



Monitoring U.S. E-Cigarette Sales: *National Trends*

This brief report highlights trends in national e-cigarette sales from January 2018 through June 2023.

Notice of Revision to Previous Data Estimates

- The data in this brief have been updated to capture new e-cigarette products coded by IRI. Historical sales estimates may differ from previous briefs.

Federal Regulatory Actions

- The U.S. Food and Drug Administration (FDA) issued an enforcement policy, effective February 2020, prohibiting the sale of flavored prefilled e-cigarette cartridges, which does not apply to tobacco-and menthol-flavored prefilled cartridges, e-liquids, or single use disposable e-cigarettes.
- FDA began issuing marketing denial orders for flavored e-cigarette products as of September 9, 2021.
- On April 15, 2022, FDA was granted authority to regulate products containing nicotine from any source, including synthetic nicotine.
- In April 2022, FDA issued a proposal to eliminate menthol cigarettes and flavored cigars.

Key Findings

Total e-cigarettes:

- From February 2, 2020, to June 18, 2023, total e-cigarette unit sales increased by 44.3% (15.7 million units to 22.6 million units); and non-tobacco flavored e-cigarette sales (mint, menthol and other flavors) increased by 60.2% (11.2 million units to 18.0 million units). By June 18, 2023, non-tobacco flavored e-cigarette sales accounted for 79.4% of total unit sales.
- The top ten brands during the period spanning April 18, 2023, through June 18, 2023, were (in descending order of dollar sales) Vuse, JUUL, Elfbar¹, Breeze Smoke, NJOY, Esco Bars, Loon Maxx, Kangvape, HQD, and Mr Fog. The top five brands and top ten brands accounted for 73.1% and 82.8% of total dollar sales, respectively.
- The 2022 National Youth Tobacco Survey (NYTS) found that 14.1% (2.14 million) of high school and 3.3% (380,000) of middle school students currently used e-cigarettes. Among those who currently used e-cigarettes, 84.9% used flavored e-cigarettes.²

Flavored disposable e-cigarettes:

- From February 2, 2020, to June 18, 2023, disposable e-cigarette sales increased by 204.4% (4.1 million units to 12.4 million units); their unit share increased from 26.0% to 54.8% of total e-cigarette sales. As of June 18, 2023, 78.1% of disposable sales were of flavors other than tobacco, mint and menthol.
- Among youth who used e-cigarettes in 2022, 55.3% used disposable e-cigarettes. The most commonly used flavors of disposable e-cigarettes were fruit (69.1%) and candy/desserts/other sweets (38.3%) (NYTS).

Menthol flavored e-cigarettes:

- From February 2, 2020, to June 18, 2023, overall menthol-flavored e-cigarette sales increased by 29.7% (5.2 million units to 6.7 million units), including a 29.8% increase in menthol-flavored cartridge sales (4.8 million units to 6.2 million units). As of June 18, 2023, menthol-flavored e-cigarette sales accounted for 29.6% of the overall e-cigarette market and 61.0% of the prefilled cartridge market.
- Among youth who used flavored e-cigarettes in 2022, 26.6% used menthol flavor; 53.9% of students using prefilled cartridges used menthol (NYTS).

Relevant Issues

- The e-cigarette or vaping product use-associated lung injury (EVALI) outbreak in late 2019 and COVID-19 pandemic may have affected e-cigarette sales.
- During 2020-2022, additional flavored tobacco products continued to be marketed, such as flavored cigars; or entered the market, such as nicotine pouches.
- Units of e-cigarettes are not adjusted to account for variations in unit size. Large-format disposable e-cigarettes that allow for thousands of “puffs” are now available. Declines in unit sales may not signify declines in prevalence of use or consumption.

