Supplemental Online Content

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eFigure. Flowchart of Analytical Sample
eTable. Descriptive Statistics of Study Sample

This supplemental material has been provided by the authors to give readers additional information about their work.
**eFigure 1.** Flowchart of Analytical Sample

**eFigure 1a.** Analytical sample that involves all adolescent participants across the PATH study Wave 4, 4.5 and 5

PATH youth cohort at Wave 4  
# of adolescents = 8,548

1,525 shadow youth at Wave 4 aged up to 12 years old were added to Wave 4.5

PATH youth cohort at Wave 4.5  
Total # of adolescents = 10,073

1,568 shadow youth at Wave 4.5 aged up to 12 years old were added to Wave 5

PATH youth cohort at Wave 5  
Final total # of adolescents included in the analysis = 11,641
eFigure 1b. Analytical sample that involves adolescent never e-cigarette users across the PATH study Wave 4, 4.5, and 5

PATH youth cohort at Wave 4
# of adolescent = 8,548

Exclude: 770 ever e-cigarette users
127 with uncertain e-cigarette use status at Wave 4

PATH youth cohort at Wave 4
# of adolescent never e-cigarette users = 7,651

1,525 shadow youth at Wave 4 aged up to 12 years old were added to Wave 4.5

Exclude: 493 ever e-cigarette users
123 with uncertain e-cigarette use status at Wave 4.5

PATH youth cohort at Wave 4.5
# of adolescent never e-cigarette users = 8,560

1,568 shadow youth at Wave 4.5 aged up to 12 years old were added to Wave 5

Exclude: 880 ever e-cigarette users
76 with uncertain e-cigarette use status at Wave 5

PATH youth cohort at Wave 5
# of adolescent never e-cigarette users = 9,172

Note: Adolescent never e-cigarette users were used to estimate the prevalence of e-cigarette advertising exposure among this subgroup, and the contemporary association between exposures and curiosity in using e-cigarettes. Adolescent e-cigarette never users at baseline waves (Wave 4 for Wave 4-4.5 analysis, and Wave 4.5 for Wave 4.5-5 analysis) were used to examine the longitudinal associations between exposures and e-cigarette initiation at 1-year follow-up.
### eTable 1. Descriptive Statistics of Study Sample

