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

This brief report highlights trends in national e-cigarette sales from January 2016 to December 2020.

- E-cigarette Use
  - The 2020 National Youth Tobacco Survey (NYTS), released in September 2020, showed that current e-cigarette use was 19.6% among high school students, and 4.7% among middle school students. Although these data show a decline since 2019 when e-cigarette use among youth peaked (at 27.5% and 10.5%, respectively), 3.6 million U.S. youth still currently used e-cigarettes in 2020, and more than 8 in 10 used flavored e-cigarettes.[1]
- Federal Legislative and Regulatory Initiatives
  - Sales Restrictions: On December 20, 2019, a federal law was passed to raise the minimum age of sale of tobacco products, including e-cigarettes, to 21 years.
  - Flavors: The U.S. Food and Drug Administration issued an enforcement policy, effective February 2020, prohibiting the sale of flavored prefilled cartridges e-cigarettes such as Juul and Vuse. This policy does not apply to tobacco-and menthol-flavored prefilled cartridges, e-liquids, or single use disposable products, such as Puff Bar and Mojo, which are available in a wide array of flavors.
- Other Relevant Issues
  - Between August 2019 and January 2020, federal, state, and local public health entities investigated a national outbreak of e-cigarette or vaping product use-associated lung injury (EVALI) which was associated with a sustained decrease in e-cigarette sales. Awareness of the outbreak and higher EVALI risk perceptions was associated with twice the odds of intending to quit, and lower intentions to own an e-cigarette or vape device in the future.[2]
  - By mid-March 2020, nearly all U.S. states had declared a state of emergency due to the novel coronavirus disease (COVID-19) pandemic. States and local jurisdictions enacted various public health interventions to limit the spread of COVID-19, including temporary closures of non-essential businesses and schools, restrictions on public gatherings, and quarantine measures. The impact of COVID-19 on e-cigarette sales is not known yet but a study that examined use in the first few months of the pandemic found a decline in e-cigarette use among adolescents and young adults.[3]
- State and Local Legislative Initiatives
  - Communities and states have begun to enact laws that prohibit sales of flavored tobacco products, including e-cigarettes.