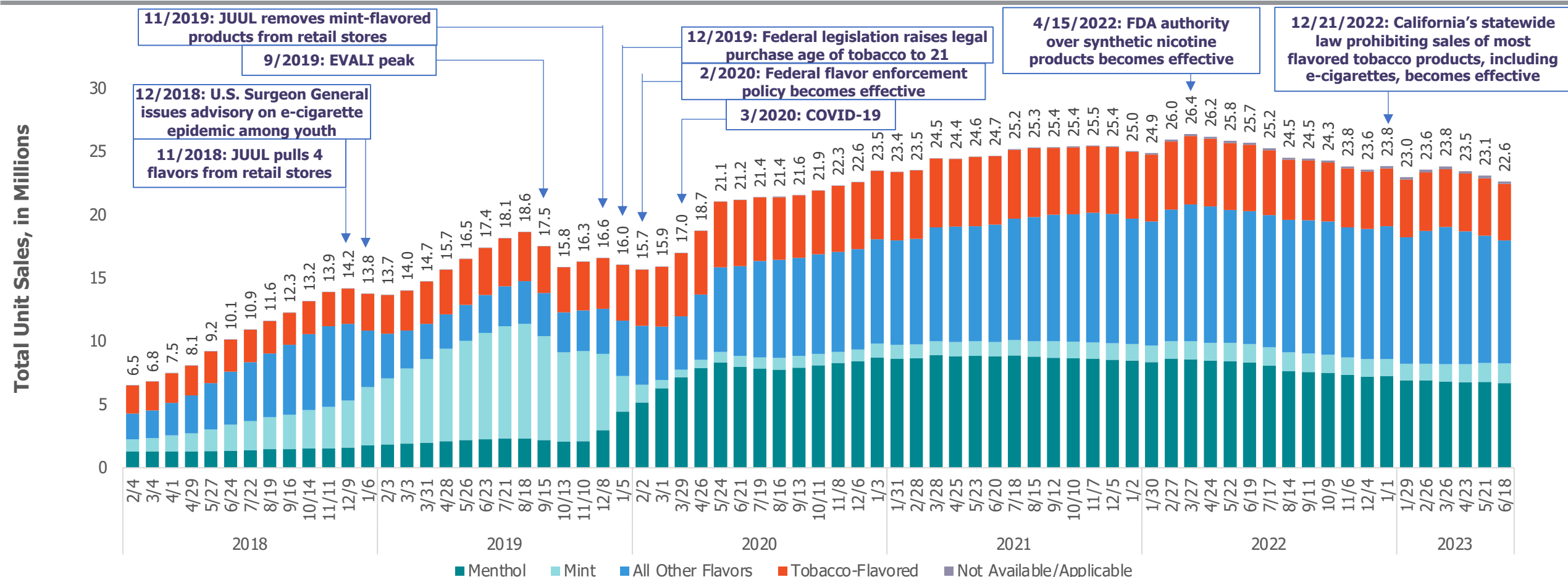
Conclusion

Restrictions that exempt certain flavors and product types likely shift sales to the products and flavors that remain on the market. Policies that prohibit all non-tobacco flavored e-cigarettes, including flavored disposable e-cigarettes and menthol-flavored prefilled cartridges, reduce e-cigarette sales and may reduce youth access and use of e-cigarettes.

1. Elfbar has rebranded as EBDesign as of March 2023 following a court-ordered injunction.

2. Cooper M, Park-Lee E, Ren C, Cornelius M, Jamal A, Cullen KA. Notes from the Field: E-cigarette Use Among Middle and High School Students — United States, 2022. MMWR Morb Mortal Wkly Rep 2022;71:1283–1285.

Figure 1. National E-Cigarette Unit Sales by Flavor, 4 Week Estimates 2/4/2018 – 6/18/2023*

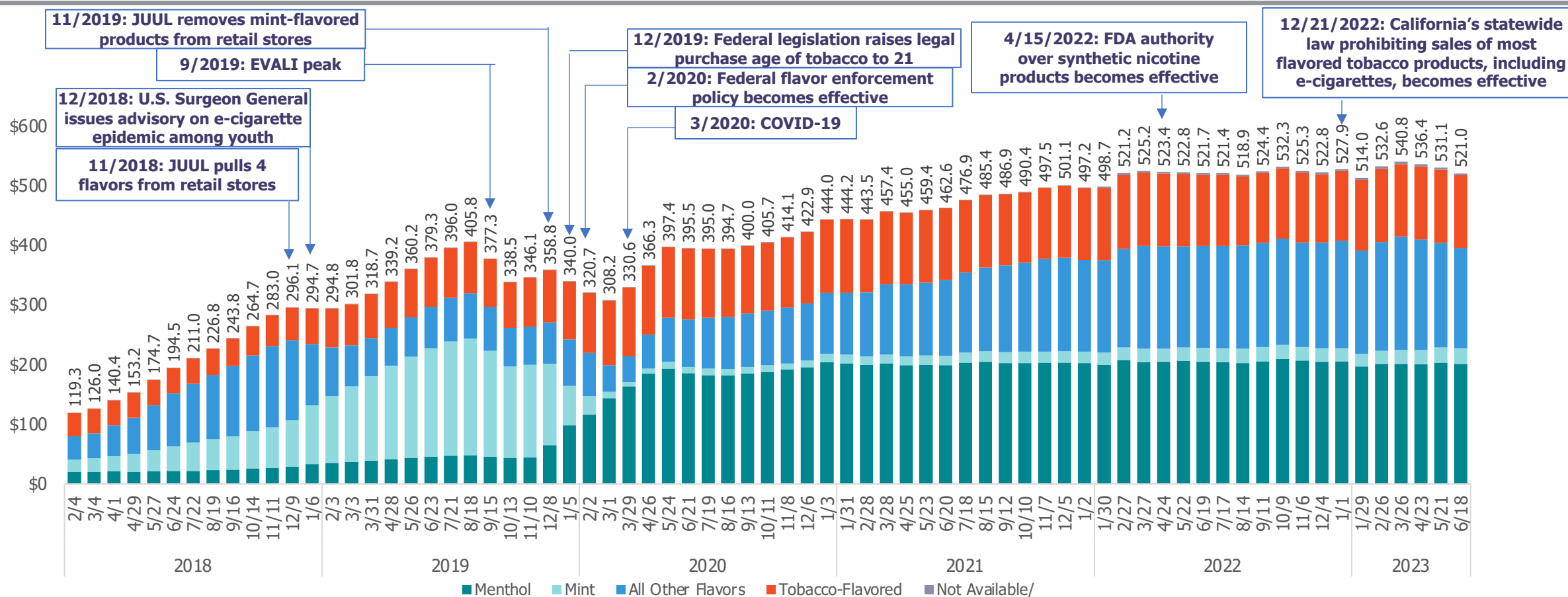


*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; All Other Flavors category includes fruit, clove/spice, chocolate, alcoholic drink (such as wine, cognac, or other cocktails), candy/desserts/other sweets, some other flavor; e-cigarette accessories and devices sold without e-liquids were excluded (9.5% of total dollar sales in 2022). Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

Trends of Unit Sales by Flavor Following FDA’s Flavor Enforcement Policy

- From February 2, 2020, to June 18, 2023:
 - Total monthly e-cigarette unit sales increased by 44.3% from 15.7 to 22.6 million units.
 - Tobacco-flavored e-cigarette sales increased by 0.6% (from 4.45 million units to 4.48 million units); unit share decreased from 28.4% to 19.8%.
 - Non-tobacco flavored e-cigarette sales (mint, menthol and other flavors) increased by 60.2% (11.2 million units to 18.0 million units).
 - Mint-flavored e-cigarette sales increased by 10.2% (from 1.4 million units to 1.6 million units); unit share decreased from 9.0% to 6.9%.
 - Menthol-flavored e-cigarette sales increased by 29.7% (from 5.2 million units to 6.7 million units); unit share decreased from 32.9% to 29.6%.
 - All other-flavored e-cigarette sales increased by 109.4% (from 4.6 million units to 9.7 million units); unit share increased from 29.6% to 42.9%.
- California’s e-cigarette unit sales represented 3.3% of national e-cigarette unit sales on December 4, 2022 (i.e., 0.8 million units out of 23.6 million units). Following California’s restriction on flavored e-cigarette sales (effective 12/21/2022), unit sales in California decreased by 35.7% during December 4, 2022 and June 18, 2023. This decline represents 30.2% (i.e., 281.4 thousand units out of 932.9 thousand units) of the decline in national e-cigarette sales that occurred during this period.

