COMPARISON OF ESTIMATES BEFORE AND AFTER THE UPDATED WEIGHTING STRATEGY CHANGE FOR THE MONITORING THE FUTURE PANEL STUDY ANNUAL REPORT

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Yvonne M. Terry-McElrath
Megan E. Patrick

Comparison of Estimates Before and After the Updated Weighting Strategy Change for the Monitoring the Future Panel Study Annual Report

Occasional Paper No. 100

Yvonne M. Terry-McElrath, MSA
Megan E. Patrick, PhD

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Overview and Summary

The purpose of this occasional paper is to compare point estimates and trends included in the Monitoring the Future Panel Study annual report: National data on substance use among adults ages 19 to 60, 1976–2021 (Patrick, Schulenberg, et al., 2022) prepared using historical post-stratification weights, with the same point estimates and trends obtained when using MTF age-specific panel analysis weights (described in Patrick, Terry-McElrath, et al., 2022). The current report is organized into four sections:

1. Part 1: Overview of old and new weighting methods;
2. Part 2: Comparison approach and summary;
3. Part 3: Differences observed between old and new weighting approaches, by substance; and
4. Part 4: Updated panel report figures and tables (all original tables and figures from the Patrick, Schulenberg, et al., 2022 annual report of data from 1976–2021 updated using the new weights).

Evaluating the impact of the new MTF panel analysis weights on point estimates and trends reported in the MTF panel annual report for 1976–2021 (Patrick, Schulenberg, et al., 2022) indicates that, overall, 63.1% of all point estimate comparisons exhibited less than a |5%| mean change between weighting approaches. Further, no trend comparisons indicated a sign flip, and 87.1% were substantively unchanged in regards to trend significance.

Part 1

Overview of Old and New Weighting Methods

Under a series of investigator-initiated, competing research grants from the National Institute on Drug Abuse, the Monitoring the Future (MTF) study has conducted annual surveys of nationally representative samples of 12th grade students since 1975, and surveys of nationally representative samples 8th and 10th grade students since 1991. A subset of 12th grade students from each cohort is followed into adulthood, and this longitudinal component of the MTF study is known as the MTF panel study (see Patrick, Schulenberg, et al., 2022). As of the completion of the 2021 data collection year, the panel study had data from over 108,000 individuals, with approximately 28,500 surveyed each year including young adults ages 19 to 30 and adults ages 35 to 60. These data, gathered on national samples over such a large portion of the lifespan, are extremely rare and can provide needed insight into the epidemiology, etiology, and life course history of substance use and relevant behaviors, attitudes, and other factors.

Each year, the MTF panel study releases an annual report providing the most recent data on substance use prevalence and trends among young adults (ages 19–30) and adults (ages 35 and up). This report provides policy makers, practitioners, and others with information on significant recent changes and historical trends in use of a wide range of substances, including marijuana, alcohol, cigarettes and other tobacco use, nicotine vaping, and other less prevalent substances (e.g., hallucinogens, stimulants, narcotics, etc.). Estimates are provided for young adults and adults overall, as well as by sex, race/ethnicity, and region. Estimates also are provided for college

and noncollege young adults. The hallmark of the 12th grade MTF surveys is the ability to provide nationally representative substance use prevalence and trend estimates among 12th grade students in the contiguous U.S. (see Miech et al., 2023; Patrick, Terry-McElrath, et al., 2022). Such estimates are possible through the use of a complex sample survey design and 12th grade sampling weights assigned at the school level to compensate for differential probabilities of selection at each sampling stage. In analyses of panel data, it is desirable to retain the ability to weight back to these nationally-representative samples of 12th grade students as the respondents move across the lifespan. However, doing so must address both the panel sampling selection process (including the oversampling of individuals reporting drug use in 12th grade) and attrition.

For past MTF panel annual reports (most recently Patrick, Schulenberg, et al., 2022), the procedure used to account for panel sampling and attrition involved weighting to adjust for the oversampling of those reporting drug use in 12th grade. There was also a post-stratification procedure in which each 12th grade cohort's panel sample was reweighted such that the prevalence distribution for a specific substance was the same for the panel respondents as it was for all of the 12th grade sample from which they were selected. This procedure was carried out separately by substance, resulting in a series of separate post-stratification weights (see Occasional Paper[1] [OP] Table 1, below; these post-stratification weights were used only for the annual reports and were not publicly available).

[1] Occasional Paper [OP] tables refer to those used in the current Occasional Paper to either explain the methodology used in the weight comparisons, or to summarize weight comparison results. OP Tables do not refer to either the Original or Updated figures from Patrick, Schulenberg, et al. 2022.

Occasional Paper Table 1. Post-Stratification Weights Used in Prior MTF Panel Reports

Weight	Use levels included in weight post-stratification	Substances in panel report for which the specified weight was utilized
fwt_mar	Frequency of lifetime, past 12-month, and past 30-day marijuana use	Marijuana use, vaping marijuana
fwt_alc	Frequency of lifetime, past 12-month, and past 30-day alcohol use	Alcohol use (including binge drinking and high-intensity drinking)
fwt_cig	Ever smoke cigarettes; frequency of smoking in past 30 days	Cigarette smoking, small cigars, hookah, vaping nicotine
fwt_smkls	Ever use smokeless tobacco; frequency of past 30-day use	Dissolvable tobacco, snus
fwt_ill	A composite measure accounting for frequency of lifetime, past 12-month, and past 30-day use of the following: marijuana, LSD, psychedelics, cocaine, amphetamines, Quaaludes, barbiturates, tranquilizers, heroin, and other narcotics	The following individual less prevalent substances: • Stimulants: Adderall, amphetamines (combined), cocaine, methamphetamine, Ritalin • Hallucinogens: hallucinogens (combined), LSD, other hallucinogens, MDMA • Narcotics: heroin, other narcotics (combined), OxyContin • Sedatives (combined) • Tranquilizers (combined)
fwt_ind	Mean of fwt_mar and fwt_ill	Combined less prevalent substances

Recent efforts to revise the MTF panel study weighting process have been undertaken (described in detail in Patrick, Terry-McElrath, et al., 2022), resulting in a pooled analysis weight approach that combines modeling of each individual respondent's panel eligibility, panel selection, and attrition (wave-specific response). Measures used as covariates in these models included data reported at 12th grade (sex, race/ethnicity, parental education, number of parents in the home, average high school grades, truancy, college plans, past 30-day cigarette use, past 30-day alcohol use, drug use status); 12th grade school type (public, private, etc.), metropolitan status, region, and 12th grade sampling weight, and additional measures regarding survey administration details (as relevant for each cohort). Additional analyses (see

Patrick, Terry-McElrath, et al., 2022) indicated that the approach is able to successfully weight back to the 12th grade nationally-representative samples by accounting for: 1) the fraction not invited to panel because of missing contact information or data on sex; 2) the panel sample selection process including oversampling of those reporting drug use, and 3) panel attrition. Further, the new weights should be relevant for analysis across a wide range of outcome variables (e.g., substance use, school and work success, health issues). The MTF panel data and the new panel analysis weights are available through the National Addiction & HIV Data Archive Program (NAHDAP).

The new age-specific panel analysis weights were created in early 2023, after the completion and release of the report including data from 1976–2021 (Patrick, Schulenberg, et al., 2022). The report covering data from 1976–2022 will utilize the new analysis weights. In order to provide the ability to evaluate the degree to which the use of the new weights has affected historical trend and prevalence estimates, MTF researchers have re-run all analyses included in the 1976–2021 report using the new weighting methodology. This report compares the results with the new weights to the previous results using the old weights. Based on the fact that the old weights did not specifically model the individual likelihood of panel eligibility, panel selection, or attrition, some differences were expected in substance use estimates when the new weights were utilized. Specifically, the following differences were hypothesized prior to weight comparisons:

(1) Prevalence estimates among adults (ages 35 and older) were likely to be higher across substances when using the new weights due to explicitly modeling attrition.

(2) Estimates using new weights for substance use behaviors that were not included in the process of calculating the old substance-specific post-stratification weights would be different (although the direction of such differences was hard to anticipate). Such

substance use types included vaping behaviors, binge and high-intensity drinking, and tobacco use other than cigarettes.

(3) Estimates for some of the specific other illicit drugs would be higher when using the new weights, because many covariates that were associated with higher odds of using other illicit substances (e.g., LSD, heroin) at 12th grade also were associated with the odds of panel eligibility and attrition (Patrick, Terry-McElrath, et al., 2022).

Part 2

Comparison Approach and Summary

Methods

The purpose of this report is to provide individual and overall estimate differences using the old and new weighting approaches for the substances and subgroups covered in the Monitoring the Future Panel Study annual report: National data on substance use among adults ages 19 to 60, 1976–2021 (Patrick, Schulenberg, et al., 2022), which was organized as follows:

Chapter 1: Monitoring the Future Panel Study Design

Chapter 2: Young Adult Substance Use Prevalence and Trends

Chapter 3: Adult Substance Use Prevalence and Trends

Chapter 4: College and Noncollege Young Adult Substance use

Chapter 5: Demographic Subgroup Differences

Material presented in the panel annual report is of two general types: prevalence point estimates and historical trend significance estimates.

Point Estimate Comparisons

Prevalence point estimates are shown in both original tables and figures in Patrick, Schulenberg, et al. (2022). Some original tables and figures present point estimates for the same substance but use different age groupings. For

example, in Patrick, Schulenberg, et al. (2022), both Original[1] Figure 1 and Original Table 3 present data on past 12-month marijuana prevalence. Original Figure 1 does so using two historical trend lines (one for young adults ages 19–30 combined, and one for adults ages 35–50 combined). Original Table 3 does so for more detailed age groups (18, 19–20, 21–22, 23–24, 25–26, 27–28, 29–30, 35, 40, 45, 50, 55, 60). Evaluation of point estimates for each original table/figure focused on answering the following key questions:

- Did use of the new weights change overall mean prevalence by at least |5%|?
- If a |5%| or greater mean change was observed, were the estimates using the new weights higher or lower than previously observed?
- How consistent were the effects of using the new weights for each substance over time? Specifically, was there evidence of (a) inconsistent direction of change over time, or (b) only a limited number of point estimates influencing observed mean change?

To answer the above questions, the following steps were taken:

- Step 1: For each point estimate (p_i) per selected table/figure, the percent change (PC_{pi}) was calculated as follows:

$$\frac{p_{i(New\ weight)} - p_{i(Old\ weight)}}{p_{i(Old\ weight)}} \times 100 = PC_{pi}$$

such that the resulting value indicated the percent change observed between the point estimate using the new weight versus the point estimate using the old weight.

- Step 2: The mean of all PC_{pi} values was calculated.

[1]"Original" refers to the relevant table/figure as published in Patrick, Schulenberg, et al., 2022.

- Step 3: The total number of PC_{pi} values with values of |5%| or greater was summed, and the percent of total PC_p values of |5%| or greater ($\%PC_{p|5|}$) was calculated.
- Step 4: Evidence for inconsistent change and/or outlier effects was examined:
    - Inconsistent change was indicated if mean PC_p was less than |5%| and $\%PC_{p|5|}$ was greater than 50%, i.e., the overall mean change was less than |5%|, but more than half of the individual estimates were |5%| or greater, indicating that both positive and negative percent changes had occurred which, combined, resulted in little overall change.
    - Outlier effects were indicated if mean PC_p was |5%| or greater and $\%PC_{p|5|}$ was less than 30%, i.e., the overall mean change was |5%| or greater, but less than 30% of the individual point estimates were |5%| or greater, indicating that relatively few individual point estimates were causing a notable overall change.

For example, assume three hypothetical tables each provided year-specific point estimates for substance use for a number of years. For the first hypothetical table, mean PC_p = -6.4%, indicating that use of the new weights resulted in overall prevalence estimates being 6.4% lower than when the old weights were used. Also in the first hypothetical table, $\%PC_{p|5|}$ = 80%, indicating that 80% of point estimate comparisons had a PC_p value equal to or greater than |5%|; thus, differences in point estimate values were observed across most points without evidence of strong outliers. In contrast, for the second hypothetical table, mean PC_p = 10.9% and $\%PC_{p|5|}$ = 25%. Here, use of the new weights resulted in overall prevalence estimates being 10.9% higher than when the old weights were used, but only 25% of point estimates had a PC_p value equal to or greater than |5%|, indicating an outlier effect (i.e., the noticeable differences in estimates between old and new weights were limited to only a few point estimates). Finally, consider the

third hypothetical table: mean PC_p = 1.4% and $\%PC_{p|5|}$ = 65%. Here, use of the new weights resulted in little overall change; however, 65% of point estimates had a PC_p value equal to or greater than |5%|, indicating that in order to have the overall mean be lower than |5%|, inconsistent direction of change over time must have occurred (i.e., some PC_p were positive while others were negative).

Trend Comparisons

In Patrick, Schulenberg, et al. (2022), information on historical trend significance was presented only via original figure text boxes. For example, on Patrick, Schulenberg, et al. (2022) Original Figure 4 (referenced earlier), results for past 1-year, 5-year, and 10-year trend estimates are shown separately for both young adults and adults in the upper left text box. Comparison of trend differences based on new and old weights involved identifying (a) if previously significant trends became insignificant using the new weights ($p>.05$), (b) if previously non-significant trends became significant using the new weights ($p<.05$), and (c) if the observed direction of significant trends flipped sign direction (from positive to negative, or vice versa).

Results

OP Table 2 (below) provides a summary of (a) young adult and adult point estimate and trend comparisons across the five main substance use areas included in Patrick, Schulenberg, et al. (2022): marijuana, alcohol, cigarettes and other tobacco, nicotine vaping, less prevalent substances, and (b) young adult 2021 prevalence comparisons across a range of substances by college status and sex. Part 3 of this report provides a detailed summary of each of these areas.