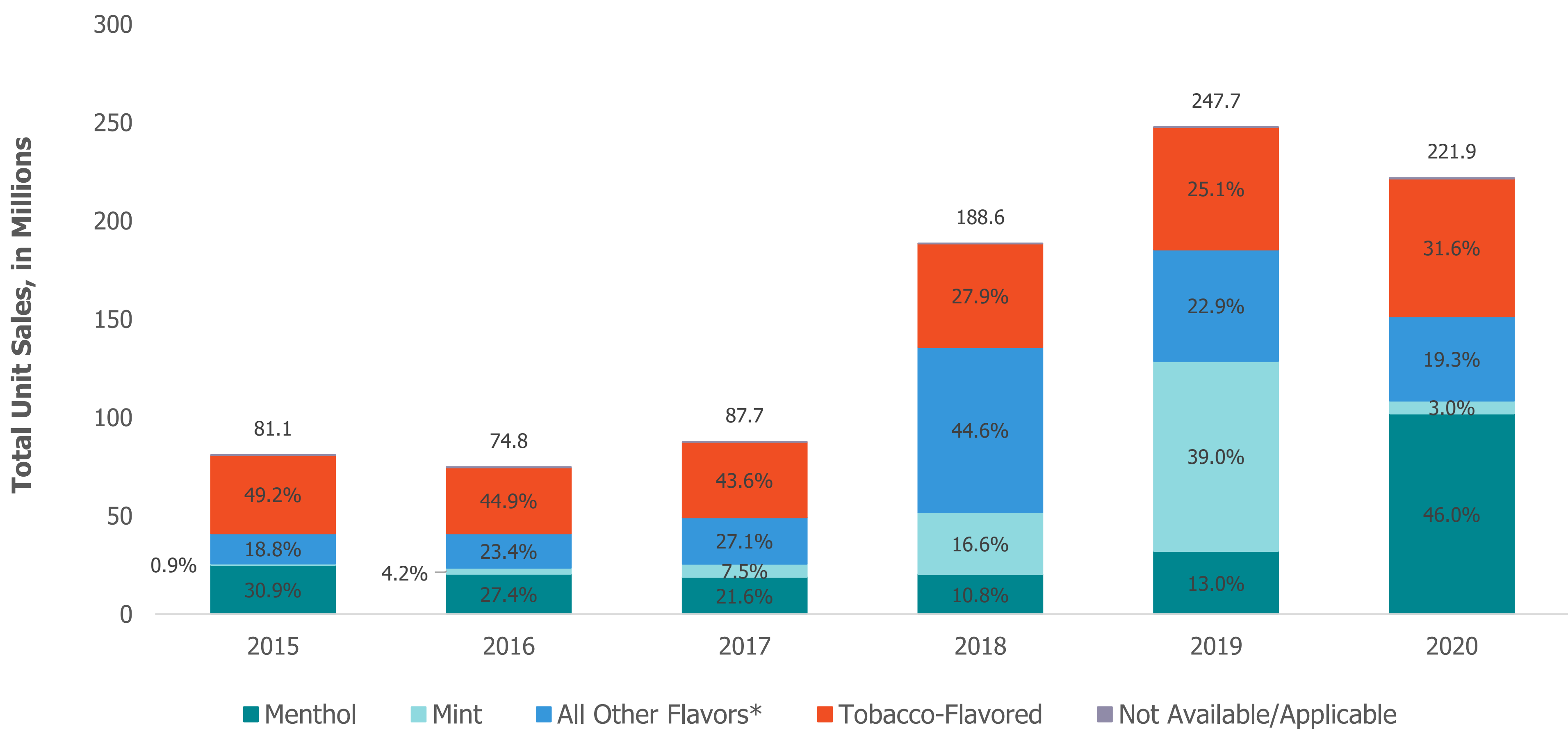
Key Findings

- From January 26, 2020 to December 27,2020, national total e-cigarette unit sales increased by 29.1%.
- Since the release of 2020 NYTS data, e-cigarette sales increased by 21.5% between September 6, 2020 to December 27, 2020.
- As of December 27, 2020, all non-tobacco flavored e-cigarettes accounted for 71.8% of the national e-cigarette market, and menthol e-cigarette sales accounted for 41.9% of the market.
- The market shares of disposable e-cigarettes and menthol-flavored prefilled cartridges significantly increased in 2020, likely influenced by the federal enforcement policy that exempted these flavors and product types.

Conclusion: Restrictions that exempt certain flavors could shift sales to the flavors that remain on the market, deterring progress in reducing use. Comprehensive removal of flavors from the e-cigarette market may reduce e-cigarette sales, reduce youth access to flavored e-cigarettes and ultimately reduce youth e-cigarette use

1. Wang TW, Neff LJ, Park-Lee E, Ren C, Cullen KA, King BA. E-cigarette use among middle and high school students — United States, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1310–131
2. Kreslake JM, Diaz MC, Shinaba M, Vallone DM, Hair EC. Youth and young adult risk perceptions and behaviours in response to an outbreak of e-cigarette/vaping-associated lung injury (EVALI) in the USA. Tob Control. Published online January 13, 2021:tobaccocontrol-2020-056090. doi:10.1136/tobaccocontrol-2020-056090
3. Gaiha SM, Lempert LK, Halpern-Felsher B. Underage youth and young adult e-cigarette use and access before and during the coronavirus disease 2019 pandemic. JAMA Network Open. 2020;3(12):e2027572-e2027572. doi:10.1001/jamanetworkopen.2020.27572

Figure 1. National E-Cigarette Unit Sales by Flavor, Annual Estimates 2015 – 2020



*Sales data does not reflect sales from vape shops or online retailers; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette device; 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 contains a humectant (e.g., propylene glycol), nicotine, and flavoring.

Unit Sales Annual Trends by Flavor (2015-2020)

- From 2015 to 2020, annual total e-cigarette unit sales (excluding hardware) increased by 173.7% (from 81.1 million to 221.9 million units).
- From 2019 to 2020:
  - Annual total e-cigarette unit sales decreased by 10.4% (from 247.7 million to 221.9 million units);
  - Market share of menthol-flavored e-cigarettes increased from 13.0% to 46.0%;
  - Market share of tobacco-flavored e-cigarettes increased from 25.1% to 31.6%;
  - Market share of mint-flavored e-cigarette sales decreased from 39.0% to 3.0%; and
  - All other-flavored e-cigarette sales decreased from 22.9% to 19.3%.