Figure 2. National E-Cigarette Dollar Sales by Flavor, 4 Week Estimates 2/4/2018 – 6/18/2023*

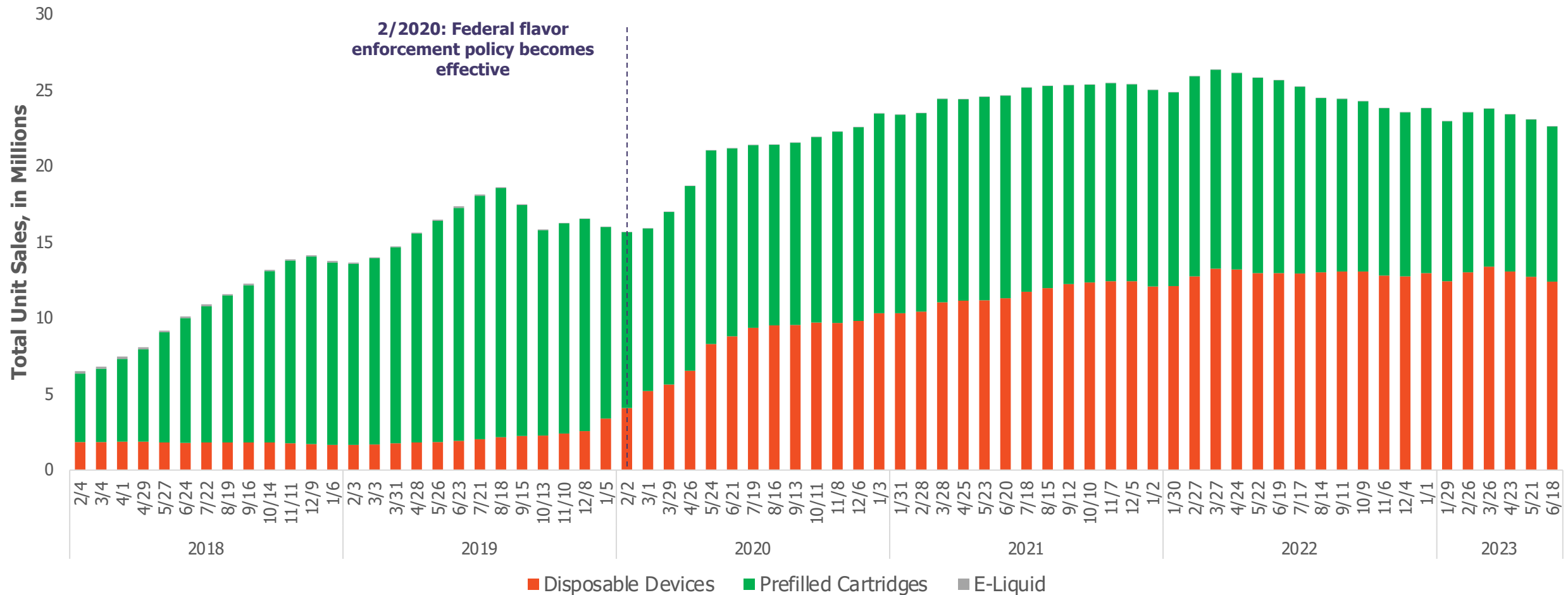


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Trends of Dollar Sales by Flavor Following FDA’s Flavor Enforcement Policy

- From February 2, 2020, to June 18, 2023:
 - Total monthly e-cigarette dollar sales increased by 62.5% from 320.7 to 521.0 million dollars.
 - Tobacco-flavored e-cigarette sales increased by 21.1% (from 100.6 million dollars to 121.8 million dollars); dollar share (i.e., tobacco flavored proportion of total dollar sales) decreased from 31.4% to 23.4%.
 - Non-tobacco flavored e-cigarette sales (mint, menthol and other flavors) increased by 80.0% (219.9 million dollars to 395.9 million dollars).
 - Mint-flavored e-cigarette sales decreased by 15.4% (from 31.2 million dollars to 26.4 million dollars); dollar share decreased from 9.7% to 5.1%.
 - Menthol-flavored e-cigarette sales increased by 73.4% (from 116.1 million dollars to 201.3 million dollars); dollar share increased from 36.2% to 38.6%.
 - All other-flavored e-cigarette sales increased by 131.7% (from 72.6 million dollars to 168.2 million dollars); dollar share increased from 22.6% to 32.3%.
- Differences between trends in unit sales and dollar sales could be due, in part, to inflation and the recent increase in large-format disposable e-cigarettes that allow for thousands of puffs. Higher price per device of large-format disposable e-cigarettes might account for declines in unit sales without comparable declines in dollar sales.