Occasional Paper Table 2. Summary of Point Estimate and Trend Comparisons

	Point Comparisons					Trend Comparisons		
		Mean PC_p[b]		Inconsistent	Outlier		Significance	Sign
	n_{PC}[a]	Lower[c]	Higher[d]	Change[e]	Effects[f]	n_{TC}[g]	change[h]	flip[i]
		%	%	%	%		%	%
Young adults								
Marijuana	37	16.2%	0.0%	5.4%	0.0%	45	6.7%	0.0%
Alcohol	38	5.3%	13.2%	0.0%	0.0%	60	28.3%	0.0%
Cigarettes and other tobacco	25	0.0%	44.0%	0.0%	4.0%	45	15.6%	0.0%
Nicotine vaping	16	50.0%	6.3%	25.0%	0.0%	15	20.0%	0.0%
Less prevalent substances	64	1.6%	21.9%	21.9%	0.0%	80	12.5%	0.0%
2021 substance prevalence by college status and sex	18	66.7%	11.1%	16.7%	0.0%	--	--	--
Adults								
Marijuana	29	6.9%	37.9%	10.3%	0.0%	29	10.3%	0.0%
Alcohol	28	0.0%	28.6%	0.0%	0.0%	30	0.0%	0.0%
Cigarettes	17	0.0%	76.5%	5.9%	0.0%	21	4.8%	0.0%
Nicotine vaping	12	0.0%	100.0%	0.0%	0.0%	11	36.4%	0.0%
Less prevalent substances	49	2.0%	28.6%	24.5%	2.0%	45	2.2%	0.0%

[a] n_{pc} = Number of table/figure point estimate comparisons for noted area.
[b] Mean PC_p = Mean point estimate percent change.
[c] % Lower = Percentage of table/figure point estimate comparisons with mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[d] % Higher = Percentage of table/figure point estimate comparisons with mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[e] % Inconsistent change = Percentage of table/figure comparisons with mean $PC_p < |5\%|$, but $\%PC_{p|5\%|} > 50\%$.
[f] % Outlier effects = Percentage of table/figure comparisons with mean $PC_p > |5\%|$, but $\%PC_{p|5\%|} < 30\%$.
[g] n_{tc} = Number of trend comparisons for noted substance group.
[h] % Significance change = Percentage of trend comparisons that exhibited a significance change of either non-significant ($p>.05$) to significant ($p<.05$), or significant ($p<.05$) to non-significant ($p>.05$).
[i] % Sign flip = Percentage of trend comparisons wherein a significant trend flipped sign direction (from either positive to negative, or negative to positive).

Young Adults

Among young adults, point estimate comparisons for 198 tables/figures were made. Of these, comparisons in 29 tables/figures (14.6%) indicated that the use of the new weights resulted in lower means. The areas with the highest percentage of comparisons resulting in lower means with the new weights among young adults were 2021 substance prevalence by college status and sex (66.7% of 18 comparisons), nicotine vaping (50.0% of 16 comparisons), and marijuana (16.2% of 37 comparisons). Higher means

resulting from the use of new weights were observed for 33 tables/figures (16.7%); areas with the highest percentage of comparisons resulting in higher means with the new weights included cigarettes and other tobacco (44.0% of 25 comparisons) and less prevalent substances (21.9% of 64 comparisons). Inconsistent change was indicated for 23 young adult comparison tables/figures (11.6%). The areas with notably higher percentages of inconsistent change were nicotine vaping (25.0% of 16 comparisons), less prevalent substances (21.9% of 64 comparisons), and prevalence by college status and sex (16.7% of 18 comparisons). Outlier effects were observed for only one young adult table/figure (0.5%); the area for this was cigarettes and other tobacco (4.0% of 25 comparisons). A total of 245 trends were compared among young adults. Of these, none indicated a sign flip, but 40 (16.3%) indicated a change in significance. Alcohol had the highest percentage of significance changes (17 of 60 comparisons [28.3%]; six became significant and 11 became non-significant) followed by nicotine vaping (three of 15 comparisons [20.0%]; one became significant and two became non-significant) and cigarettes and other tobacco (seven of 45 comparisons [15.6%]; two became significant and five became non-significant).

Adults

Among adults ages 35 to 50, point estimate comparisons for 135 tables/figures were made. Of these, only three (2.2%) indicated the new weights resulted in lower means. The area with the highest percentage of comparisons resulting in lower means with the new weights was marijuana use (6.9% of 29 table/figure comparisons). In contrast, 58 (43.0%) of adult table/figure comparisons indicated higher means with the new weights. All of the substance areas examined for adults had at least 25% of comparisons resulting in higher means. In descending order, percentage of higher means was 100.0% for nicotine vaping (12 comparisons), 76.5% for cigarettes (17 comparisons), 37.9% for marijuana (29 comparisons), 28.6% for alcohol (28 comparisons), and 28.6% for less prevalent substances (49 comparisons). Inconsistent change was indicated for 16 adult table/figure comparisons

(11.9%). The areas with the highest percentage of inconsistent change were less prevalent substances (24.5% of 49 comparisons), marijuana (10.3% of 29 comparisons), and cigarettes (5.9% of 17 comparisons). The only area to indicate outlier effects among adults was within less prevalent substances (2.0% of 49 comparisons). Of the 136 historical trend comparisons among adults, none indicated sign flip, and only nine (6.6%) indicated a significance change. The area with the highest percentage of significance changes was nicotine vaping (4 of 11 comparisons [36.4%], all of which became significant); followed by marijuana (3 of 29 comparisons [10.3%], all of which became non-significant).

Summary

In general, the evaluation confirmed all hypotheses. First, prevalence estimates among adults (ages 35 and up) were more likely to be higher across substances when using the new weights; this was observed for 43.0% of all adult point estimate comparisons. Second, for both young adults and adults, results indicated a substantial degree of difference between old and new weights for types of substance use that were not included in calculating the prior substance-specific post-stratification weights. For example, among young adults, use of the new weights tended to result in lower estimates for both marijuana vaping and nicotine vaping; among adults, estimates for both marijuana vaping and nicotine vaping were higher (these areas were also likely to evidence higher rates of historical trend change). Finally, it had been anticipated that estimates for at least some individual less prevalent substances (e.g., LSD, heroin) would be higher when using the new weights for both young adults and adults. Results confirmed this, with the less prevalence substances area having one of the higher percentages of comparisons resulting in higher means with the new weights for both age groups.

References

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Part 3

Differences Observed Between Old and New Weighting Approaches, by Substance

This section presents weight comparison results by age group (young adults and adults) for the five main substance types: marijuana, alcohol, cigarettes and other tobacco, nicotine vaping, and less prevalent substances. In addition, for young adults, comparison results are provided for 2021 substance prevalence by college status and sex.

OP table 3 (below) provides an example of the format used to report results. In OP table 3, results for three hypothetical tables (A, B, and C) and one figure (F) are presented. For the first hypothetical table (A), a mean PC_p of -5.0% or lower was observed indicating lower mean prevalence with new weights, with no evidence of inconsistent change or outlier effects; no historical trend comparisons were applicable (N/A). For the second hypothetical table (B), a mean PC_p of 5.0% or greater was observed indicating higher mean prevalence with new weights, along with evidence of outlier effects; no historical trend comparisons were applicable. For the third hypothetical table (C), mean PC_p was not |5%| or greater, but there was evidence of inconsistent change over the estimates; again, no historical trends were applicable. For the hypothetical figure (F), no mean PC_p of |5.0%| or greater or evidence of outlier effects were observed; when comparing historical trends, the “1-yr now NS (3)”, indicates that the 1-year trend was not significant ($p>.05$) using the new weights but had been significant ($p<.05$) using the old weights. The parenthetical “(3)” indicates three trends were examined. As only one trend (1-year) was specified as

having changed, the remaining two trends were substantively unchanged when comparing results using new and old weights.

Occasional Paper Table 3. Summary of Weight Comparisons for Hypothetical Tables and Figures

Hypothetical Table/ Figure	Point Estimate Comparisons				Trend Comparisons
	Mean PC_p		Inconsistent Change	Outlier Effects	
	Lower	Higher			
A	1				N/A
B		1		1	N/A
C			1		N/A
F					1-yr now NS (3)

Comparison Table Summary

Marijuana Use

Young adults. Among young adults (OP table 4), six of 37 table/figure point estimate comparisons (16.2%) had lower mean prevalence[1]: adjusted lifetime marijuana use overall; 30-day prevalence among college women; and 30-day vaping prevalence among college and noncollege respondents, and college men and women. No table/figure point estimate comparisons indicated higher mean prevalence.[2] Indications of inconsistent change were found for 2 point estimate comparisons (5.4% of 37): 30-day vaping prevalence overall (for both detailed young adult age groups and young adults combined). Of the 45 historical trend comparisons, none indicated a sign flip, but three (6.7%) indicated change in trend significance. Two 1-year trends moved to significance: 12-month prevalence among White respondents, and 30-day prevalence among noncollege respondents overall. One 10-year trend moved to non-significance: 30-day prevalence among college respondents overall.

[1] "Lower mean prevalence" indicates a mean PC_p value of -5% or greater indicating use of the new weights resulted in lower mean point estimate prevalence than when using the old weights.

[2] "Higher mean prevalence" indicates a mean PC_p value of 5% or greater indicating use of the new weights resulted in higher mean point estimate prevalence than when using the old weights.

Adults. Among adults (OP table 5), two of the 29 table/figure point estimate comparisons (6.9%) had lower mean prevalence: 12-month and 30-day prevalence in the West. Eleven table/figure point estimate comparisons (37.9%) had higher mean prevalence: 12-month prevalence among women and in the Midwest and South; 30-day prevalence overall (for detailed adult age groups) and in the Midwest and South; daily prevalence overall (for both detailed adult age groups and adults combined); 12-month vaping prevalence (adults combined); and 30-day vaping prevalence[3] (both detailed age groups and adults combined). Three table/figure point estimate comparisons (10.3%) indicated inconsistent change: 12-month prevalence among Hispanic respondents, and 30-day prevalence among Black and Hispanic respondents. Of the 29 historical trend comparisons, none indicated a sign flip; three (10.3%) indicated changes in trend significance (all becoming non-significant): 1-year trends in 12-month prevalence overall, and 30-day prevalence overall and in the Midwest.

Alcohol Use

Young adults. Of the 38 table/figure point estimate comparisons made (OP table 6), only two (5.3%) indicated lower mean prevalence: 10+[4] high-intensity drinking overall and 15+[5] high-intensity drinking overall. Five table/figure point estimate comparisons (13.2%) indicated higher mean prevalence: binge drinking among Black and Hispanic respondents and those in the West, and daily prevalence overall (both detailed age groups and young adults combined). No comparisons indicated inconsistent change. Of the 60 historical trend comparisons, none indicated a sign flip, but 17 (28.3%) indicated significance change. The following trends became nonsignificant: (a) 12-month prevalence overall (5- and 10-year trends); (b) 30-day prevalence overall (5- and 10-year trends), in the Midwest (1-year

[3] Estimates for marijuana vaping among adults published in Patrick, Schulenberg, et al. (2022) were affected by an error in coding. Comparisons in this report have been corrected for the coding error.

[4] Estimates for 10+ drinking published in Patrick, Schulenberg, et al. (2022) were affected by an error in coding. Comparisons in this report have been corrected for the coding error.

[5] Estimates for 15+ drinking published in Patrick, Schulenberg, et al. (2022) were affected by an error in coding. Comparisons in this report have been corrected for the coding error.

trend), and among noncollege respondents overall (10-year trend); (c) binge prevalence in the Northeast (1-year trend) and among college students overall (10-year trend); (d) and daily prevalence overall (1-, 5- and 10-year trends). In contrast, the following 1-year trends all became significant: (a) 30-day prevalence among women, college students overall, and college women; (b) binge prevalence in the Midwest and West; and (c) 10+ high-intensity drinking overall.

Adults. Of the 28 table/figure point estimate comparisons made (OP table 7), none indicated lower mean prevalence; eight (28.6%) indicated higher mean prevalence: binge drinking overall (both by detailed age groups and adults combined); among Black, Hispanic, and White respondents; and in the Midwest, Northeast, and South. No evidence of inconsistent change or outlier effects was observed. Of the 30 historical trend comparisons, none indicated a sign flip and no changes in significance were observed.

Cigarette and Other Tobacco Use

Young adults. Of the 25 table/figure point estimate comparisons (OP table 8), none indicated lower mean prevalence; 11 (44.0%) indicated higher mean prevalence: (a) 30-day cigarette prevalence among Black, Hispanic, and White respondents, and in the Midwest and West; (b) daily cigarette prevalence overall (for young adults combined); (c) smoking half a pack of cigarettes or more per day overall (both for detailed age groups and young adults combined); and (d) 12-month prevalence for small cigars, dissolvable tobacco, and snus. No evidence of inconsistent change was observed; one (4.0%) outlier effect was observed: smoking half a pack of cigarettes or more per day overall among young adults combined. Of the 45 historical trend comparisons, none indicated a sign flip but seven (15.6%) indicated significance change. One-year trends became nonsignificant for 12-month prevalence overall, 30-day prevalence among women and noncollege respondents overall, and 12-month use of small cigars and dissolvable tobacco. One-year trends became significant for 30-day cigarette use among White respondents and college respondents overall.

Adults. Of the 17 table/figure point estimate comparisons (OP table 9), none indicated lower mean prevalence. Thirteen (76.5%) indicated higher mean prevalence for cigarette use: (a) 12-month prevalence overall (both detailed age groups and adults combined); (b) 30-day prevalence overall (both detailed age groups and adults combined), among men, Hispanic and White respondents, and in the Midwest, South, and West; (c) daily prevalence overall (both detailed age groups and adults combined); and (d) smoking half a pack or more per day (adults combined). One comparison (5.9%) indicated inconsistent change: 30-day prevalence among Black respondents. Of the 21 historical trend comparisons, none indicated a sign flip and one (4.8%) significance change was observed (the 1-year trend for 12-month prevalence overall for adults combined became significant).

