and aggregated in annual (calendar year) periods. Analyses were performed for total unit sales and the proportion of total unit sales by flavor using Stata (version 19.5; StataCorp). All estimates presented in the data briefs were independently checked by a second analyst.

## **Nicotine Pouches**

### Measures

Nicotine pouches are spitless, powdered nicotine products, contained within a pouch, that do not contain tobacco leaf. Data from Circana consists of unit sales, dollar sales and product characteristics for each UPC, such as product description, nicotine strength, flavor and number of items per package.

All nicotine pouch products were assigned to one of the following flavor categories: tobacco, menthol, mint, clear/other cooling, original/smooth, all other flavors and unknown. Clear/other cooling includes products with flavor names such as clear, clear ice or unflavored, which likely contain non-menthol synthetic cooling agents (e.g., Zyn Chill, Oeo Clear). Original/Smooth includes products with flavor names such as smooth or original, which likely contain artificial sweeteners (e.g., Zyn Smooth, On! Original, Zyn Original). The "All Other Flavors" category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac or other cocktails), candy/desserts or some other flavor.

### Analyses

Analyses were performed for total dollar sales and the proportion of total dollar sales by flavor using Stata (version 19.5; StataCorp). All estimates presented in the data briefs were independently checked by a second analyst.