Figure 3. National E-Cigarette Unit Sales by Product Type, 4 Week Estimates 2/4/2018 – 6/18/2023*

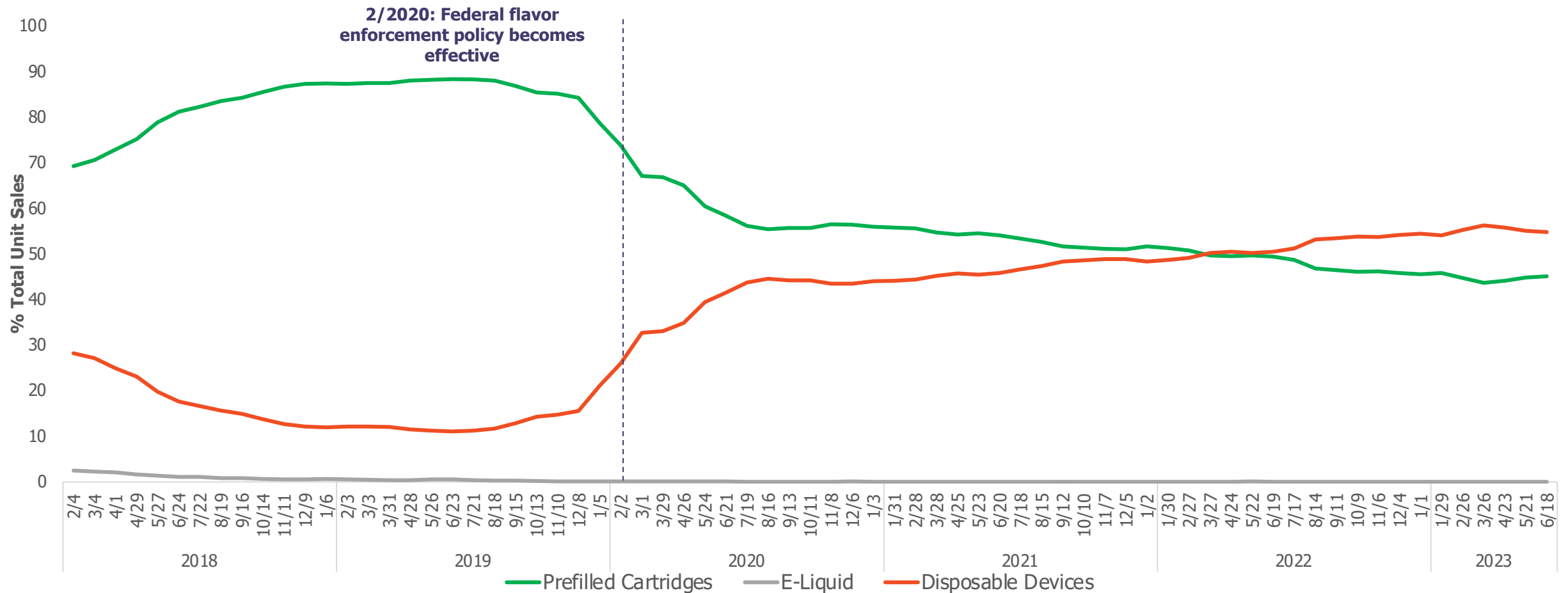


*Sales data do not reflect sales from vape shops or online retailers; dates represent end of 4-week periods; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette devices; disposable devices include nonrechargeable and nonreusable e-cigarette devices that are not intended to be refilled with e-liquid after being depleted; e-liquids are containers of the liquid used in e-cigarette devices, which typically contain a humectant (e.g., propylene glycol), nicotine, and flavoring. Unit sales were standardized to reflect the most common package size for each product type. A standardized unit was equal to five prefilled cartridges, one disposable device, or one e-liquid bottle.

Trends of Unit Sales by Product Following FDA’s Flavor Enforcement Policy

- Following FDA’s flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020, and June 18, 2023:
 - Sales of disposable devices increased by 204.4% (from 4.1 million units to 12.4 million units).
 - Sales of prefilled cartridges decreased by 11.8% (from 11.6 million units to 10.2 million units).

Figure 4. National E-Cigarette Unit Share by Product Type, 4 Week Estimates 2/4/2018 – 6/18/2023*