Nicotine Vaping

Young adults. Of the 16 table/figure point estimate comparisons (OP table 10), eight (50.0%) indicated lower mean prevalence: 30-day prevalence among men and women, Black respondents, the Northeast, college students and noncollege respondents overall, and college men and women. Higher mean prevalence was indicated for one (6.3%) comparison: 30-day prevalence among Hispanic respondents. Inconsistent change was indicated for four (25.0%) comparisons: 30-day prevalence overall (both detailed age groups and young adults combined), among White respondents, and in the West. Of the 15 historical trend comparisons, none indicated a sign flip; three (20.0%) indicated significance changes: 1-year trends for 30-day prevalence among women and in the Northeast became nonsignificant. One-year trends for 30-day prevalence among noncollege respondents overall became significant.

Adults. Of the 12 table/figure point estimate comparisons (OP table 11), none indicated lower mean prevalence. All 12 (100.0%) comparisons indicated higher mean prevalence.[6] Of the 11 historical trend comparisons,

[6] Estimates for nicotine vaping among adults published in Patrick, Schulenberg et al. (2022) were affected by an error in coding. Comparisons in this report have been corrected for the coding error.

none indicated a sign flip and four (36.4%) indicated significance change: 1-year trends for 30-day prevalence among men and women, and in the Midwest and South became significant.

Less Prevalent Substances

Young adults. Of the 64 table/figure point estimate comparisons (OP table 12), only one (1.6%) indicated lower mean prevalence: 30-day prevalence of combined less prevalent substances among noncollege respondents overall. Higher mean prevalence was indicated for 14 (21.9%) comparisons: (a) 30-day prevalence of combined less prevalent substances among Hispanic respondents; (b) 2021 adjusted and unadjusted lifetime prevalence of heroin, narcotics other than heroin, and sedatives; (c) 12-month prevalence (young adults combined) of heroin, OxyContin, cocaine, Adderall, and methamphetamine; and (d) 12-month prevalence (detailed age groups) of heroin and cocaine. Inconsistent change was indicated for 14 (21.9%) comparisons: (a) 30-day prevalence of combined less prevalent substances among Black respondents and in the Midwest; (b) 2021 adjusted and unadjusted lifetime prevalence of tranquilizers, amphetamines, and cocaine; (c) 12-month prevalence (young adults combined) of LSD, other hallucinogens, MDMA, sedatives, and Ritalin; and (d) 12-month prevalence (detailed age groups) of MDMA. Of the 80 historical trend comparisons, none indicated a sign flip; ten (12.5%) indicated significance change (all moving to nonsignificant). Trends that became nonsignificant included 30-day prevalence of combined less prevalence substances in the Northeast (1-year trend); 12-month prevalence for heroin (10-year trend), narcotics other than heroin (1-year trend), sedatives (1-year trend), amphetamines (1-year trend), cocaine (1- and 10-year trends), Adderall (1- and 5-year trends), and methamphetamine (1-year trend).

Adults. Of the 49 table/figure point estimate comparisons (OP table 13), one (2.0%) indicated lower mean prevalence: 12-month prevalence of combined lower prevalence substances in the West. Higher mean prevalence was indicated for 14 (28.6%) comparisons: (a) 30-day prevalence of combined

lower prevalence substances among Hispanic and White respondents, and in the Midwest; (b) 2021 adjusted and unadjusted lifetime heroin prevalence; (c) 12-month prevalence (adults combined) of heroin, narcotics other than heroin, sedatives, amphetamines, and cocaine; and 12-month prevalence (detailed age groups) of hallucinogens, heroin, amphetamines, and cocaine. Inconsistent change was indicated for 12 (24.5%) comparisons: (a) 12-month prevalence of combined lower prevalence substances among Hispanic and White respondents; (b) 30-day prevalence of combined lower prevalence substances overall (adults combined), among men and women, Black respondents, and in the Northeast and West; (c) 12-month prevalence (adults combined) of hallucinogens; and (d) 12-month prevalence (detailed age groups) of narcotics other than heroin, sedatives, and tranquilizers. Outlier effects were indicated for one (2.0%) comparison: 12-month prevalence of narcotics other than heroin (adults combined). Of the 45 historical trend comparisons, only one (2.2%) indicated a significance change: 10-year trends in 12-month sedative prevalence became nonsignificant.

2021 Prevalence by College Status and Sex (Young Adults Only)

The 2021 substance prevalence by college status and sex comparisons (summarized in OP table 14) focused on data across different substances among six subgroups: full-time college overall, college men, college women, noncollege overall, noncollege men, and noncollege women. Past 12-month prevalence estimates were listed for 26 substances,[7] past 30-day prevalence estimates were listed for 19 substances, and daily prevalence estimates were listed for six substances. Eighteen point estimate comparisons (3 prevalence levels × 6 subgroups) were made. Of these, 12 (66.7%) indicated lower mean prevalence: (a) 12-month prevalence among college and noncollege respondents overall, as well as noncollege men and women; (b) 30-day prevalence among college and noncollege respondents overall, college men and women, and noncollege men and women; and (c) daily

[7] Not all subgroups had estimates presented due to 2021 prevalence rates of less than 0.05%.

prevalence among noncollege respondents overall and among noncollege women. Higher mean prevalence was indicated for two (11.1%) comparisons: daily prevalence among college men and women. Inconsistent change was indicated for three (16.7%) comparisons: (a) 12-month prevalence among college men and women; and (b) daily prevalence among college respondents overall. Historical trends were not presented.

Comparison Tables

Occasional Paper Table 4. Young Adults: Marijuana Use

Table/ Figure	Outcome: Marijuana	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a]		Inconsistent	Outlier	
			Lower[b]	Higher[c]	Change[d]	Effects[e]	
Marijuana							
F39	**2021 Lifetime**, adjusted	Overall	1				N/A
F39	2021 Lifetime, unadjusted	Overall					N/A
F1[f]	**12-month prevalence**	Overall					No substantive change (3)
T3[g]	12-month	Overall					N/A
F62	12-month	Men					No substantive change (1)
F62	12-month	Women					No substantive change (1)
F64	12-month	Black					No substantive change (1)
F64	12-month	Hispanic					No substantive change (1)
F64	12-month	White					1-yr now sig (1)
F63	12-month	MW					No substantive change (1)
F63	12-month	NE					No substantive change (1)
F63	12-month	S					No substantive change (1)
F63	12-month	W					No substantive change (1)
F2[f]	**30-day prevalence**	Overall					No substantive change (3)
T4[g]	30-day	Overall					N/A
F68	30-day	Men					No substantive change (1)
F68	30-day	Women					No substantive change (1)
F70	30-day	Black					No substantive change (1)
F70	30-day	Hispanic					No substantive change (1)
F70	30-day	White					No substantive change (1)
F69	30-day	MW					No substantive change (1)
F69	30-day	NE					No substantive change (1)
F69	30-day	S					No substantive change (1)
F69	30-day	W					No substantive change (1)
F48	30-day by college	College					10-yr now NS (3)

F48	30-day by college	Noncollege				1-yr now sig (3)
F49	30-day full-time college by sex	Men				No substantive change (3)
F49	30-day full-time college by sex	Women	1			No substantive change (3)
F3[f]	**Daily prevalence**	Overall				No substantive change (3)
T5[g]	Daily	Overall				N/A
Vaping marijuana						
F4[f]	**12-month prevalence**	Overall				No substantive change (1)
F5[f]	**30-day prevalence**	Overall			1	No substantive change (1)
T6[g]	30-day	Overall			1	NA
F50	30-day by college	College	1			No substantive change (3)
F50	30-day by college	Noncollege	1			No substantive change (3)
F51	30-day full-time college by sex	Men	1			No substantive change (3)
F51	30-day full-time college by sex	Women	1			No substantive change (3)

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all young adult ages combined.
[g] Point estimates presented for detailed young adult age groups.

Occasional Paper Table 5. Adults: Marijuana Use

Table/ Figure	Outcome: Marijuana	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a]		Inconsistent	Outlier	
			Lower[b]	Higher[c]	Change[d]	Effects[e]	
Marijuana							
F39	**2021 Lifetime**, adjusted	Overall					N/A
F39	2021 Lifetime, unadjusted	Overall					N/A
F1[f]	**12-month prevalence**	Overall					1-yr now NS (3)
T3[g]	12-month	Overall					N/A
F65	12-month	Men					No substantive change (1)
F65	12-month	Women		1			No substantive change (1)
F67	12-month	Black					No substantive change (1)
F67	12-month	Hispanic			1		No substantive change (1)
F67	12-month	White					No substantive change (1)
F66	12-month	MW		1			No substantive change (1)
F66	12-month	NE					No substantive change (1)
F66	12-month	S		1			No substantive change (1)
F66	12-month	W	1				No substantive change (1)
F2[f]	**30-day prevalence**	Overall					1-yr now NS (3)
T4[g]	30-day	Overall		1			N/A
F71	30-day	Men					No substantive change (1)
F71	30-day	Women					No substantive change (1)
F73	30-day	Black			1		No substantive change (1)
F73	30-day	Hispanic			1		No substantive change (1)
F73	30-day	White					No substantive change (1)
F72	30-day	MW		1			1-yr now NS (1)
F72	30-day	NE					No substantive change (1)
F72	30-day	S		1			No substantive change (1)
F72	30-day	W	1				No substantive change (1)
F3[f]	**Daily prevalence**	Overall		1			No substantive change (3)
T5[g]	Daily	Overall		1			N/A

Marijuana vaping

F4[f]	**12-month prevalence**	Overall	1	No substantive change (1)
F5[f]	**30-day prevalence**	Overall	1	No substantive change (1)
T6[g]	30-day	Overall	1	N/A

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all adult ages combined.
[g] Point estimates presented for detailed adult age groups.

Occasional Paper Table 6. Young Adults: Alcohol Use

Table/ Figure	Outcome: Alcohol	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a] Lower[b]	Mean PC_p[a] Higher[c]	Inconsistent Change[d]	Outlier Effects[e]	
F40	**2021 Lifetime**, adjusted	Overall					N/A
F40	2021 Lifetime, unadjusted	Overall					N/A
F6[f]	**12-month prevalence**	Overall					5-yr and 10-yr now NS (3)
T7[g]	12-month	Overall					N/A
F7[f]	**30-day prevalence**	Overall					5-yr and 10-yr now NS (3)
T8[g]	30-day	Overall					N/A
F74	30-day	Men					No substantive change (1)
F74	30-day	Women					1-yr now sig (1)
F76	30-day	Black					No substantive change (1)
F76	30-day	Hispanic					No substantive change (1)
F76	30-day	White					No substantive change (1)
F75	30-day	MW					1-yr now NS (1)
F75	30-day	NE					No substantive change (1)
F75	30-day	S					No substantive change (1)
F75	30-day	W					No substantive change (1)
F52	30-day by college	College					1-yr now sig (3)
F52	30-day by college	Noncollege					10-yr now NS (3)
F53	30-day full-time college by sex	Men					No substantive change (3)
F53	30-day full-time college by sex	Women					1-yr now sig (3)
F9[f]	**Binge**[h]	Overall					No substantive change (3)
T10[g]	Binge	Overall					N/A
F80	Binge	Men					No substantive change (1)
F80	Binge	Women					No substantive change (1)
F82	Binge	Black		1			No substantive change (1)
F82	Binge	Hispanic		1			No substantive change (1)
F82	Binge	White					No substantive change (1)
F81	Binge	MW					1-yr now sig (1)
F81	Binge	NE					1-yr now NS (1)

F81	Binge	S			No substantive change (1)
F81	Binge	W		1	1-yr now sig (1)
F54	Binge by college	College			10-yr now NS (3)
F54	Binge by college	Noncollege			No substantive change (3)
F55	Binge full-time college by sex	Men			No substantive change (3)
F55	Binge full-time college by sex	Women			No substantive change (3)
F8[f]	**Daily prevalence**	Overall		1	1-yr, 5-yr, 10-yr now NS (3)
T9[g]	Daily	Overall		1	N/A
F10[f]	**HID 10+[i]**	Overall	1		1-yr now sig (3)
F11[f]	**HID 15+[j]**	Overall	1		No substantive change (3)

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all young adult ages combined.
[g] Point estimates presented for detailed young adult age groups.
[h] Binge drinking = 5 or more drinks per occasion.
[i] HID 10+ = 10 or more drinks per occasion. Estimates for 10+ drinking published in Patrick, Schulenberg et al. (2022) were affected by an error in coding. Comparisons in this report have been corrected for the coding error.
[j] HID 15+ = 15 or more drinks per occasion. Estimates for 15+ drinking published in Patrick, Schulenberg et al. (2022) were affected by an error in coding. Comparisons in this report have been corrected for the coding error.

Occasional Paper Table 7. Adults: Alcohol Use

Table/ Figure	Outcome: Alcohol	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a] Lower[a]	Mean PC_p[a] Higher[c]	Inconsistent Change[d]	Outlier Effects[e]	
F40	**2021 Lifetime**, adjusted	Overall					N/A
F40	2021 Lifetime, unadjusted	Overall					N/A
F6[f]	**12-month prevalence**	Overall					No substantive change (3)
T7[g]	12-month	Overall					N/A
F7[f]	**30-day prevalence**	Overall					No substantive change (3)
T8[g]	30-day	Overall					N/A
F77	30-day	Men					No substantive change (1)
F77	30-day	Women					No substantive change (1)
F79	30-day	Black					No substantive change (1)
F79	30-day	Hispanic					No substantive change (1)
F79	30-day	White					No substantive change (1)
F78	30-day	MW					No substantive change (1)
F78	30-day	NE					No substantive change (1)
F78	30-day	S					No substantive change (1)
F78	30-day	W					No substantive change (1)
F9[f]	**Binge**[h]	Overall		1			No substantive change (3)
T10[g]	Binge	Overall		1			N/A
F83	Binge	Men					No substantive change (1)
F83	Binge	Women					No substantive change (1)
F85	Binge	Black		1			No substantive change (1)
F85	Binge	Hispanic		1			No substantive change (1)
F85	Binge	White		1			No substantive change (1)
F84	Binge	MW		1			No substantive change (1)
F84	Binge	NE		1			No substantive change (1)
F84	Binge	S		1			No substantive change (1)
F84	Binge	W					No substantive change (1)
F8[f]	**Daily prevalence**	Overall					No substantive change (3)
T9[g]	Daily	Overall					N/A

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all adult ages combined.
[g] Point estimates presented for detailed adult age groups.
[h] Binge drinking = 5 or more drinks per occasion.