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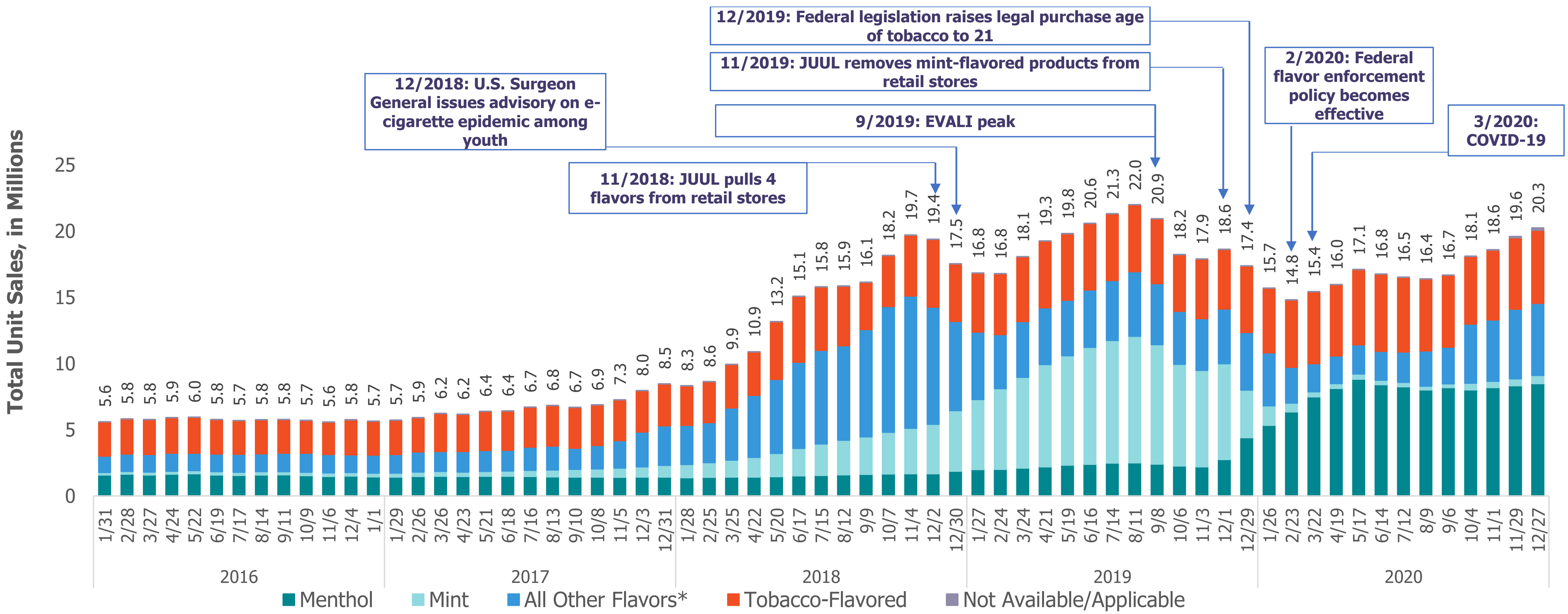
Figure 2. National E-Cigarette Unit Sales by Flavor, 4 Week Estimates 1/2016 – 12/2020*



*Sales data does 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 (11.5% of total sales).

Unit Sales Data Trends (1/26/20-12/27/20)

- From January 26, 2020 to December 27, 2020, monthly e-cigarette unit sales increased by 29.1% to 20.3 million units.
  - Since the release of 2020 NYTS data, sales increased by 21.5% between September 06, 2020 to December 27, 2020.
- As of December 27, 2020, the proportion of menthol e-cigarette sales is 41.9% of the entire e-cigarette market. The proportion of tobacco e-cigarette sales is 27.3% of the entire e-cigarette market.
- From January 26, 2020 to December 27, 2020 :
  - Menthol-flavored e-cigarette sales increased by 58.8% (from 5.3 million to 8.5 million);
  - Tobacco-flavored e-cigarette sales increased by 13.5% (from 4.9 million to 5.5 million);
  - Mint-flavored e-cigarette sales decreased by 58.1% (from 1.5 million to 0.6 million); and
  - All other-flavored e-cigarette sales increased by 36.3% (from 4.0 million to 5.4 million).