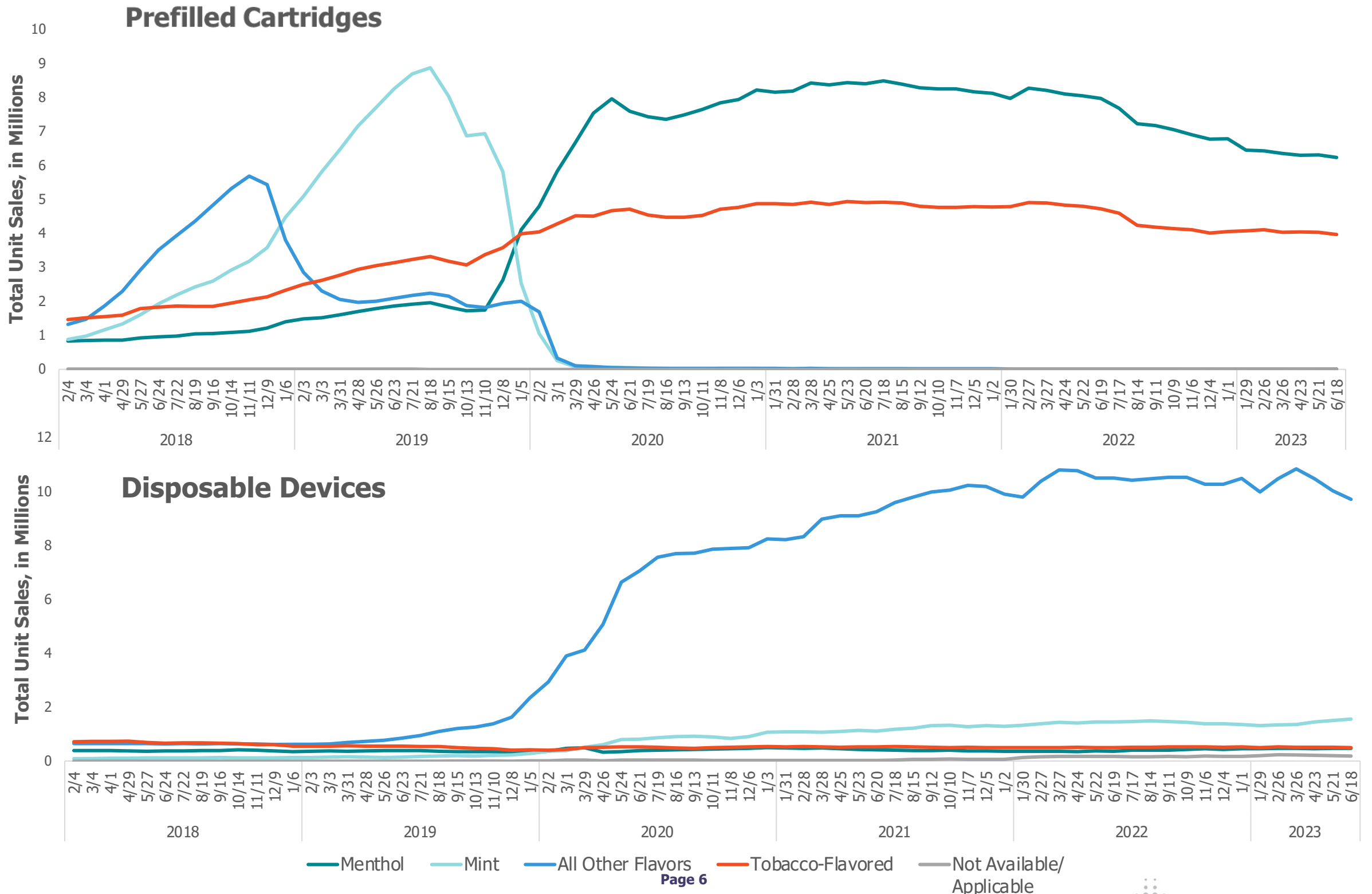


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Trends of Unit Share by Product Following FDA’s Flavor Enforcement Policy

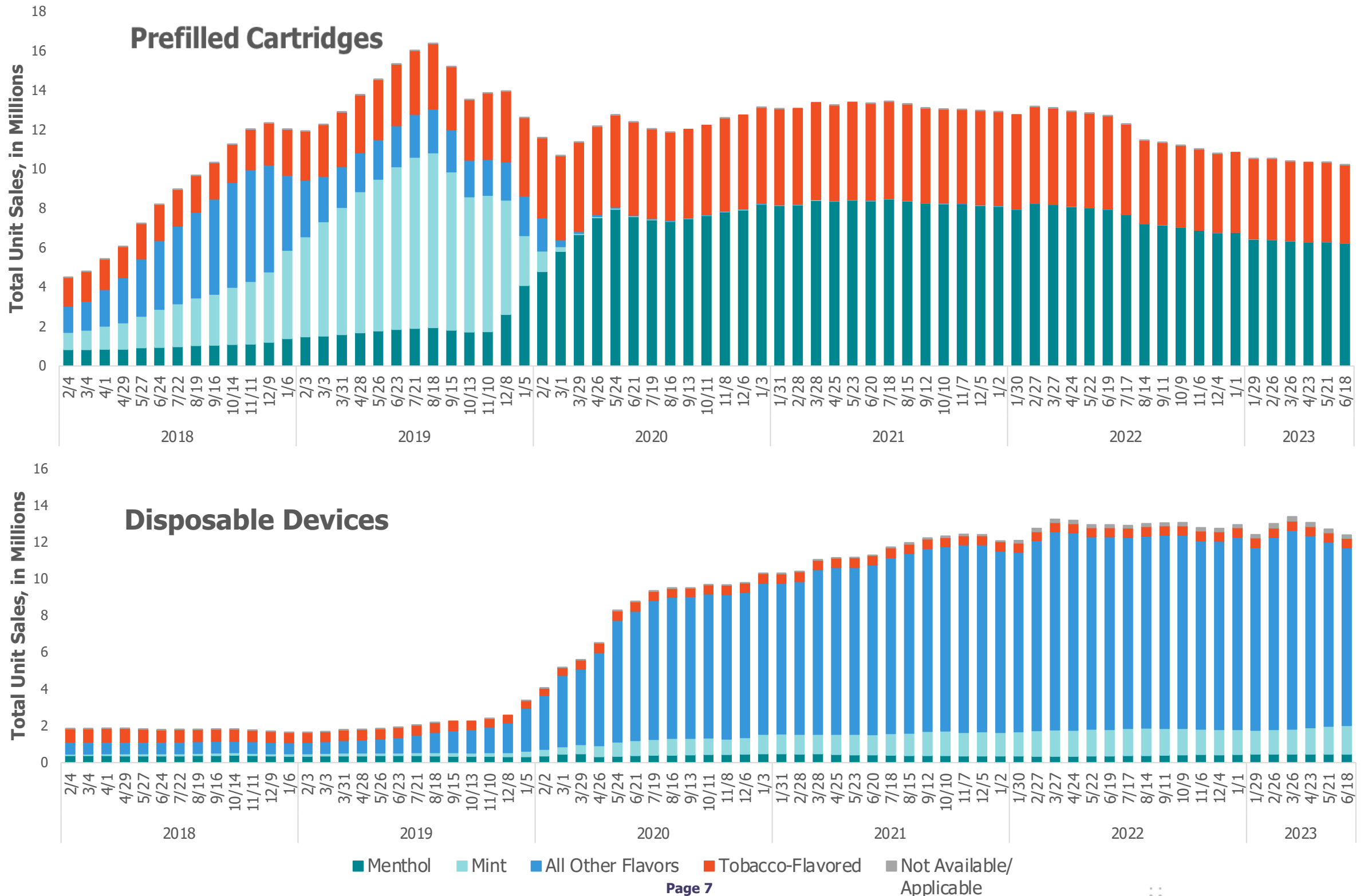
- Following FDA’s flavor enforcement policy, which prohibited the sale of flavored prefilled cartridges but exempted disposable devices and menthol and tobacco prefilled cartridges, between February 2, 2020, and June 18, 2023:
 - Unit share of disposable devices increased from 26.0% to 54.8%.
 - Unit share of prefilled cartridges decreased from 73.9% to 45.1%.