Occasional Paper Table 8. Young Adults: Cigarette and Other Tobacco Use

Table/ Figure	Outcome: Cigarettes and other tobacco	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a]		Inconsistent	Outlier	
			Lower[b]	Higher[c]	Change[d]	Effects[e]	
Cigarettes							
F12[f]	**12-month prevalence**	Overall					1-yr now NS
T11[g]	12-month	Overall					N/A
F13[f]	**30-day prevalence**	Overall					No substantive change (3)
T12[g]	30-day	Overall					N/A
F86	30-day	Men					No substantive change (1)
F86	30-day	Women					1-yr now NS (1)
F88	30-day	Black		1			No substantive change (1)
F88	30-day	Hispanic		1			No substantive change (1)
F88	30-day	White		1			1-yr now sig (1)
F87	30-day	MW		1			No substantive change (1)
F87	30-day	NE					No substantive change (1)
F87	30-day	S					No substantive change (1)
F87	30-day	W		1			No substantive change (1)
F56	30-day by college	College					1-yr now sig (3)
F56	30-day by college	Noncollege					1-yr now NS (3)
F57	30-day full-time college by sex	Men					No substantive change (3)
F57	30-day full-time college by sex	Women					No substantive change (3)
F14[f]	**Daily prevalence**	Overall		1			No substantive change (3)
T13[g]	Daily	Overall					N/A
F15[f]	**Half-pack or more per day**	Overall		1		1	No substantive change (3)
T14[g]	Half-pack+	Overall		1			N/A
Other tobacco							
F35[f]	**12-month small cigars**	Overall		1			1-yr now NS (3)
F36[f]	**12-month hookah**	Overall					No substantive change (3)
F37[f]	**12-month dissolvable tobacco**	Overall		1			1-yr now NS (3)
F38[f]	**12-month snus**	Overall		1			No substantive change (3)

[a] Mean PC_p = Mean point estimate percent change.

[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all young adult ages combined.
[g] Point estimates presented for detailed young adult age groups.

Occasional Paper Table 9. Adults: Cigarette Use

Table/ Figure	Outcome: Cigarettes	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a]		Inconsistent Change[d]	Outlier Effects[e]	
			Lower[b]	Higher[c]			
F12[f]	**12-month prevalence**	Overall		1			1-yr now sig (3)
T11[g]	12-month	Overall		1			N/A
F13[f]	**30-day prevalence**	Overall		1			No substantive change (3)
T12[g]	30-day	Overall		1			N/A
F89	30-day	Men		1			No substantive change (1)
F89	30-day	Women					No substantive change (1)
F91	30-day	Black			1		No substantive change (1)
F91	30-day	Hispanic		1			No substantive change (1)
F91	30-day	White		1			No substantive change (1)
F90	30-day	MW		1			No substantive change (1)
F90	30-day	NE					No substantive change (1)
F90	30-day	S		1			No substantive change (1)
F90	30-day	W		1			No substantive change (1)
F14[f]	**Daily prevalence**	Overall		1			No substantive change (3)
T13[g]	Daily	Overall		1			N/A
F15[f]	**Half-pack or more per day**	Overall		1			No substantive change (3)
T14[g]	Half-pack+	Overall					N/A

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all adult ages combined.
[g] Point estimates presented for detailed adult age groups.

Occasional Paper Table 10. Young Adults: Nicotine Vaping

Table/ Figure	Outcome: Nicotine vaping	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a]		Inconsistent	Outlier	
			Lower[b]	Higher[c]	Change[d]	Effects[e]	
F16[f]	**12-month prevalence**	Overall					No substantive change (1)
F17[f]	**30-day prevalence**	Overall			1		No substantive change (1)
T15[g]	30-day	Overall			1		N/A
F92	30-day	Men	1				No substantive change (1)
F92	30-day	Women	1				1-yr now NS (1)
F94	30-day	Black	1				No substantive change (1)
F94	30-day	Hispanic		1			No substantive change (1)
F94	30-day	White			1		No substantive change (1)
F93	30-day	MW					No substantive change (1)
F93	30-day	NE	1				1-yr now NS (1)
F93	30-day	S					No substantive change (1)
F93	30-day	W			1		No substantive change (1)
F58	30-day by college	College	1				No substantive change (1)
F58	30-day by college	Noncollege	1				1-yr now sig (1)
F59	30-day full-time college by sex	Men	1				No substantive change (1)
F59	30-day full-time college by sex	Women	1				No substantive change (1)

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all young adult ages combined.
[g] Point estimates presented for detailed young adult age groups.

Occasional Paper Table 11. Adults: Nicotine Vaping

Table/ Figure	Outcome: Nicotine vaping	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a]		Inconsistent Change[d]	Outlier Effects[e]	
			Lower[b]	Higher[c]			
F16[f]	**12-month prevalence**	Overall		1			No substantive change (1)
F17[f]	**30-day prevalence**	Overall		1			No substantive change (1)
T15[g]	30-day	Overall		1			N/A
F95	30-day	Men		1			1-yr now sig (1)
F95	30-day	Women		1			1-yr now sig (1)
F97	30-day	Black		1			No substantive change (1)
F97	30-day	Hispanic		1			No substantive change (1)
F97	30-day	White		1			No substantive change (1)
F96	30-day	MW		1			1-yr now sig (1)
F96	30-day	NE		1			No substantive change (1)
F96	30-day	S		1			1-yr now sig (1)
F96	30-day	W		1			No substantive change (1)

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all adult ages combined.
[g] Point estimates presented for detailed adult age groups.

Occasional Paper Table 12. Young Adults: Less Prevalent Substances

Table/ Figure	Outcome: Less Prevalent substances	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a] Lower[b]	Mean PC_p[a] Higher[c]	Inconsistent Change[d]	Outlier Effects[e]	
Combined less prevalent substances							
F41	**2021 Lifetime**, adjusted	Overall					N/A
F41	2021 Lifetime, unadjusted	Overall					N/A
F18[f]	**12-month prevalence**	Overall					No substantive change (3)
T16[g]	12-month	Overall					N/A
F98	12-month	Men					No substantive change (1)
F98	12-month	Women					No substantive change (1)
F100	12-month	Black					No substantive change (1)
F100	12-month	Hispanic					No substantive change (1)
F100	12-month	White					No substantive change (1)
F99	12-month	MW					No substantive change (1)
F99	12-month	NE					No substantive change (1)
F99	12-month	S					No substantive change (1)
F99	12-month	W					No substantive change (1)
F19[f]	**30-day prevalence**	Overall					No substantive change (3)
F104	30-day	Men					No substantive change (1)
F104	30-day	Women					No substantive change (1)
F106	30-day	Black			1		No substantive change (1)
F106	30-day	Hispanic		1			No substantive change (1)
F106	30-day	White					No substantive change (1)
F105	30-day	MW			1		No substantive change (1)
F105	30-day	NE					1-yr now NS (1)
F105	30-day	S					No substantive change (1)
F105	30-day	W					No substantive change (1)
F60	30-day by college	College					No substantive change (3)
F60	30-day by college	Noncollege	1				No substantive change (3)
F61	30-day full-time college by sex	Men					No substantive change (3)
F61	30-day full-time college by sex	Women					No substantive change (3)

Individual less prevalence substances					
	Hallucinogens (combined)				
F20[f]	12-month prevalence	Overall			No substantive change (3)
T17[g]	12-month	Overall			N/A
	LSD				
F21[f]	12-month prevalence	Overall		1	No substantive change (3)
T18[g]	12-month	Overall			N/A
	Other hallucinogens				
F22[f]	12-month prevalence	Overall		1	No substantive change (3)
T19[g]	12-month	Overall			N/A
	MDMA				
F23[f]	12-month prevalence	Overall		1	No substantive change (2)
T20[g]	12-month	Overall		1	N/A
	Heroin				
F42	2021 Lifetime, adjusted	Overall	1		N/A
F42	2021 Lifetime, unadjusted	Overall	1		N/A
F24[f]	12-month prevalence	Overall	1		10-yr now NS (3)
T21[g]	12-month	Overall	1		N/A
	Narcotics other than heroin				
F43	2021 Lifetime, adjusted	Overall	1		N/A
F43	2021 Lifetime, unadjusted	Overall	1		N/A
F25[f]	12-month prevalence	Overall			1-yr now NS (3)
T22[g]	12-month	Overall			N/A
F26[f]	**12-month OxyContin**	Overall	1		No substantive change (3)
F27[f]	**12-month Vicodin**	Overall			No substantive change (3)
	Sedatives				
F44	2021 Lifetime, adjusted	Overall	1		N/A
F44	2021 Lifetime, unadjusted	Overall	1		N/A
F28[f]	12-month prevalence	Overall		1	1-yr now NS (3)
T23[g]	12-month	Overall			N/A
	Tranquilizers				
F45	2021 Lifetime, adjusted	Overall		1	N/A

F45	2021 Lifetime, unadjusted	Overall		1	N/A
F29[f]	12-month prevalence	Overall			No substantive change (3)
T24[g]	12-month	Overall			N/A
	Amphetamines				
F46	2021 Lifetime, adjusted	Overall		1	N/A
F46	2021 Lifetime, unadjusted	Overall		1	N/A
F30[f]	12-month prevalence	Overall			1-yr now NS (3)
T25[g]	12-month	Overall			N/A
	Cocaine				
F47	2021 Lifetime, adjusted	Overall		1	N/A
F47	2021 Lifetime, unadjusted	Overall		1	N/A
F33[f]	12-month prevalence	Overall	1		1-yr and 10-yr now NS (3)
T26[g]	12-month	Overall	1		N/A
F31[f]	**12-month Adderall**	Overall	1		1-yr and 5-yr now NS (3)
F32[f]	**12-month Ritalin**	Overall		1	No substantive change (3)
F34[f]	**12-month methamphetamine**	Overall	1		1-yr now NS (3)

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all young adult ages combined.
[g] Point estimates presented for detailed young adult age groups.

Occasional Paper Table 13. Adults: Less Prevalent Substances

Table/ Figure	Outcome: Combined less prevalent substances	Subgroup	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a]		Inconsistent Change[d]	Outlier Effects[e]	
			Lower[b]	Higher[c]			
Combined less prevalent substances							
F41	**2021 Lifetime**, adjusted	Overall					N/A
F41	2021 Lifetime, unadjusted	Overall					N/A
F18[f]	**12-month prevalence**	Overall					No substantive change (3)
T16[g]	12-month	Overall					N/A
F101	12-month	Men					No substantive change (1)
F101	12-month	Women					No substantive change (1)
F103	12-month	Black					No substantive change (1)
F103	12-month	Hispanic			1		No substantive change (1)
F103	12-month	White			1		No substantive change (1)
F102	12-month	MW					No substantive change (1)
F102	12-month	NE					No substantive change (1)
F102	12-month	S					No substantive change (1)
F102	12-month	W	1				No substantive change (1)
F19[f]	**30-day prevalence**	Overall			1		No substantive change (3)
F107	30-day	Men			1		No substantive change (1)
F107	30-day	Women			1		No substantive change (1)
F109	30-day	Black			1		No substantive change (1)
F109	30-day	Hispanic		1			No substantive change (1)
F109	30-day	White		1			No substantive change (1)
F108	30-day	MW		1			No substantive change (1)
F108	30-day	NE			1		No substantive change (1)
F108	30-day	S					No substantive change (1)
F108	30-day	W			1		No substantive change (1)
Individual less prevalent substances							
	Hallucinogens (combined)						
F20[f]	12-month prevalence	Overall			1		No substantive change (3)
T17[g]	12-month	Overall		1			N/A

	Heroin					
F42	2021 Lifetime, adjusted	Overall	1			N/A
F42	2021 Lifetime, unadjusted	Overall	1			N/A
F24[f]	12-month prevalence	Overall	1			No substantive change (3)
T21[g]	12-month	Overall	1			N/A
	Narcotics other than heroin					
F43	2021 Lifetime, adjusted	Overall				N/A
F43	2021 Lifetime, unadjusted	Overall				N/A
F25[f]	12-month prevalence	Overall	1		1	No substantive change (3)
T22[g]	12-month	Overall		1		N/A
	Sedatives					
F44	2021 Lifetime, adjusted	Overall				N/A
F44	2021 Lifetime, unadjusted	Overall				N/A
F28[f]	12-month prevalence	Overall	1			10-yr now NS (3)
T23[g]	12-month	Overall		1		N/A
	Tranquilizers					
F45	2021 Lifetime, adjusted	Overall				N/A
F45	2021 Lifetime, unadjusted	Overall				N/A
F29[f]	12-month prevalence	Overall				No substantive change (3)
T24[g]	12-month	Overall		1		N/A
	Amphetamines					
F46	2021 Lifetime, adjusted	Overall				N/A
F46	2021 Lifetime, unadjusted	Overall				N/A
F30[f]	12-month prevalence	Overall	1			No substantive change (3)
T25[g]	12-month	Overall	1			N/A
	Cocaine					
F47	2021 Lifetime, adjusted	Overall				N/A
F47	2021 Lifetime, unadjusted	Overall				N/A
F33[f]	12-month prevalence	Overall	1			No substantive change (3)
T26[g]	12-month	Overall	1			N/A

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|} > 50\%$.