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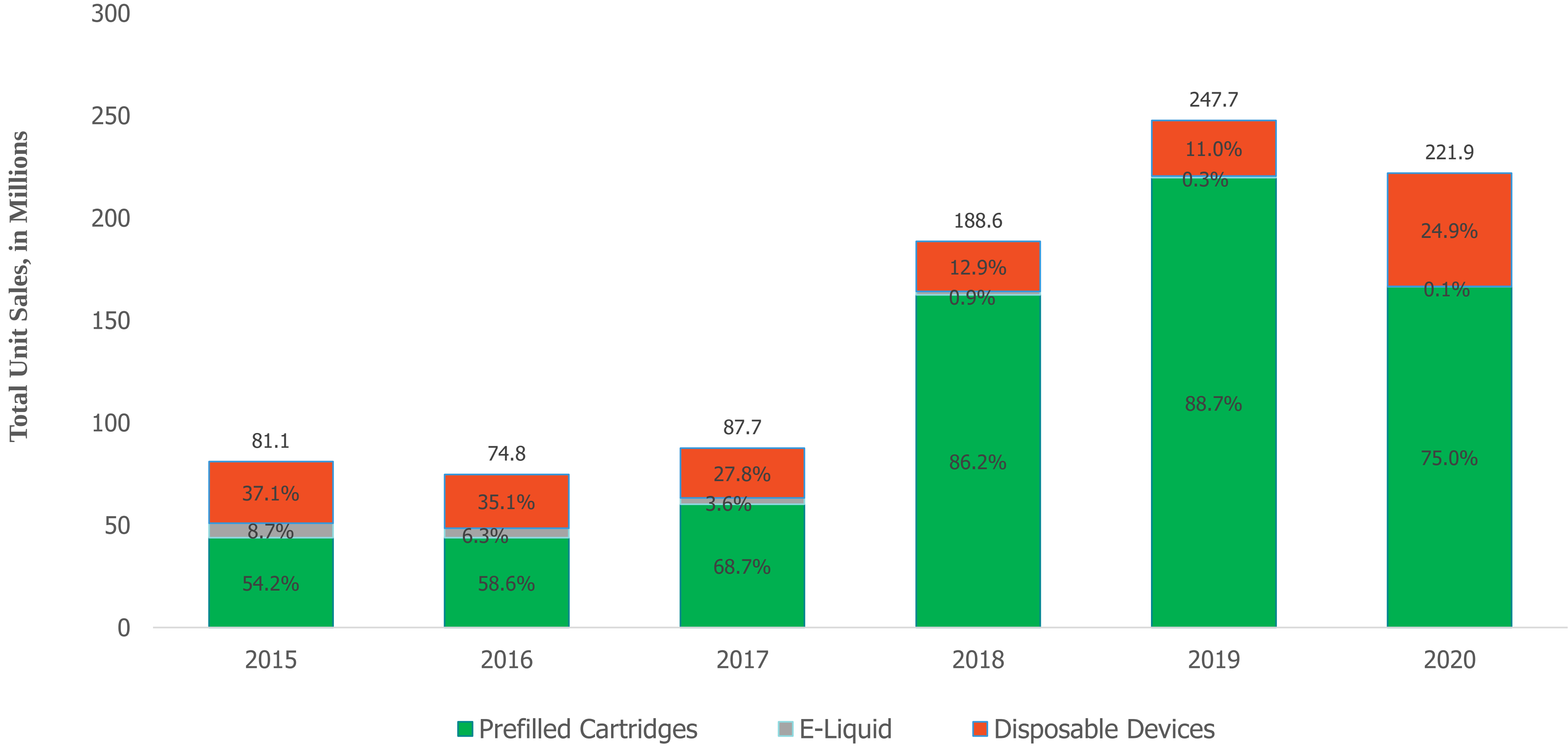
Figure 3. National E-Cigarette Unit Sales by Product Type, Annual Estimates 2015 – 2020



*Sales data does not reflect sales from vape shops or online retailers; prefilled cartridges include tanks, cartridges, and pods used in rechargeable and reusable e-cigarette device; 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 contains a humectant (e.g., propylene glycol), nicotine, and flavoring.