Figure 5. National E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/4/2018 – 6/18/2023

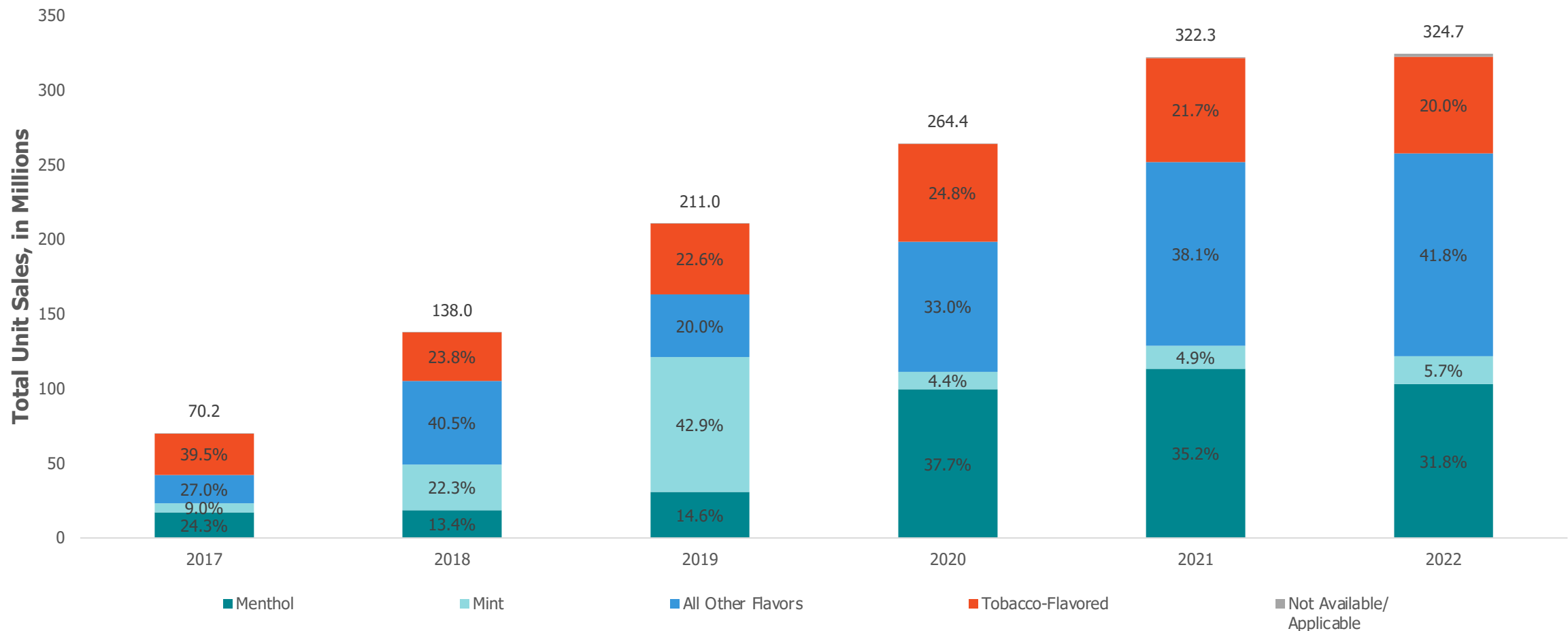


All estimates and analyses in this data brief based on Information Resources, Inc., Multi-Outlet + Convenience data are by the author and not by Information Resources, Inc. Financial support was provided by Bloomberg Philanthropies through a grant to the CDC Foundation. According to IRI, new e-cigarette product coding is managed to consistently meet or exceed releasing products that cover a minimum of 95.5% of total e-cigarette dollar sales at any given time. Coding and releasing of new products are prioritized based on significance of dollar sales in order to continually comply with capturing at least 95.5% of total e-cigarette dollar sales in each period.

Figure 6. National E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 2/4/2018 – 6/18/2023



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Figure 7. National E-Cigarette Unit Sales by Flavor, Annual Estimates 2017 – 2022*