[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.
[f] Point estimates for all adult ages combined.
[g] Point estimates presented for detailed adult age groups.

Occasional Paper Table 14. Young Adults: 2021 Prevalence by College Status and Sex

Table/ Figure	Outcome: 2021 substance prevalence by college status and sex	Sub-group	Point Estimate Comparisons				Trend Comparisons
			Mean PC_p[a]		Inconsistent	Outlier	
			Lower[b]	Higher[c]	Change[d]	Effects[e]	
T27	**12-month, by college**	College	1				N/A
T27	12-month, by college	Noncollege	1				N/A
T27	**12-month, by sex and college**	Men, college			1		N/A
T27	12-month, by sex and college	Men, noncollege	1				N/A
T27	12-month, by sex and college	Women, college			1		N/A
T27	12-month, by sex and college	Women, noncollege	1				N/A
T28	**30-day, by college**	College	1				N/A
T28	30-day, by college	Noncollege	1				N/A
T28	**30-day, by sex and college**	Men, college	1				N/A
T28	30-day, by sex and college	Men, noncollege	1				N/A
T28	30-day, by sex and college	Women, college	1				N/A
T28	30-day, by sex and college	Women, noncollege	1				N/A
T29	**Daily, by college**	College			1		N/A
T29	Daily, by college	Noncollege	1				N/A
T29	**Daily, by sex and college**	Men, college		1			N/A
T29	Daily, by sex and college	Men, noncollege					N/A
T29	Daily, by sex and college	Women, college		1			N/A
T29	Daily, by sex and college	Women, noncollege	1				N/A

[a] Mean PC_p = Mean point estimate percent change.
[b] Lower = Mean PC_p of -5.0% or lower, indicating mean percent change was lower with new weights.
[c] Higher = Mean PC_p of 5.0% or greater, indicating mean percent change was higher with new weights.
[d] Inconsistent change = Mean PC_p < |5%|, but $\%PC_{p|5\%|}$ > 50%.
[e] Outlier effects = Mean PC_p > |5%|, but $\%PC_{p|5\%|}$ < 30%.

Part 4

Updated Panel Report Figures and Tables

This section of the Occasional Paper contains all tables and figures presented in Patrick, Schulenberg, et al. (2022) updated with the use of the new age-specific panel analysis weights. The material is presented based on the order in which tables and figures were shown in the original Panel Report (Patrick, Schulenberg, et al., 2022) as follows:

Prevalence Trends for Specific Substances: Young Adults and Adults

Adjusted and Unadjusted Prevalence by Age Group, 2021

College and Noncollege Young Adult Substance Use Trends

Demographic Subgroup Trend Differences

Prevalence Trends for Specific Substances: Young Adults and Adults

Updated Tables 3–26

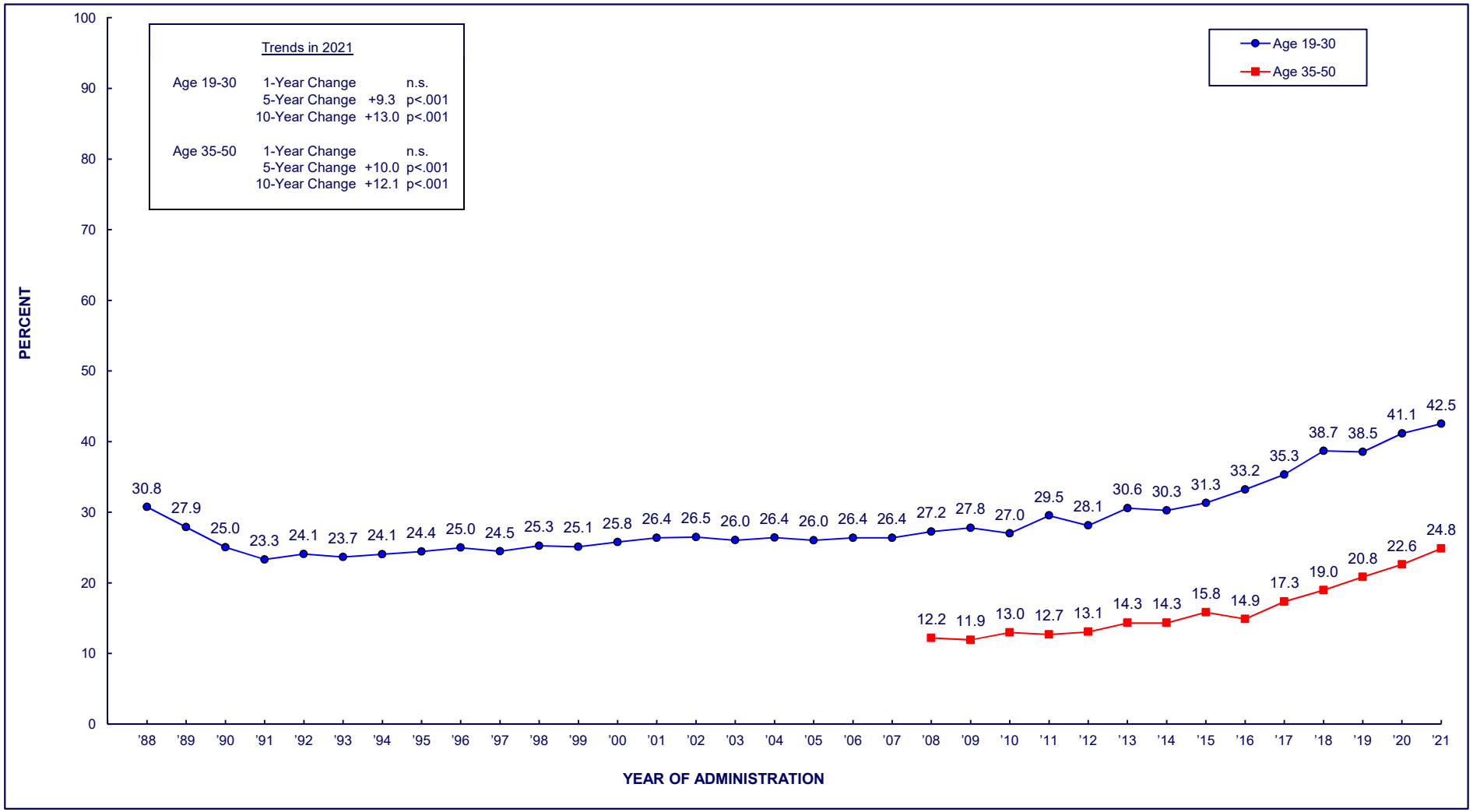
Updated Figures 1–38

UPDATED FIGURE 1

MARIJUANA

Trends in 12-Month Prevalence

among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 3
MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	44.5												
1977	47.6												
1978	50.2	52.5											
1979	50.8	50.8											
1980	48.8	50.5	50.4										
1981	46.1	49.4	50.7										
1982	44.3	46.2	46.3	46.7									
1983	42.3	42.9	45.5	43.6									
1984	40.0	42.4	43.4	38.7	38.6								
1985	40.6	41.9	40.7	41.5	39.7								
1986	38.8	39.6	40.0	38.1	34.2	33.1							
1987	36.3	36.6	37.8	34.3	34.8	32.3							
1988	33.1	34.6	33.5	32.9	30.7	27.1	25.5						
1989	29.6	30.5	31.6	28.2	26.1	26.4	25.0						
1990	27.0	27.8	27.6	27.0	24.5	23.3	20.4						
1991	23.9	25.3	25.9	23.7	22.8	21.4	21.0						
1992	21.9	27.5	25.8	25.7	23.7	22.1	20.2						
1993	26.0	26.7	25.4	25.7	22.7	22.4	19.4						
1994	30.7	29.6	29.8	24.4	21.6	19.5	20.0	15.4					
1995	34.7	30.9	27.1	25.1	23.4	20.7	19.6	17.3					
1996	35.8	33.3	30.0	27.3	21.3	20.8	17.7	16.1					
1997	38.5	34.5	29.6	24.0	23.5	17.7	18.3	17.5					
1998	37.5	36.7	30.7	25.5	21.7	20.9	16.9	14.7	16.3				
1999	37.8	37.6	30.6	26.7	21.9	18.4	16.5	15.0	14.2				
2000	36.5	35.0	33.1	26.1	23.0	19.3	19.0	15.3	13.7				
2001	37.0	34.1	35.9	28.1	24.3	19.8	17.3	14.7	12.2				
2002	36.2	34.1	31.9	31.6	24.0	19.2	19.8	14.5	14.1				
2003	34.9	34.4	33.3	29.4	23.9	20.7	16.9	13.7	13.3	15.0			
2004	34.3	34.3	31.9	28.0	27.7	22.0	16.4	12.9	15.0	12.3			
2005	33.6	34.0	32.2	26.5	25.9	19.8	18.7	13.5	15.8	11.9			
2006	31.5	33.7	31.3	28.4	22.9	21.9	20.6	11.0	11.6	12.0			
2007	31.7	33.0	31.2	28.0	24.9	23.8	17.6	11.7	12.5	12.7			
2008	32.4	30.7	33.6	27.9	25.1	22.9	23.2	14.3	11.6	11.0	12.1		
2009	32.8	32.1	32.3	30.2	25.9	23.8	22.3	12.3	12.4	12.7	10.2		
2010	34.8	29.1	33.4	31.0	24.8	21.1	22.2	14.5	13.3	13.2	11.1		
2011	36.4	34.5	34.7	30.8	28.5	26.8	21.3	17.9	9.9	12.2	11.0		
2012	36.4	33.3	32.4	29.7	26.4	27.0	19.4	14.2	13.0	12.7	12.4		
2013	36.4	34.6	36.9	33.7	28.6	26.4	23.0	18.2	15.4	12.5	11.9	12.8	
2014	35.1	37.6	34.3	30.6	29.0	27.1	23.7	19.7	13.2	11.1	13.7	11.7	
2015	34.9	39.2	37.1	33.2	31.9	25.8	22.1	20.8	14.2	14.8	13.9	12.8	
2016	35.6	38.9	43.1	34.2	28.4	29.1	27.0	19.3	16.9	11.7	12.4	12.9	
2017	37.1	38.4	41.4	36.0	34.8	33.8	28.8	23.8	17.4	15.0	14.0	15.3	
2018	35.9	41.3	42.5	46.0	37.2	32.3	34.0	23.6	21.6	18.2	13.1	16.6	16.8
2019	35.7	38.1	43.5	40.5	37.8	34.0	38.1	26.7	23.9	16.4	17.5	17.6	13.7
2020	35.2	38.4	44.7	41.8	45.1	41.7	35.1	27.0	26.6	20.3	17.2	16.9	17.9
2021	30.5	39.3	43.3	45.1	43.9	42.1	40.5	32.1	28.5	25.2	16.2	15.6	15.7

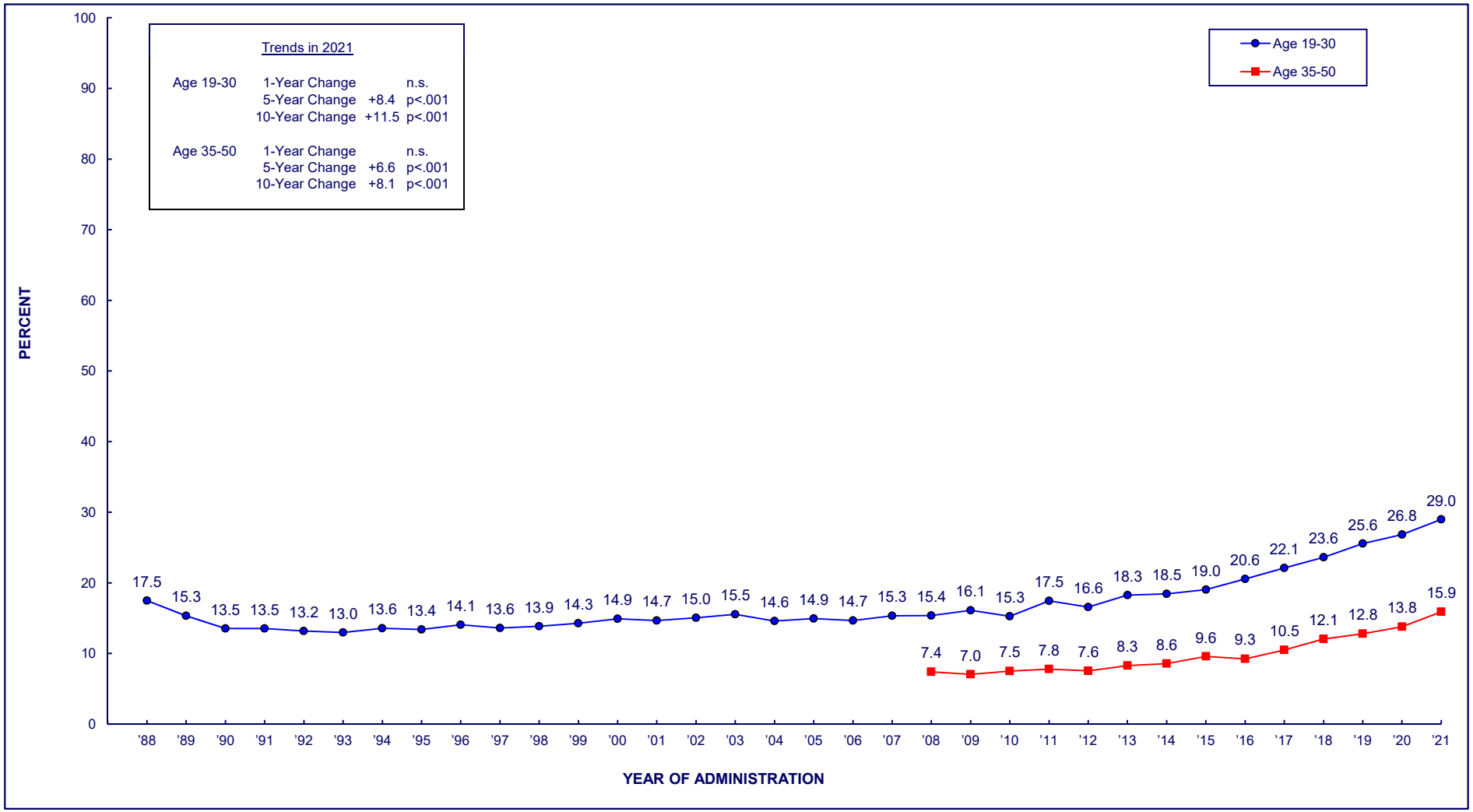
Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 2