Unit Sales Annual Trends by Product Type (2015-2020)

- From 2015 to 2019:
  - Market share of prefilled cartridges increased from 54.2% to 88.7%; and
  - Market share of disposable devices decreased from 37.1% to 11.0%.

- From 2019 to 2020:
  - Market share of prefilled cartridges decreased from 88.7% to 75.0%; and
  - Market share of disposable devices increased from 11.0 % to 24.9%.

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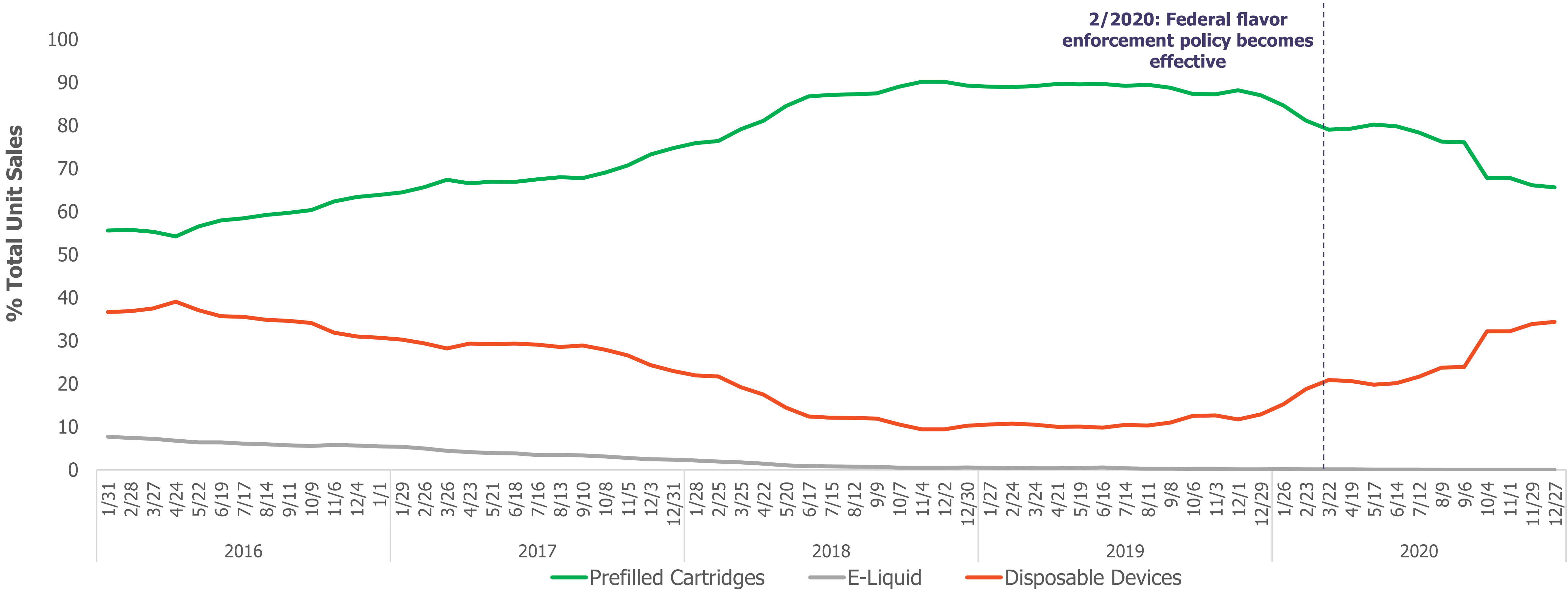
Figure 4. National E-Cigarette Unit Sales by Product Type, 4 Week Estimates 1/2016 – 12/2020*



*Sales data does 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 device; 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 contains a humectant (e.g., propylene glycol), nicotine, and flavoring.