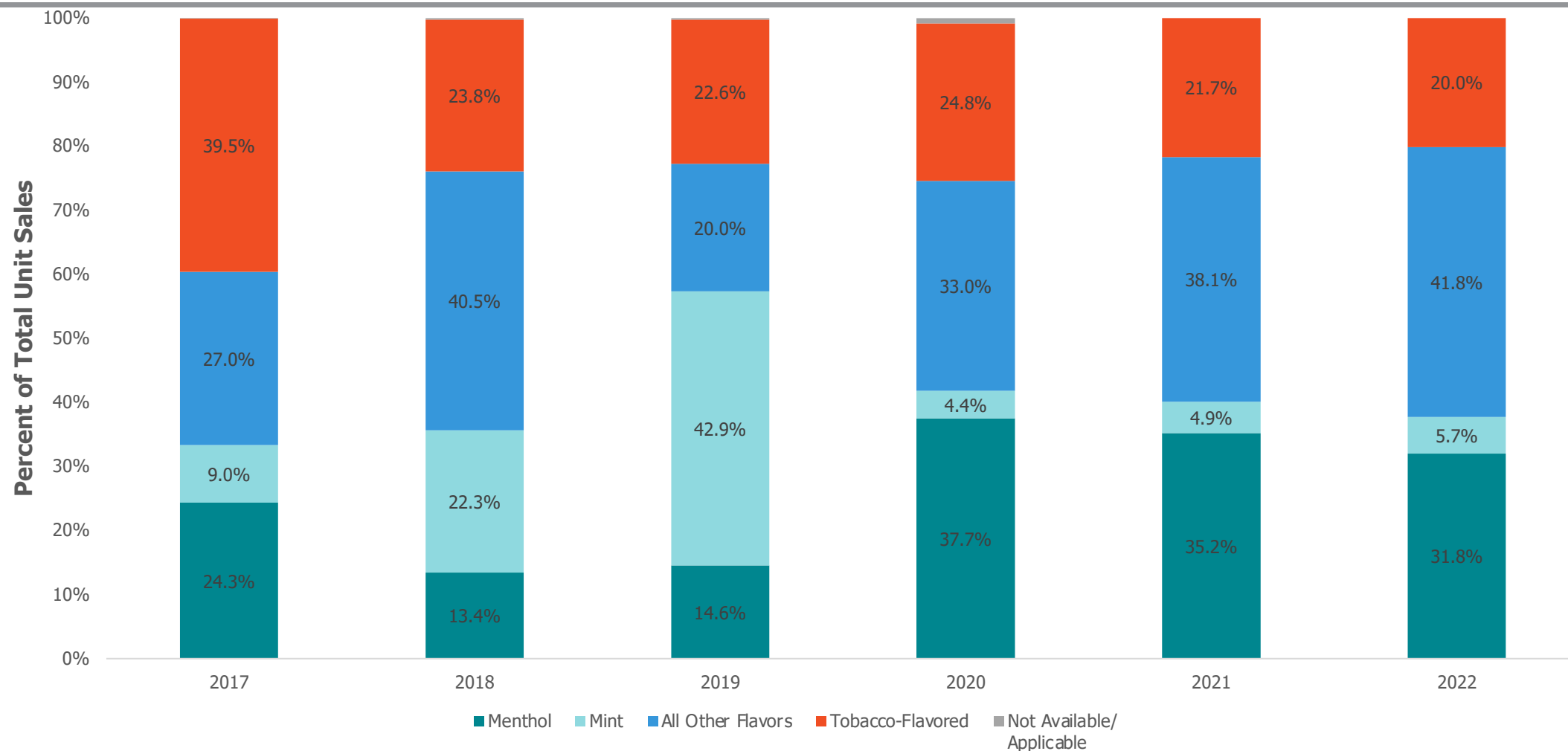
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Unit Sales Annual Trends by Flavor (2021 - 2022)

■ From 2021 to 2022:

- Annual total e-cigarette unit sales increased by 0.7% (from 322.3 million units to 324.7 million units);
- Unit sales of menthol-flavored e-cigarettes decreased by 8.9% (from 113.3 million units to 103.3 million units);
- Unit sales of tobacco-flavored e-cigarettes decreased by 7.0% (from 69.8 million units to 64.9 million units);
- Unit sales of mint-flavored e-cigarettes increased by 18.3% (from 15.6 million units to 18.5 million units); and
- Unit sales of other-flavored e-cigarettes increased by 10.5% (from 122.9 million units to 135.9 million units).

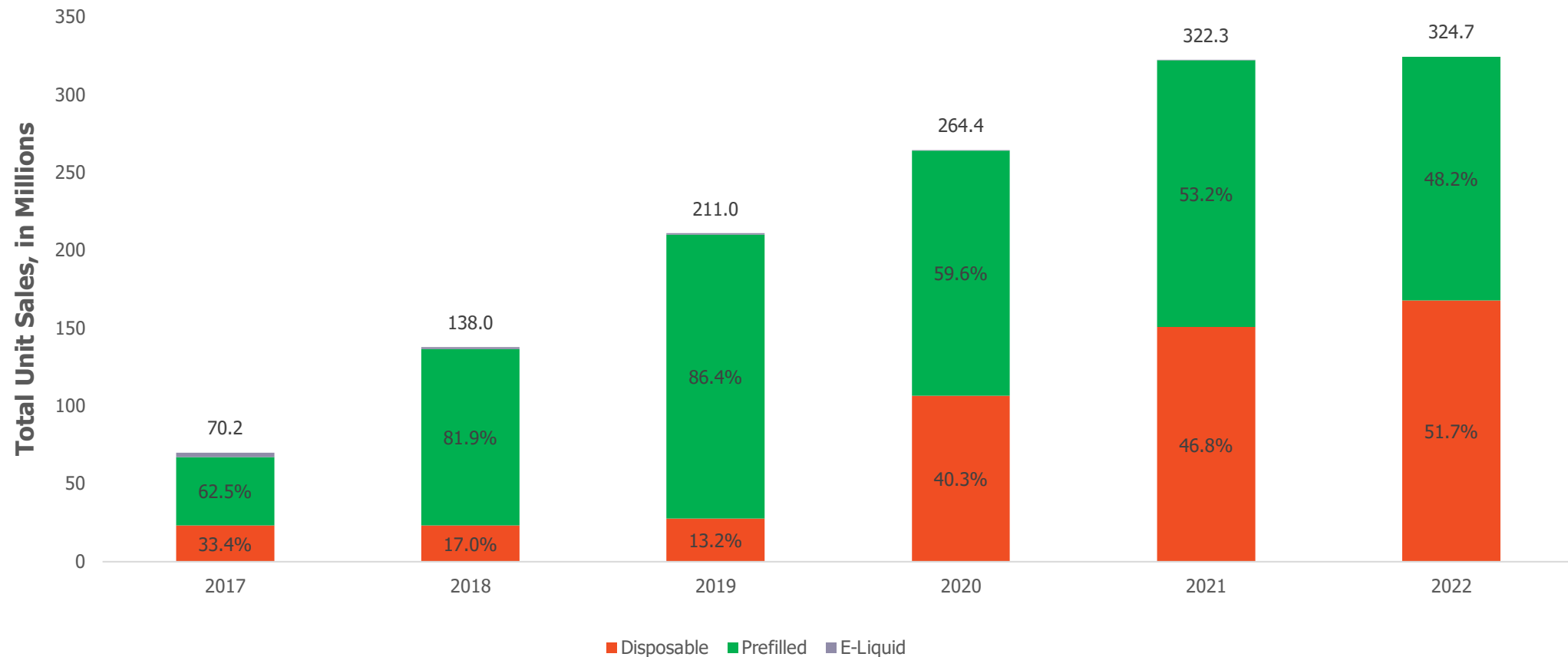
Figure 8. Unit Share of National E-Cigarette Unit Sales by Flavor, Annual Estimates 2017 – 2022*



