Effect of PMTA Decisions To-Date: Changes in the Devices and Liquids Used by U.S. Adults Frequently Using ENDS (2020-2023)

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Background

The majority of ENDS PMTA decisions were made from Oct. 2020-Feb. 2023, with over 99% of determinations made by Mar. 2023. Little is known about the impact of these decisions to-date. We examined the devices and liquids used among U.S. adults frequently using ENDS before and after the majority of PMTA decisions were made.

Methods

- Data from W1 (May-Oct. 2020; n=1179) and W5 (Feb.-Apr. 2023; n=1350) of a longitudinal cohort of U.S. adults (≥21 years) using ENDS ≥5 days/week
- Coded user-submitted photos of adults' most-used devices and liquids
- Defined unique device products using brand and model
- Defined unique liquid products using liquid brand, flavor, nicotine concentration, formulation, PG/VG
- Used descriptive analyses to under-stand number and types of unique devices and liquids used in W1 vs. W5

Results

- From W1-W5, the number of unique device and liquid ENDS products used by participants increased from 279 to 357 and 546 to 695, respectively
- Few participants used device (n=17, 1.3%) or liquid (n=6, 0.5%) products with a marketing granted order in W5

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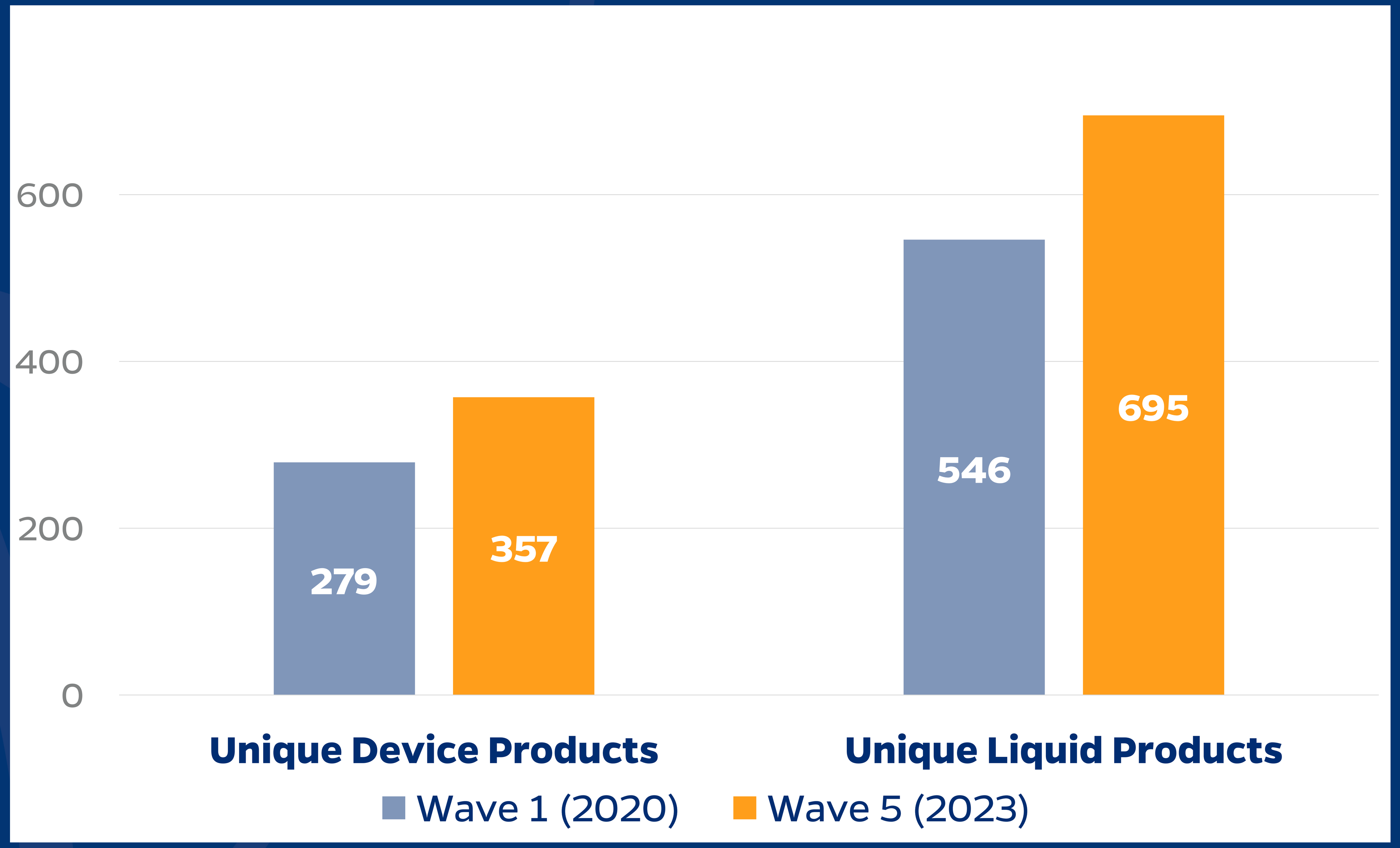
From 2020-2023, **the number of unique ENDS device and liquid products** used by adults frequently using ENDS **grew**.



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Competing interests: No tobacco interests to declare.

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Results (continued)

Device Type of Unique Device ENDS Products, n (%)	W1 (n=279)	W5 (n=357)
Disposable device	46 (16.5)	129 (36.1)
Reusable device w/ disposable pod	18 (6.5)	11 (3.1)
Reusable device w/ refillable pod	65 (23.3)	107 (30.0)
Refillable tank device	150 (53.8)	110 (30.8)

Characteristics of Unique Liquid ENDS Products	W1 (n=546)	W5 (n=695)
Liquid container type, n (%)		
Disposable device	71 (13.0)	298 (42.9)
Disposable pod	31 (5.7)	19 (2.7)
Liquid bottle	444 (81.3)	378 (54.4)
Primary flavor, n (%)		
Tobacco	45 (8.2)	31 (4.5)
Menthol/Mint	38 (7.0)	58 (8.4)
Sweet	443 (81.1)	570 (82.0)
Other	19 (3.5)	20 (2.9)
Missing	1 (0.2)	16 (2.3)
Nicotine concentration, median (min, max)		
	12 (1.5,60)	50 (3, 60)
Formulation, n (%)		
Freebase	321 (58.8)	237 (34.1)
Salt	225 (41.2)	458 (65.9)
PG/VG, n (%)		
PG ≤ 30	349 (63.9)	237 (34.1)
PG > 30% & < 50%	49 (9.0)	25 (3.6)
PG ≥ 50%	148 (27.1)	433 (62.3)

Conclusions

- Despite PMTA decisions, an increase in the number of unique devices and liquids used was observed from 2020 to 2023
- Few participants (<1.5%) in 2023 were using devices or liquids with a marketing granted order
- Further action (e.g., monitoring/improving compliance) may be needed to ensure FDA regulation is effective

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