|                          | Wave 4 (N = 8,548)   |          | Wave 4.5 (N = 10,073) |          | Wave 5 (N = 11,641)   |          |
|--------------------------|----------------------|----------|------------------------|----------|------------------------|----------|
|                          | n (weighted %)       | 95% CI   | n (weighted %)         | 95% CI   | n (weighted %)         | 95% CI   |
| Sex                      |                      |          |                        |          |                        |          |
| Boy                      | 4,425 (51.1%)        | 50.0 - 52.2 | 5,225 (51.1%)        | 50.0 - 52.2 | 6,063 (51.1%)        | 50.1 - 52.1 |
| Girl                     | 4,090 (48.9%)        | 47.8 - 50.0 | 4,810 (48.9%)        | 47.8 - 50.0 | 5,531 (48.9%)        | 47.9 - 49.9 |
| Age in years             |                      |          |                        |          |                        |          |
| 12                       | 1,935 (24.9%)        | 23.9 - 25.9 | 1,523 (19.5%)        | 18.6 - 20.5 | 1,624 (17.3%)        | 16.5 - 18.1 |
| 13                       | 2,179 (24.7%)        | 23.7 - 25.7 | 1,985 (20.5%)        | 19.7 - 21.4 | 1,474 (15.7%)        | 14.9 - 16.5 |
| 14                       | 2,232 (24.8%)        | 23.8 - 25.8 | 2,196 (20.0%)        | 19.2 - 20.9 | 2,030 (17.5%)        | 16.7 - 18.2 |
| 15                       | 2,074 (24.1%)        | 23.2 - 25.1 | 2,226 (19.8%)        | 19.0 - 20.7 | 2,181 (16.4%)        | 15.8 - 17.2 |
| 16                       | 128 (1.5%)           | 1.3 - 1.9 | 2,067 (19.3%)        | 18.5 - 20.1 | 2,217 (16.6%)        | 15.9 - 17.3 |
| 17                       | -                    | -        | 76 (0.8%)             | 0.6 - 1.0 | 2,115 (16.5%)        | 15.8 - 17.2 |
| Race/ethnicity           |                      |          |                        |          |                        |          |
| Black                    | 1,105 (13.0%)        | 12.2 - 13.8 | 1,245 (12.7%)        | 12.0 - 13.4 | 1,405 (12.7%)        | 12.1 - 13.5 |
| Hispanic                 | 2,515 (24.4%)        | 23.4 - 25.3 | 2,917 (24.7%)        | 23.8 - 25.5 | 3,375 (25.0%)        | 24.2 - 25.9 |
| White                    | 3,702 (52.3%)        | 51.2 - 53.5 | 4,453 (51.9%)        | 50.8 - 53.0 | 5,185 (51.4%)        | 50.4 - 52.5 |
| Other*                   | 817 (10.3%)          | 9.6 - 11.1 | 970 (10.7%)          | 10.0 - 11.4 | 1,111 (10.8%)        | 10.1 - 11.5 |
| Parental education       |                      |          |                        |          |                        |          |
| Less than high school    | 1,582 (15.9%)        | 15.1 - 16.7 | 1,724 (14.8%)        | 14.1 - 15.5 | 2,000 (15.2%)        | 14.6 - 15.9 |
| High school graduate     | 1,506 (16.7%)        | 15.9 - 17.5 | 1,778 (17.0%)        | 16.3 - 17.9 | 2,040 (16.8%)        | 16.0 - 17.5 |
| Some college or associate degree | 2,665 (30.9%) | 29.8 - 32.0 | 3,148 (31.0%)        | 30.0 - 32.0 | 3,617 (30.9%)        | 30.0 - 31.9 |
| Bachelor's degree or above | 2,727 (36.6%) | 35.4 - 37.7 | 3,318 (37.2%)        | 36.1 - 38.2 | 3,907 (37.1%)        | 36.1 - 38.0 |
| Severity of internalizing mental health problems | | | | | | |
| Low                      | 4,247 (49.9%)        | 48.7 - 51.0 | 4,885 (49.2%)        | 48.1 - 50.2 | 5,381 (47.3%)        | 46.3 - 48.3 |
| Moderate                 | 2,370 (28.6%)        | 27.6 - 29.7 | 2,746 (28.0%)        | 27.1 - 29.0 | 3,103 (28.0%)        | 27.1 - 28.9 |
| High                     | 1,834 (21.5%)        | 20.6 - 22.5 | 2,318 (22.8%)        | 21.9 - 23.7 | 2,840 (24.7%)        | 23.9 - 25.6 |
| Severity of externalizing mental health problems | | | | | | |
| Low                      | 3,350 (38.9%)        | 37.8 - 40.0 | 4,108 (41.2%)        | 40.1 - 42.2 | 4,674 (41.2%)        | 40.3 - 42.2 |
| Moderate                 | 2,389 (29.3%)        | 28.3 - 30.4 | 2,707 (27.9%)        | 27.0 - 28.9 | 3,128 (27.8%)        | 26.9 - 28.7 |
| High                     | 2,648 (31.8%)        | 30.7 - 32.8 | 3,077 (30.9%)        | 29.9 - 31.9 | 3,454 (30.9%)        | 30.0 - 31.9 |
| Parental e-cigarette use |                      |          |                        |          |                        |          |
| Yes                      | 330 (3.9%)           | 3.5 - 4.4 | 353 (3.7%)           | 3.3 - 4.1 | 599 (5.2%)           | 4.8 - 5.6 |
| No                       | 8,159 (96.1%)        | 95.6 - 96.5 | 9,618 (96.3%)        | 95.9 - 96.7 | 10,970 (94.8%)       | 94.4 - 95.2 |
| Friends using e-cigarettes |                    |          |                        |          |                        |          |
| None                     | 7,165 (84.3%)        | 83.4 - 85.1 | 7,329 (73.3%)        | 72.4 - 74.2 | 7,270 (63.4%)        | 62.5 - 64.4 |