MARIJUANA

Trends in 30-Day Prevalence

among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 4
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

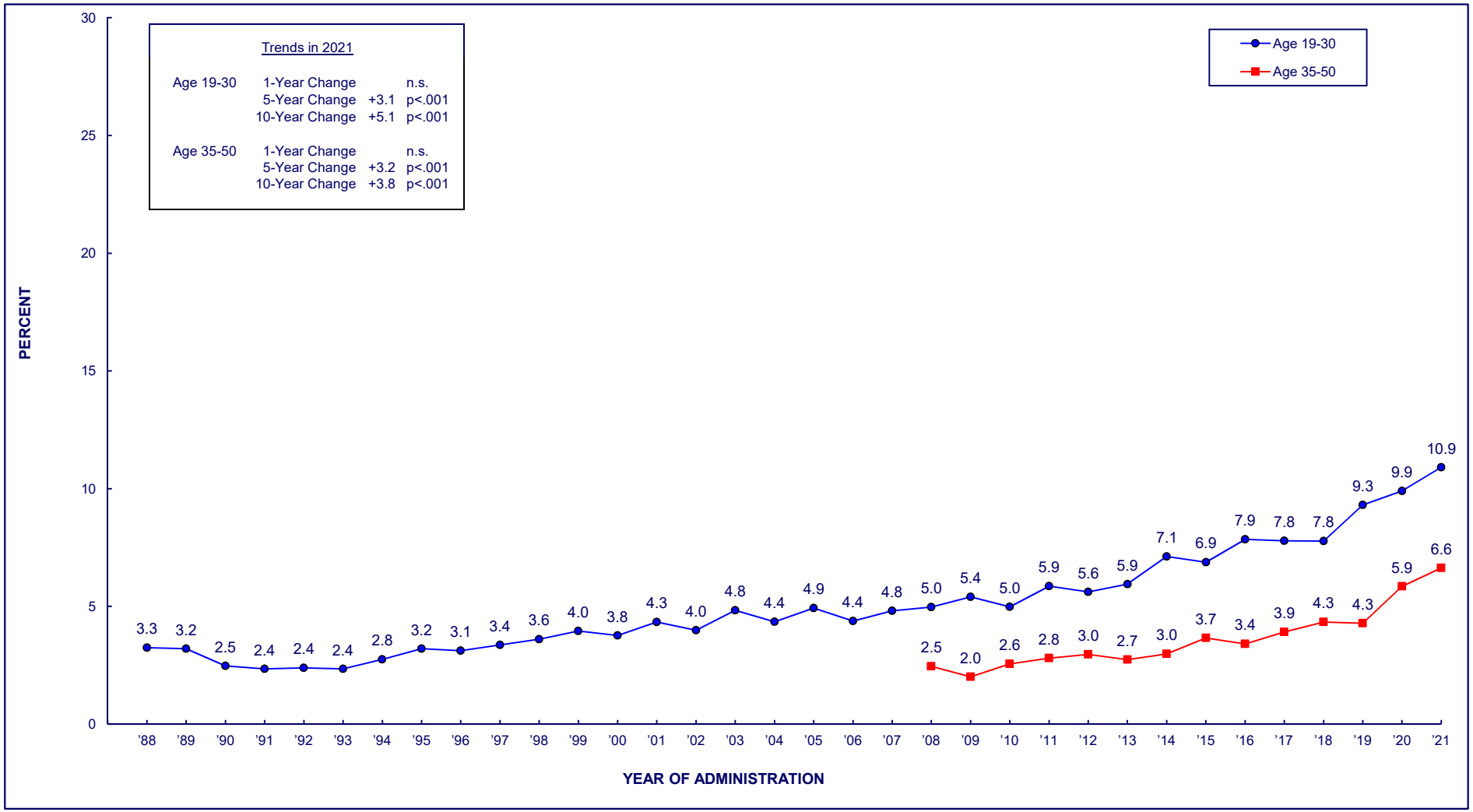
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	32.2												
1977	35.4												
1978	37.1	37.9											
1979	36.5	37.1											
1980	33.7	34.6	36.3										
1981	31.6	33.8	35.0										
1982	28.5	29.5	29.5	31.0									
1983	27.0	25.9	28.8	29.7									
1984	25.2	25.5	26.7	25.8	25.4								
1985	25.7	23.9	25.5	26.5	25.1								
1986	23.4	23.3	23.6	23.6	20.2	21.3							
1987	21.0	20.8	22.4	19.9	21.0	20.7							
1988	18.0	19.1	18.8	18.0	17.4	16.5	15.1						
1989	16.7	15.1	16.4	16.0	14.9	14.3	15.4						
1990	14.0	14.9	13.9	13.7	13.5	13.3	11.9						
1991	13.8	13.1	14.2	13.4	13.7	14.0	12.8						
1992	11.9	14.7	14.0	12.0	13.1	13.0	12.5						
1993	15.5	13.9	13.5	13.1	13.2	12.7	11.7						
1994	19.0	16.0	17.0	13.1	12.3	11.3	12.1	9.1					
1995	21.2	18.6	14.9	12.4	11.9	10.9	11.8	11.2					
1996	21.9	19.5	16.1	15.3	12.8	11.0	10.1	8.6					
1997	23.7	20.0	18.5	13.2	10.5	10.3	9.7	10.6					
1998	22.8	19.0	17.1	14.3	13.1	11.0	9.2	8.9	9.7				
1999	23.1	22.2	17.3	15.2	12.0	9.2	10.2	9.0	8.6				
2000	21.6	21.0	20.1	14.2	12.8	11.2	10.8	8.9	8.6				
2001	22.4	20.4	21.8	14.4	14.3	9.8	8.4	8.9	8.3				
2002	21.5	20.5	18.4	17.3	15.2	9.6	10.3	9.6	7.8				
2003	21.2	22.2	18.6	18.7	14.3	12.1	8.9	7.9	8.2	9.1			
2004	19.9	19.5	18.0	15.8	15.4	11.8	8.4	8.0	9.1	6.6			
2005	19.8	18.4	17.6	14.0	16.0	11.8	12.1	7.5	9.2	7.2			
2006	18.3	17.9	17.1	16.5	13.2	13.4	10.3	6.0	7.2	6.6			
2007	18.8	17.4	19.3	16.6	15.0	13.6	10.3	6.0	7.6	7.2			
2008	19.4	16.8	17.8	16.4	13.3	14.2	13.4	8.2	7.5	6.5	7.8		
2009	20.6	18.7	19.0	17.6	16.0	13.5	11.9	6.3	7.2	8.3	6.1		
2010	21.4	17.7	17.4	17.5	13.0	13.7	12.2	8.5	7.6	7.4	6.6		
2011	22.6	20.5	21.3	17.6	17.2	16.3	11.4	10.9	6.2	8.2	6.0		
2012	22.9	21.1	19.0	17.8	14.7	14.8	11.7	9.1	6.9	6.7	7.5		
2013	22.7	22.4	23.7	20.1	15.4	15.0	12.9	10.8	9.6	5.8	7.4	8.2	
2014	21.2	25.1	19.8	18.6	18.1	16.5	13.3	11.1	7.1	6.9	9.2	8.4	
2015	21.3	23.8	23.6	19.9	19.8	14.3	13.6	13.1	8.8	8.4	8.3	8.8	
2016	22.5	22.0	29.0	20.8	18.3	18.2	15.9	11.1	11.0	7.3	8.0	6.5	
2017	22.9	22.1	26.5	23.8	22.8	20.6	17.5	14.1	10.3	8.7	9.3	10.3	
2018	22.2	25.1	23.6	26.5	24.0	21.4	21.5	15.0	13.6	11.0	9.0	10.0	11.3
2019	22.3	24.7	29.6	25.5	24.6	25.1	24.3	16.4	14.9	10.2	10.3	12.5	9.1
2020	21.1	22.1	28.7	27.6	31.2	27.0	23.7	16.7	16.0	11.9	11.0	10.7	11.6
2021	19.5	28.8	29.4	28.4	31.9	28.5	27.0	19.0	19.1	17.0	10.5	9.7	11.1

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 3

MARIJUANA

Trends in 30-Day Prevalence of Daily Use
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 5
MARIJUANA
Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	8.2												
1977	9.1												
1978	10.7	10.5											
1979	10.3	10.8											
1980	9.1	8.3	11.4										
1981	7.0	7.7	9.4										
1982	6.3	6.3	6.4	8.3									
1983	5.5	5.2	5.8	6.7									
1984	5.0	4.8	5.3	5.8	6.3								
1985	4.9	4.6	4.5	5.4	6.0								
1986	4.0	3.5	4.2	4.7	3.6	4.6							
1987	3.3	3.3	3.9	4.4	4.6	4.8							
1988	2.7	3.1	3.6	3.0	3.6	3.1	3.0						
1989	2.9	2.7	3.1	2.9	3.2	4.0	3.3						
1990	2.2	2.5	2.4	2.6	2.6	2.4	2.2						
1991	2.0	2.1	2.2	2.0	2.7	2.6	2.5						
1992	1.9	1.5	2.4	2.2	2.8	2.5	2.9						
1993	2.4	2.0	2.1	2.5	2.4	2.3	2.7						
1994	3.5	3.4	3.0	3.0	2.4	2.4	2.3	2.3					
1995	4.6	5.0	3.3	3.4	2.4	2.8	2.4	2.4					
1996	4.9	4.7	3.1	2.6	3.5	2.3	2.5	2.1					
1997	5.8	5.1	5.3	2.7	2.3	2.6	2.3	3.5					
1998	5.6	5.1	5.2	3.4	2.9	2.7	2.5	2.4	3.2				
1999	6.0	6.1	4.5	5.1	3.0	3.0	2.2	1.9	2.1				
2000	6.0	5.7	5.0	3.7	3.5	2.5	2.4	2.7	2.7				
2001	5.8	6.2	6.6	4.5	4.5	2.0	2.6	2.5	1.7				
2002	6.0	5.7	5.3	5.6	2.5	2.3	2.9	3.1	2.9				
2003	6.0	6.4	6.7	6.7	3.4	4.2	2.1	2.4	2.4	3.1			
2004	5.6	5.7	4.8	5.6	5.6	2.9	1.9	2.1	1.9	2.1			
2005	5.0	6.3	4.9	4.8	6.2	3.2	4.2	2.2	1.9	2.1			
2006	5.0	5.2	4.5	5.2	4.6	4.6	2.3	2.6	3.0	1.3			
2007	5.1	4.4	5.5	5.0	4.7	5.7	3.5	2.5	2.6	2.9			
2008	5.4	4.2	5.8	4.6	5.6	4.2	5.4	2.3	2.6	2.7	2.2		
2009	5.2	5.4	6.0	6.1	5.9	3.8	5.2	1.9	1.9	2.3	2.0		
2010	6.1	5.6	5.4	6.1	3.5	5.2	4.1	3.4	2.7	2.1	2.0		
2011	6.6	5.9	6.3	6.8	7.4	4.2	4.2	3.0	2.7	3.1	2.4		
2012	6.5	6.2	5.8	6.5	5.5	4.9	4.8	3.9	3.0	2.3	2.7		
2013	6.5	6.4	7.9	6.9	5.7	5.5	3.0	3.7	2.8	2.7	2.0	2.9	
2014	5.8	8.9	7.2	6.9	6.9	7.2	5.8	4.8	2.0	2.5	2.8	2.3	
2015	6.0	9.2	6.4	7.8	7.3	5.8	5.2	4.9	4.0	2.8	3.1	2.8	
2016	6.0	6.4	10.0	9.3	6.8	6.7	7.7	3.9	4.3	3.0	2.5	3.0	
2017	5.9	5.9	9.8	9.2	8.2	6.3	7.4	5.2	4.7	3.3	2.7	3.2	
2018	5.8	6.4	7.2	9.4	9.7	6.9	6.9	4.6	5.4	3.6	3.9	3.6	4.7
2019	6.4	6.9	10.4	10.1	9.7	10.6	8.3	5.2	6.0	2.7	3.5	3.7	2.7
2020	6.9	5.6	12.3	10.2	11.0	11.2	8.3	8.0	6.4	4.8	4.4	3.6	4.7
2021	5.8	11.1	9.5	10.5	12.7	9.8	11.9	9.5	8.2	6.3	3.5	4.5	4.3