Trends of Unit Sales by Product Type

- Following FDA's flavor enforcement policy, the market share of prefilled cartridges decreased from 81.1% of total sales to 65.6% of total sales between February 23, 2020 to December 27, 2020.
    - Since the release of 2020 NYTS data, the market share decreased from 76.1% in September 6, 2020 to 65.6% in December 27, 2020.
- Following FDA's flavor enforcement policy, the market share of disposable devices increased from 18.8% of total sales to 34.4% of total sales between February 23, 2020 to December 27, 2020.
    - Since the release of 2020 NYTS data, the market share increased from 23.9% in September 6, 2020 to 34.4% in December 27, 2020.

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Figure 5. National E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 1/2016 – 12/2020

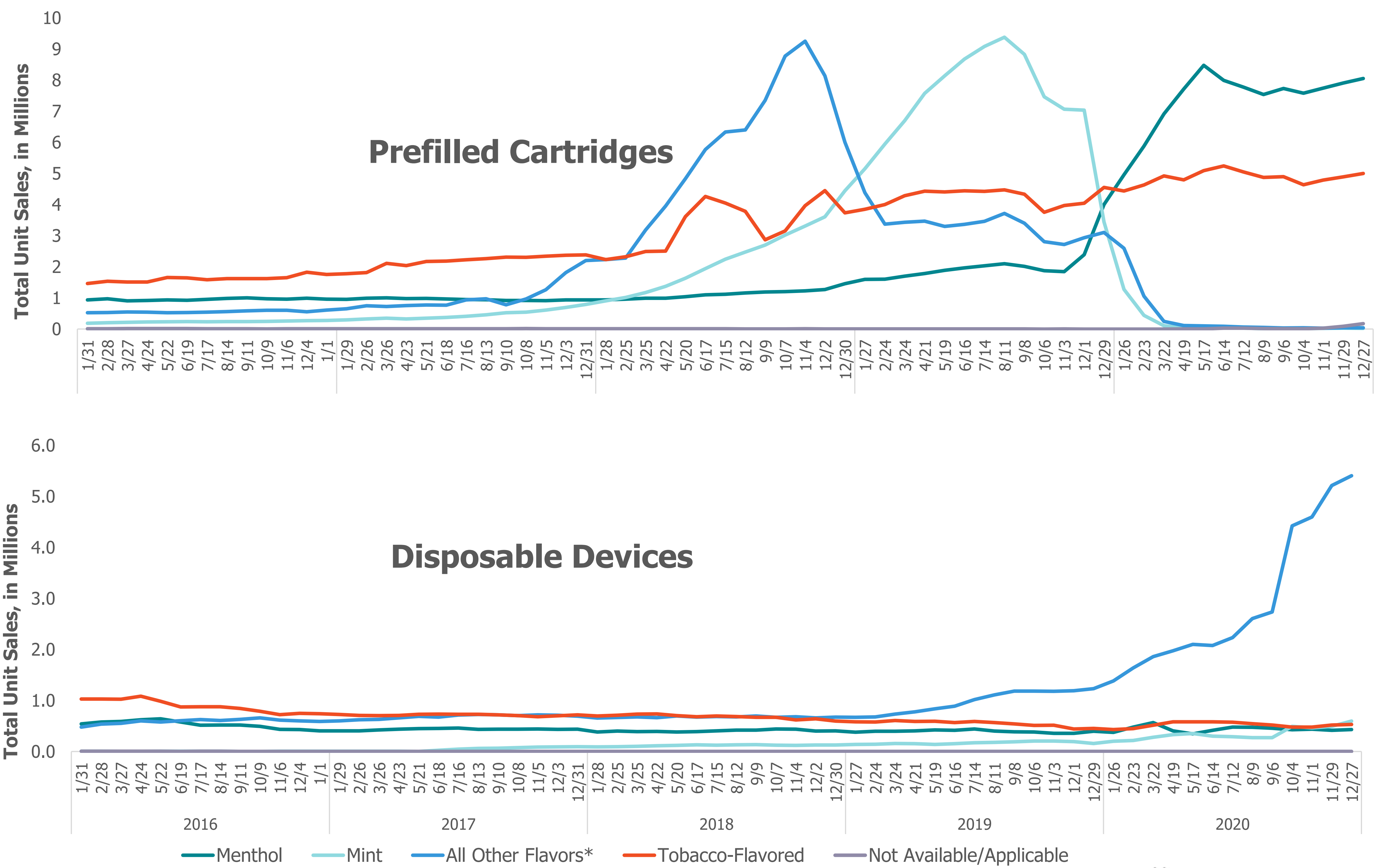

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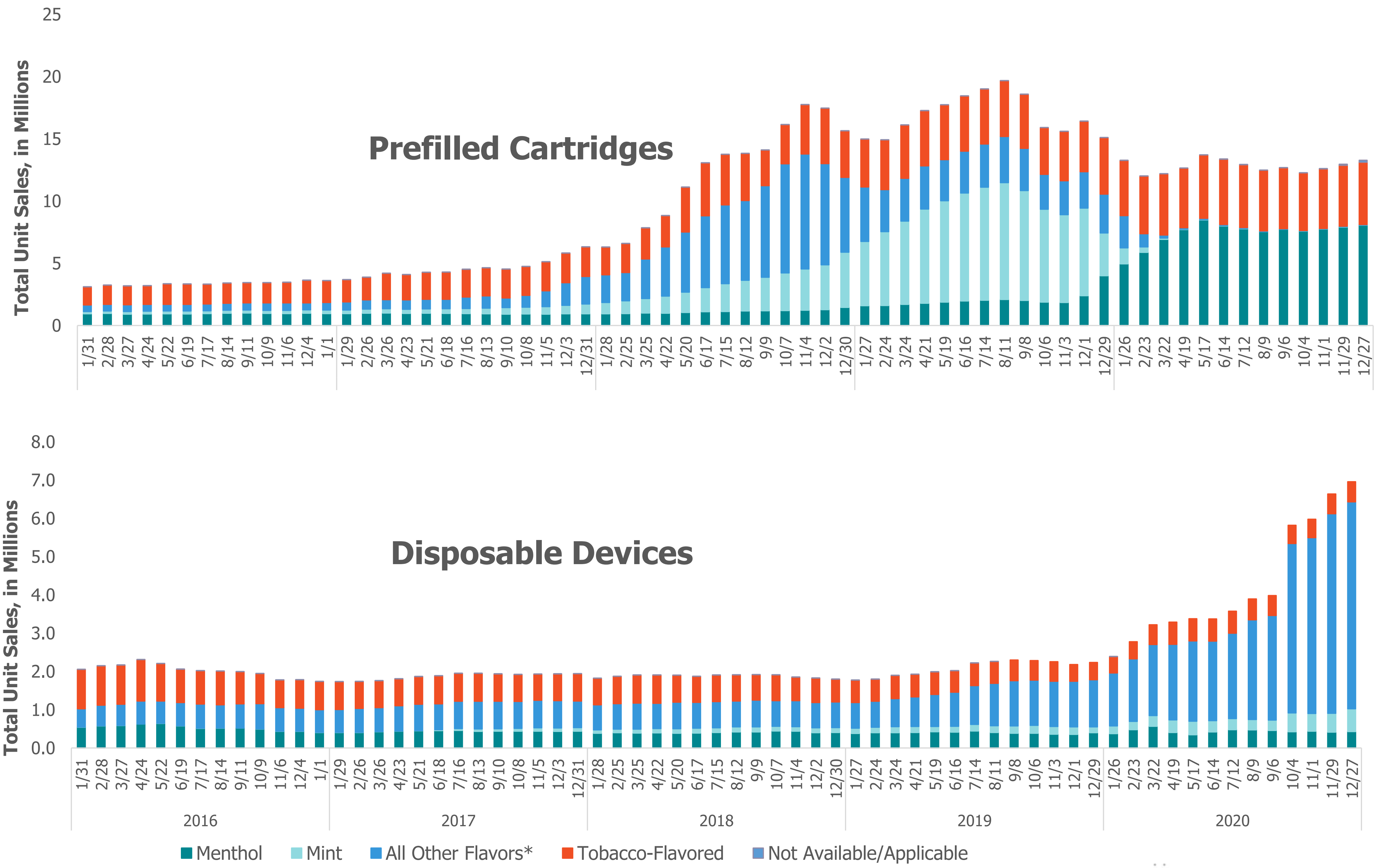
Figure 6. National E-Cigarette Unit Sales by Product Type and Flavor, 4 Week Estimates 1/2016 – 12/2020



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