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|                          | Wave 4 (N = 8,548) | Wave 4.5 (N = 10,073) | Wave 5 (N = 11,641) |
|--------------------------|--------------------|----------------------|--------------------|
|                          | n (weighted %)     | 95% CI               | n (weighted %)     | 95% CI               | n (weighted %)     | 95% CI               |
| A few                    | 939 (11.0%)        | 10.3 - 11.7          | 1,652 (16.5%)      | 15.7 - 17.3          | 2,549 (21.8%)      | 21.0 - 22.6          |
| Some                     | 254 (3.1%)         | 2.7 - 3.6            | 609 (6.0%)         | 5.5 - 6.5            | 977 (8.2%)         | 7.7 - 8.8            |
| Most                     | 107 (1.3%)         | 1.1 - 1.6            | 332 (3.4%)         | 3.0 - 3.8            | 642 (5.4%)         | 5.0 - 5.9            |
| All                      | 30 (0.3%)          | 0.2 - 0.4            | 79 (0.8%)          | 0.7 - 1.1            | 142 (1.1%)         | 0.9 - 1.3            |
| Perception of harm from e-cigarette use |                    |                      |                    |                      |                    |
| No harm                  | 157 (1.8%)         | 1.5 - 2.1            | 213 (2.1%)         | 1.8 - 2.4            | 169 (1.4%)         | 1.2 - 1.6            |
| Little harm              | 850 (10.2%)        | 9.5 - 10.9           | 1,020 (10.3%)      | 9.7 – 11.0           | 1,088 (9.3%)       | 8.7 - 9.9            |
| Some harm                | 2,558 (30.3%)      | 29.3 - 31.4          | 3,112 (31.1%)      | 30.1 - 32.1          | 3,413 (29.0%)      | 28.1 - 29.9          |
| A lot of harm            | 4,912 (57.6%)      | 56.5 - 58.8          | 5,626 (56.5%)      | 55.5 - 57.6          | 6,909 (60.3%)      | 59.3 - 61.3          |
| Ever e-cigarette use     |                    |                      |                    |                      |                    |
| Yes                      | 770 (9.0%)         | 8.4 - 9.7            | 1,390 (13.5%)      | 12.8 - 14.2          | 2,393 (19.9%)      | 19.1 - 20.6          |
| No                       | 7,651 (91.0%)      | 90.3 - 91.6          | 8,560 (86.5%)      | 85.8 - 87.2          | 9,172 (80.1%)      | 79.4 - 80.9          |
| Current e-cigarette use  |                    |                      |                    |                      |                    |
| Yes                      | 193 (2.4%)         | 2.0 - 2.7            | 528 (5.2%)         | 4.8 - 5.7            | 1049 (8.7%)        | 8.1 - 9.2            |
| No                       | 8,324 (97.6%)      | 97.3 - 98.0          | 9,520 (94.8%)      | 94.3 - 95.2          | 10,549 (91.3%)     | 90.8 - 91.9          |
| Current cigarette smoking|                    |                      |                    |                      |                    |
| Yes                      | 115 (1.3%)         | 1.1 - 1.6            | 212 (2.0%)         | 1.7 - 2.3            | 288 (2.3%)         | 2.0 - 2.6            |
| No                       | 8,421 (98.7%)      | 98.4 - 98.9          | 9,844 (98.0%)      | 97.7 - 98.3          | 11,339 (97.7%)     | 97.4 - 98.0          |
| Current use of other tobacco products |        |                      |                    |                      |                    |
| Yes                      | 94 (1.2%)          | 1.0 - 1.5            | 153 (1.5%)         | 1.3 - 1.8            | 199 (1.6%)         | 1.4 - 1.9            |
| No                       | 8,343 (98.8%)      | 98.5 - 99.0          | 9,787 (98.5%)      | 98.2 - 98.7          | 11,298 (98.4%)     | 98.1 - 98.6          |

a Other included non-Hispanic American Indian or Alaska Native, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, other Asian, Native Hawaiian, Guamanian or Chamorro, Samoan, and other Pacific Islanders.