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Unit Share Annual Trends by Flavor (2021 - 2022)

- From 2021 to 2022:
 - Unit share of menthol-flavored e-cigarette sales decreased from 35.2% to 31.8%;
 - Unit share of tobacco-flavored e-cigarette sales decreased from 21.7% to 20.0%;
 - Unit share of mint-flavored e-cigarette sales increased from 4.9% to 5.7%; and
 - Unit share of other-flavored e-cigarette sales increased from 38.1% to 41.8%.

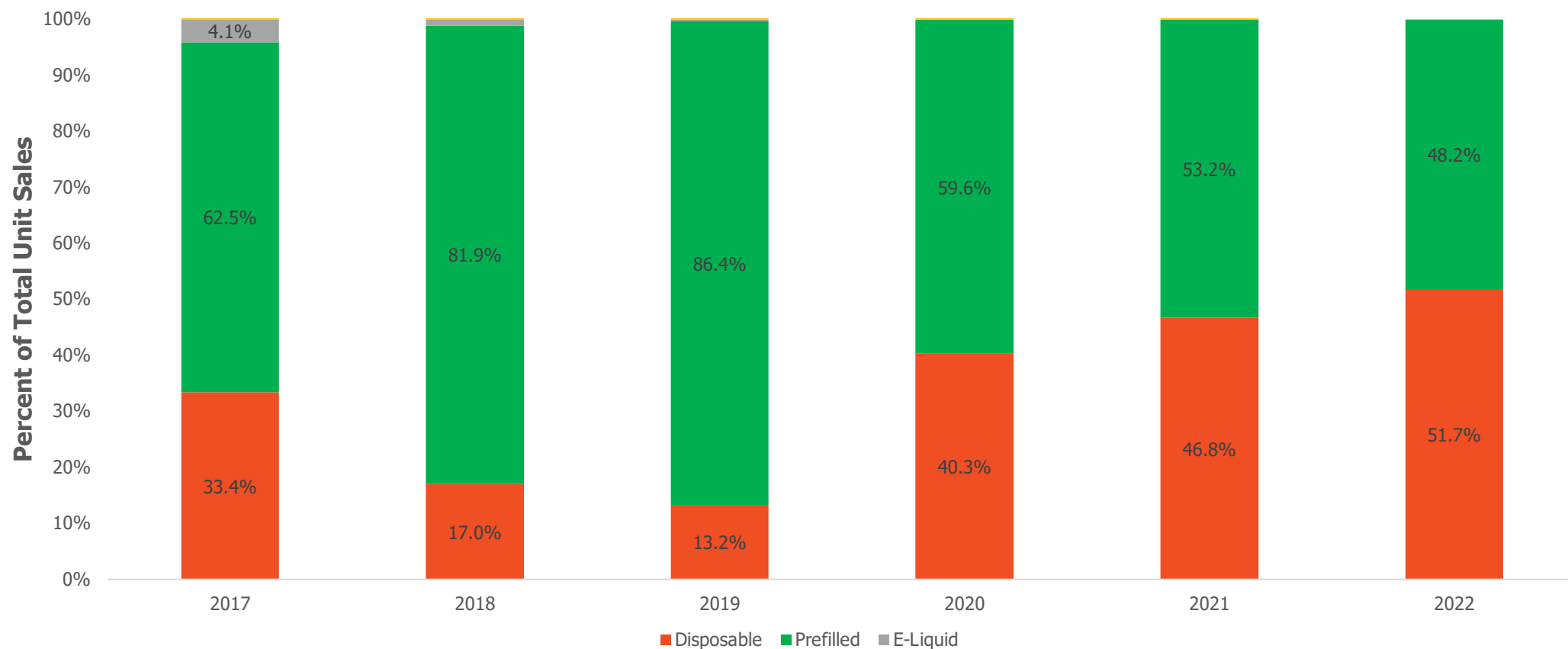
Figure 9. National E-Cigarette Unit Sales by Product Type, Annual Estimates 2017 – 2022*

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Unit Sales Annual Trends by Product (2021 - 2022)

- From 2021 to 2022:
 - Annual total e-cigarette unit sales increased by 0.7% (from 322.3 million units to 324.7 million units);
 - Unit sales of disposable e-cigarettes increased by 11.4% (from 150.8 million units to 168.0 million units); and
 - Unit sales of prefilled cartridge e-cigarettes decreased by 8.6% (from 171.4 million units to 156.6 million units).

Figure 10. Unit Share of National E-Cigarette Unit Sales by Product Type, Annual Estimates 2017 – 2022*



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Unit Share Annual Trends by Product (2021 - 2022)

- From 2021 to 2022:
 - Unit share of disposable e-cigarette sales increased from 46.8% to 51.7%; and
 - Unit share of prefilled cartridge e-cigarette sales decreased from 53.2% to 48.2%.