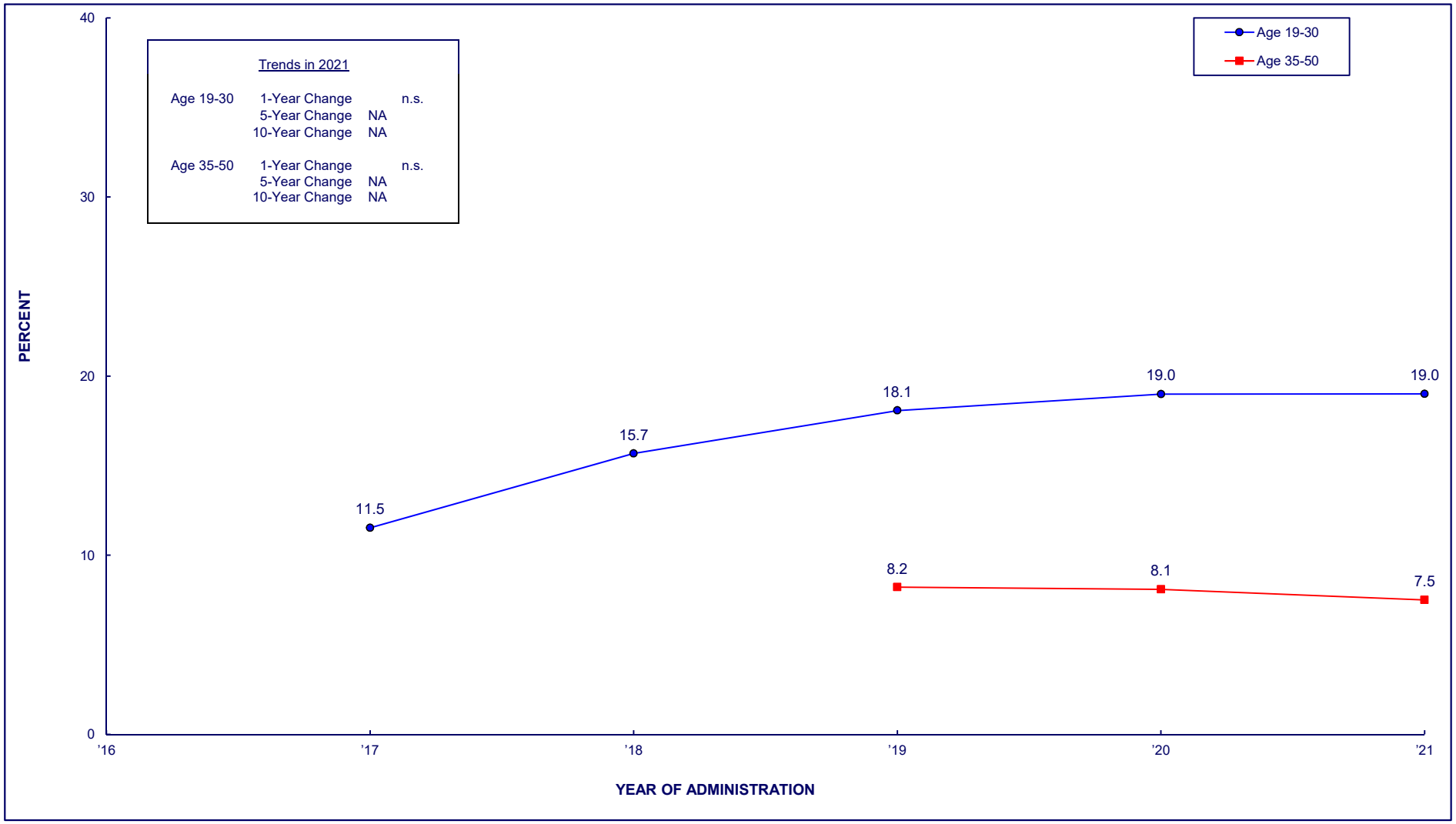
Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 4

VAPING MARIJUANA

Trends in 12-Month Prevalence

among Respondents of Modal Ages 19 through 50, by Age Group

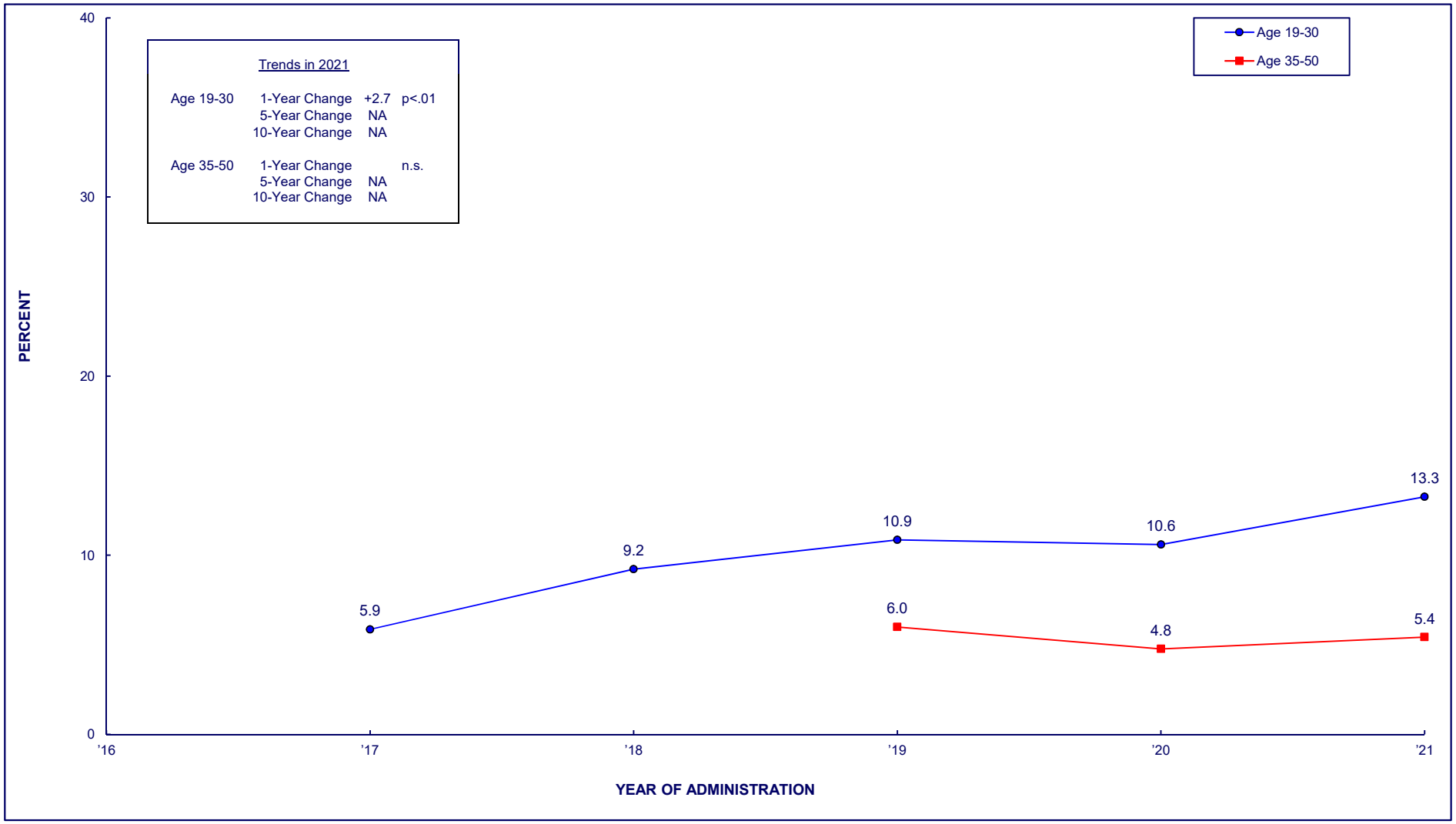


UPDATED FIGURE 5

VAPING MARIJUANA

Trends in 30-Day Prevalence

among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 6
VAPING MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
2017	4.9	5.1	6.2	7.0	5.2	7.6	4.0						
2018	7.5	7.2	10.6	12.1	12.5	7.2	6.2						
2019	14.0	10.5	11.4	10.4	10.1	10.9	11.9	12.1	6.5	2.8	3.9	3.9	2.6
2020	12.2	13.3	11.5	11.2	10.7	10.1	7.8	7.3	5.7	2.8	3.6	1.7	1.8
2021	12.4	13.8	13.3	13.1	15.7	11.4	12.7	8.2	4.9	5.4	3.5	2.0	1.3

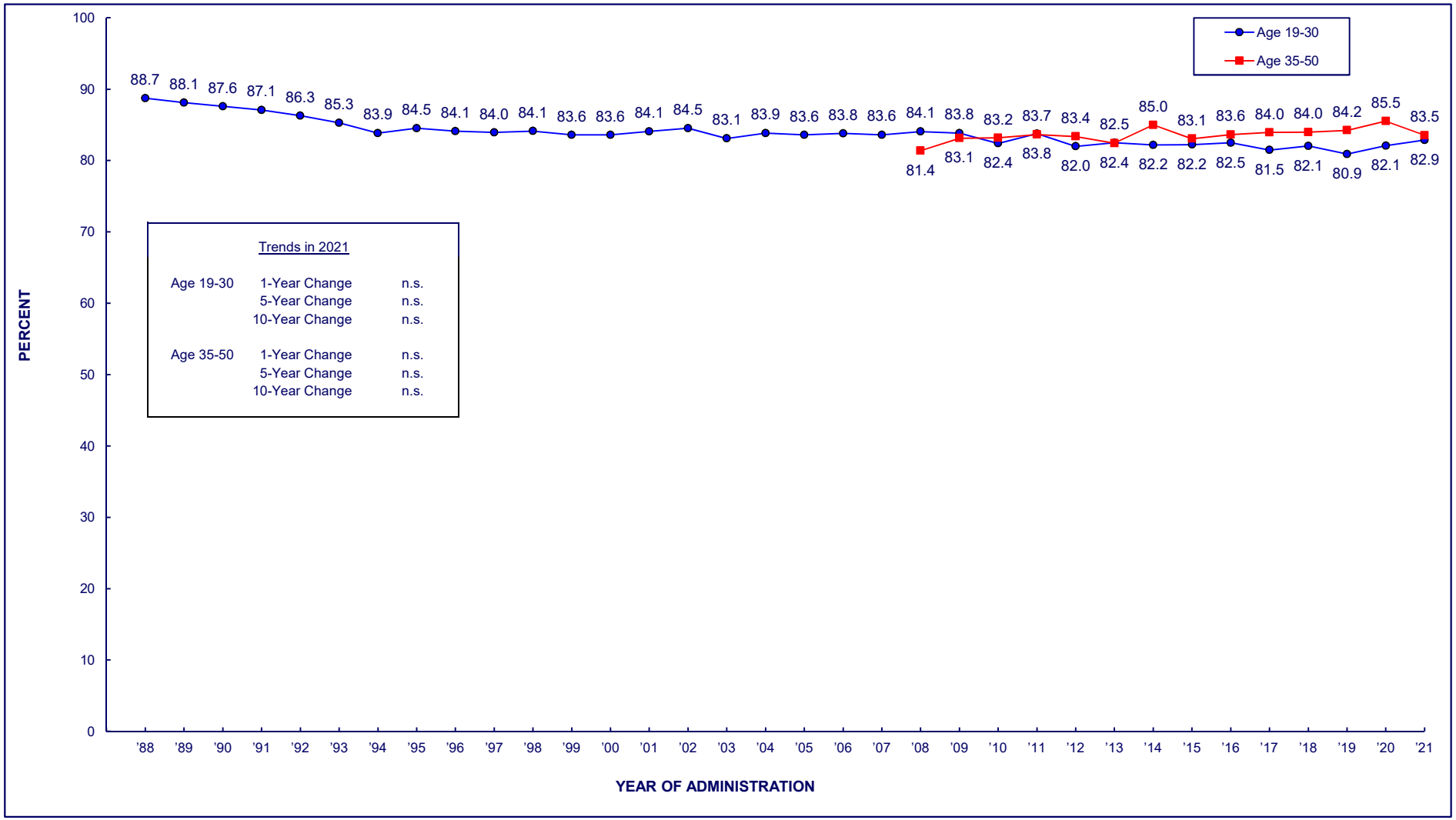
Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 6

ALCOHOL

Trends in 12-Month Prevalence

among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 7
ALCOHOL
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	85.7												
1977	87.0												
1978	87.7	90.4											
1979	88.1	90.5											
1980	87.9	89.2	90.7										
1981	87.0	91.1	91.8										
1982	86.8	89.5	91.5	90.8									
1983	87.3	89.1	92.4	91.4									
1984	86.0	89.5	90.1	90.4	89.2								
1985	85.6	89.3	90.4	92.0	90.3								
1986	84.5	88.2	90.5	89.0	88.6	88.8							
1987	85.7	88.5	91.4	90.5	90.4	87.7							
1988	85.3	87.3	89.2	89.6	90.3	87.5	88.4						
1989	82.7	87.3	89.7	89.3	88.4	88.0	86.1						
1990	80.6	86.0	89.8	87.8	87.9	87.0	87.1						
1991	77.7	85.2	88.8	88.4	88.4	86.3	85.5						
1992	76.8	82.9	88.0	89.1	86.4	85.7	85.4						
1993	76.0	80.4	85.5	87.0	88.4	86.3	83.9						
1994	73.0	79.1	85.2	86.4	86.0	83.5	83.0	83.4					
1995	73.7	78.5	85.1	87.2	85.9	86.3	84.0	82.3					
1996	72.5	80.0	83.8	86.2	85.5	85.5	83.6	84.3					
1997	74.8	79.4	84.1	85.0	86.0	85.2	83.8	83.4					
1998	74.3	80.2	85.5	84.9	84.6	85.8	83.6	82.7	77.4				
1999	73.8	80.4	84.7	84.5	84.4	83.8	83.7	82.2	80.5				
2000	73.2	78.2	85.5	86.4	83.9	83.0	84.2	81.5	79.7				
2001	73.3	78.2	86.9	85.7	85.7	83.4	83.8	82.5	81.5				
2002	71.5	78.2	84.8	87.5	87.5	83.9	84.4	85.2	80.9				
2003	70.1	75.8	84.1	87.3	85.3	82.3	82.7	82.8	81.3	79.1			
2004	70.6	76.9	85.7	85.8	86.4	85.3	82.9	85.4	80.8	79.7			
2005	68.6	77.3	84.7	86.5	84.9	84.7	83.9	85.6	82.2	79.5			
2006	66.5	77.8	83.6	87.6	84.7	85.8	83.8	83.2	79.8	82.8			
2007	66.4	73.4	87.2	87.9	84.8	84.3	84.3	84.6	85.2	80.7			
2008	65.5	73.8	87.5	85.9	84.6	84.5	87.7	84.3	82.1	80.1	79.1		
2009	66.2	71.9	84.7	87.6	88.6	86.9	83.5	83.5	85.7	82.7	80.4		
2010	65.2	67.6	82.3	88.6	85.3	84.5	85.7	84.8	86.2	82.2	79.9		
2011	63.5	72.1	81.0	87.7	89.9	87.1	84.7	89.0	84.1	80.1	81.5		
2012	63.5	70.0	80.4	84.2	88.6	86.0	82.5	85.7	83.4	84.2	80.2		
2013	62.0	67.3	82.8	83.8	87.2	87.4	86.1	86.2	84.3	81.2	79.2	76.9	
2014	60.2	65.9	82.4	83.7	84.5	89.4	85.9	88.2	83.6	83.9	84.3	78.1	
2015	58.2	69.3	83.2	84.6	83.6	84.8	86.2	85.7	81.0	84.3	81.5	78.2	
2016	55.6	66.6	86.3	84.9	83.0	82.7	89.5	85.7	85.6	82.0	81.6	79.6	
2017	55.7	65.2	83.5	86.9	82.4	84.6	84.5	86.9	82.2	84.6	82.6	81.9	
2018	53.3	63.3	83.2	88.6	86.4	84.5	84.5	87.3	84.2	85.2	79.5	80.1	77.2
2019	52.1	63.5	81.9	85.3	85.5	85.1	83.6	88.0	85.8	80.1	83.9	81.6	78.2
2020	55.3	63.1	81.9	84.3	88.0	85.9	84.9	88.4	84.2	86.0	83.5	80.2	78.1
2021	46.5	66.6	80.6	84.8	86.6	87.9	84.1	86.9	84.9	83.6	79.2	79.2	79.0

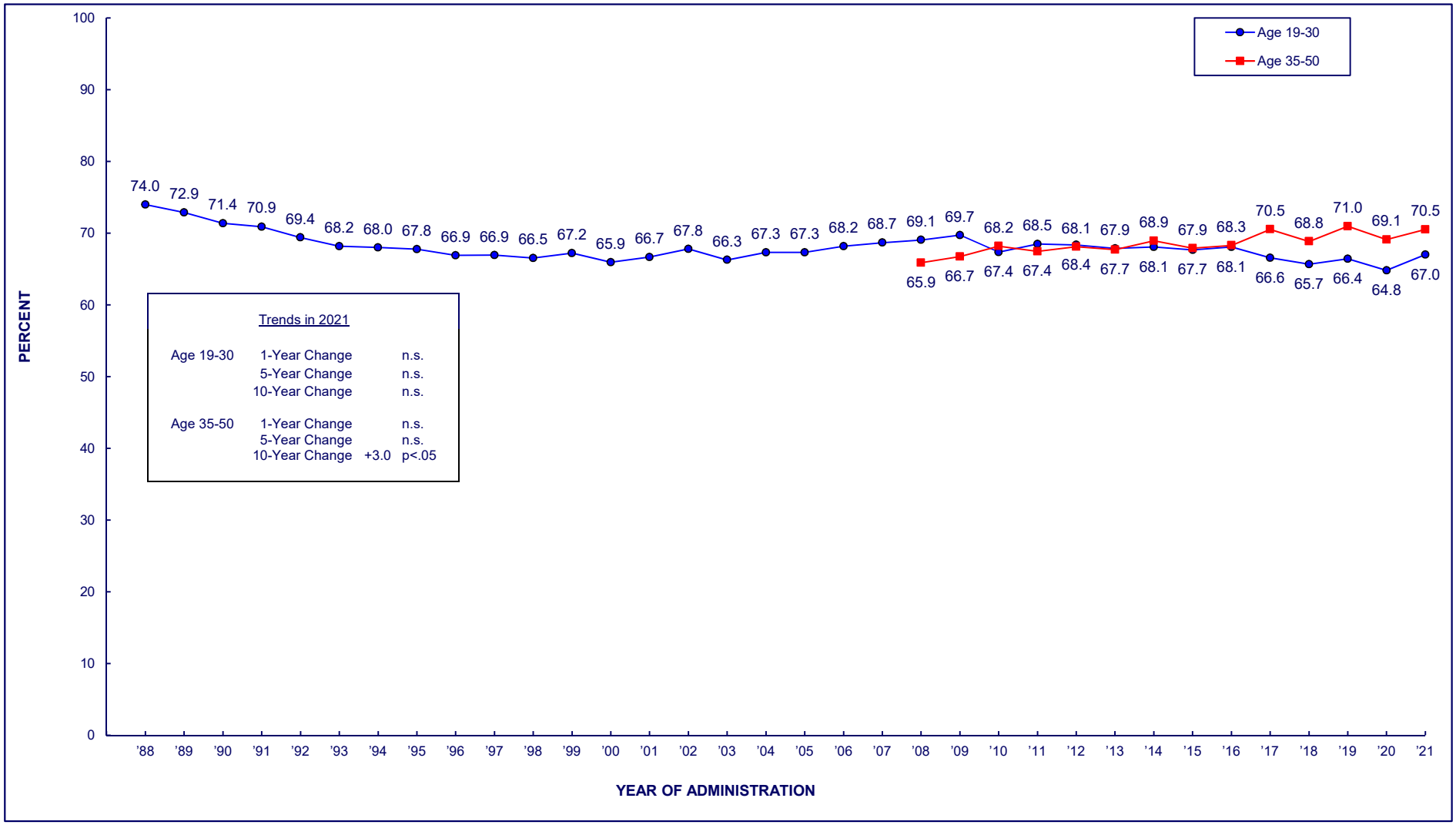
Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 7

ALCOHOL

Trends in 30-Day Prevalence

among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 8
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

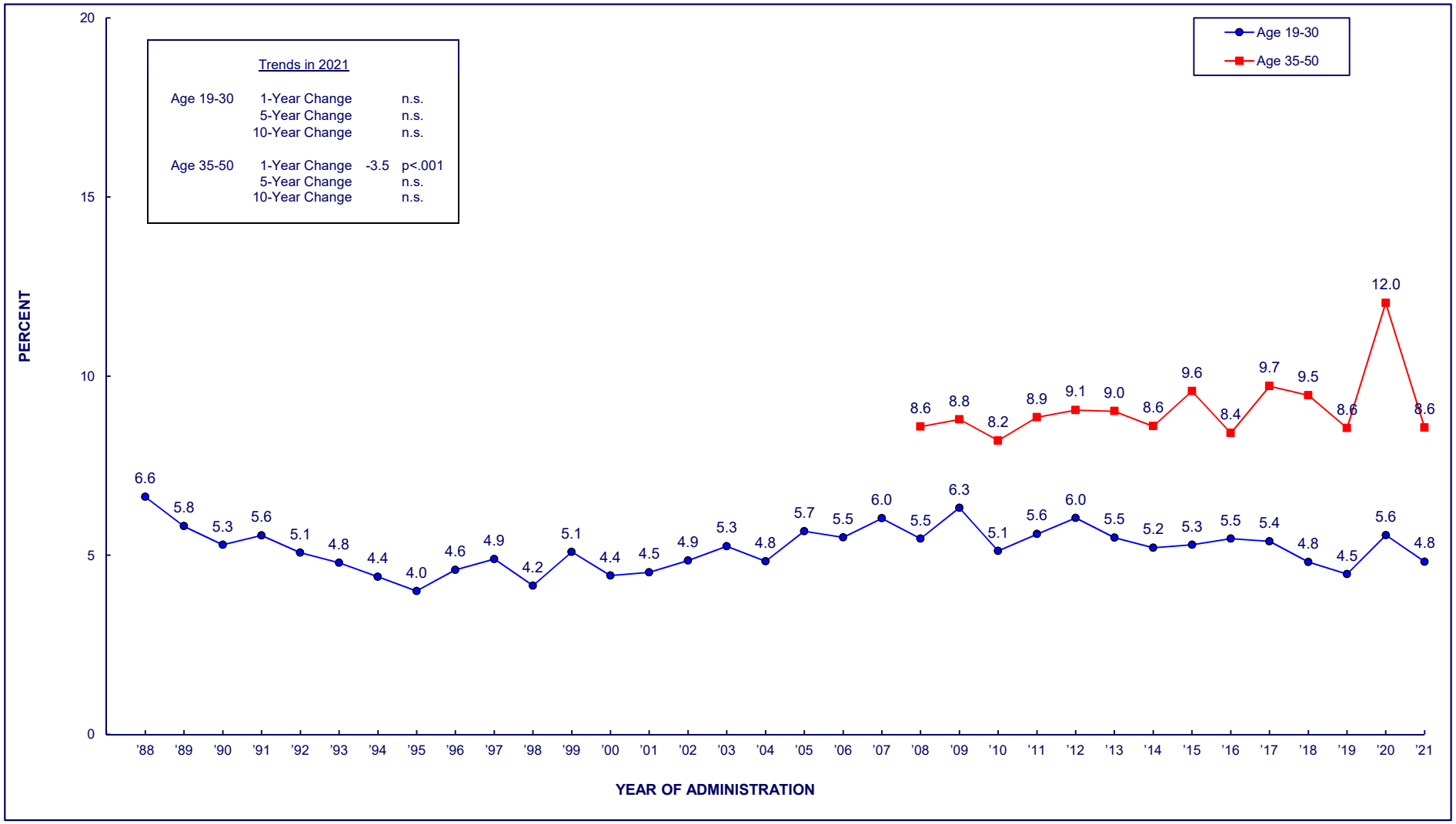
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	68.3												
1977	71.2												
1978	72.1	76.8											
1979	71.8	76.5											
1980	72.0	76.5	79.3										
1981	70.7	77.6	80.8										
1982	69.7	76.0	79.7	79.1									
1983	69.4	74.6	79.7	78.6									
1984	67.2	74.3	79.2	77.7	76.2								
1985	65.9	74.5	76.6	80.3	77.1								
1986	65.3	72.8	77.4	76.7	76.1	74.4							
1987	66.4	72.8	78.3	75.5	77.9	75.2							
1988	63.9	69.1	75.6	75.4	75.3	74.7	73.2						
1989	60.0	69.1	74.6	73.3	73.6	74.2	72.5						
1990	57.1	66.7	74.3	73.3	72.1	71.4	70.6						
1991	54.0	64.8	73.9	73.0	72.7	70.8	69.9						
1992	51.3	62.0	72.0	72.6	69.4	69.6	70.2						
1993	51.0	59.7	70.1	72.1	70.2	69.3	67.3						
1994	50.1	60.6	71.3	69.5	69.7	69.0	67.9	65.7					
1995	51.3	58.9	68.7	71.4	70.3	69.5	67.7	67.1					
1996	50.8	58.1	68.3	69.7	67.7	70.0	67.5	65.2					
1997	52.7	59.6	67.4	67.8	70.4	69.4	66.5	66.0					
1998	52.0	60.4	68.0	69.9	66.5	68.7	65.4	63.0	60.9				
1999	51.0	62.5	68.6	69.2	67.8	69.4	65.7	65.2	64.5				
2000	50.0	56.9	69.4	70.0	67.9	65.3	65.5	64.4	62.4				
2001	49.8	58.8	70.9	70.0	68.2	65.7	65.6	64.5	65.4				
2002	48.6	59.0	70.0	70.8	70.5	68.2	67.4	67.7	65.5				
2003	47.5	57.3	67.9	71.2	68.0	66.4	65.4	64.7	66.1	63.4			
2004	48.0	57.8	70.9	71.8	70.8	67.7	65.0	69.4	64.6	66.0			
2005	47.0	58.2	70.0	69.3	72.3	69.2	65.6	68.2	65.6	64.6			
2006	45.3	57.3	69.7	72.7	68.4	72.4	69.0	62.4	62.3	66.7			
2007	44.4	54.2	73.0	73.3	73.2	69.7	69.0	67.7	66.9	64.1			
2008	43.1	53.4	72.5	73.3	71.4	70.2	73.3	64.5	67.4	67.1	64.4		
2009	43.5	52.2	71.8	77.5	75.6	69.8	71.0	64.3	70.2	67.5	64.7		
2010	41.2	49.7	69.8	72.8	72.8	70.2	68.2	66.4	72.3	67.7	66.4		
2011	40.0	52.4	67.8	73.6	74.5	73.4	69.2	71.0	66.1	65.0	67.7		
2012	41.5	52.4	68.0	71.2	76.2	73.5	68.4	68.0	68.0	71.1	65.3		
2013	39.2	48.9	69.8	71.3	73.6	72.1	70.9	68.9	69.4	67.3	65.7	62.7	
2014	37.4	48.2	68.1	68.7	71.5	76.9	73.2	72.1	65.8	70.6	67.3	64.3	
2015	35.3	48.3	67.9	71.7	69.5	72.8	73.4	71.0	64.7	67.5	68.6	65.5	
2016	33.2	49.0	71.0	73.0	68.7	69.4	75.0	68.7	69.1	68.0	67.4	68.0	
2017	33.2	45.9	71.2	72.1	69.3	68.3	70.6	72.1	69.8	70.1	70.2	67.1	
2018	30.2	43.0	65.6	72.8	71.8	67.7	70.6	72.8	69.1	70.2	63.7	66.5	61.5
2019	29.3	43.1	68.3	71.9	72.4	70.8	71.5	73.3	71.1	67.6	72.3	65.3	64.7
2020	33.6	41.7	63.4	66.1	72.3	70.7	69.3	72.5	70.8	66.2	67.2	63.0	61.3
2021	25.8	46.9	63.2	70.4	73.8	72.3	67.6	72.7	73.1	71.4	65.3	66.7	65.1

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 8

ALCOHOL

Trends in 30-Day Prevalence of Daily Use
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 9
ALCOHOL
Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 60, by Age Group

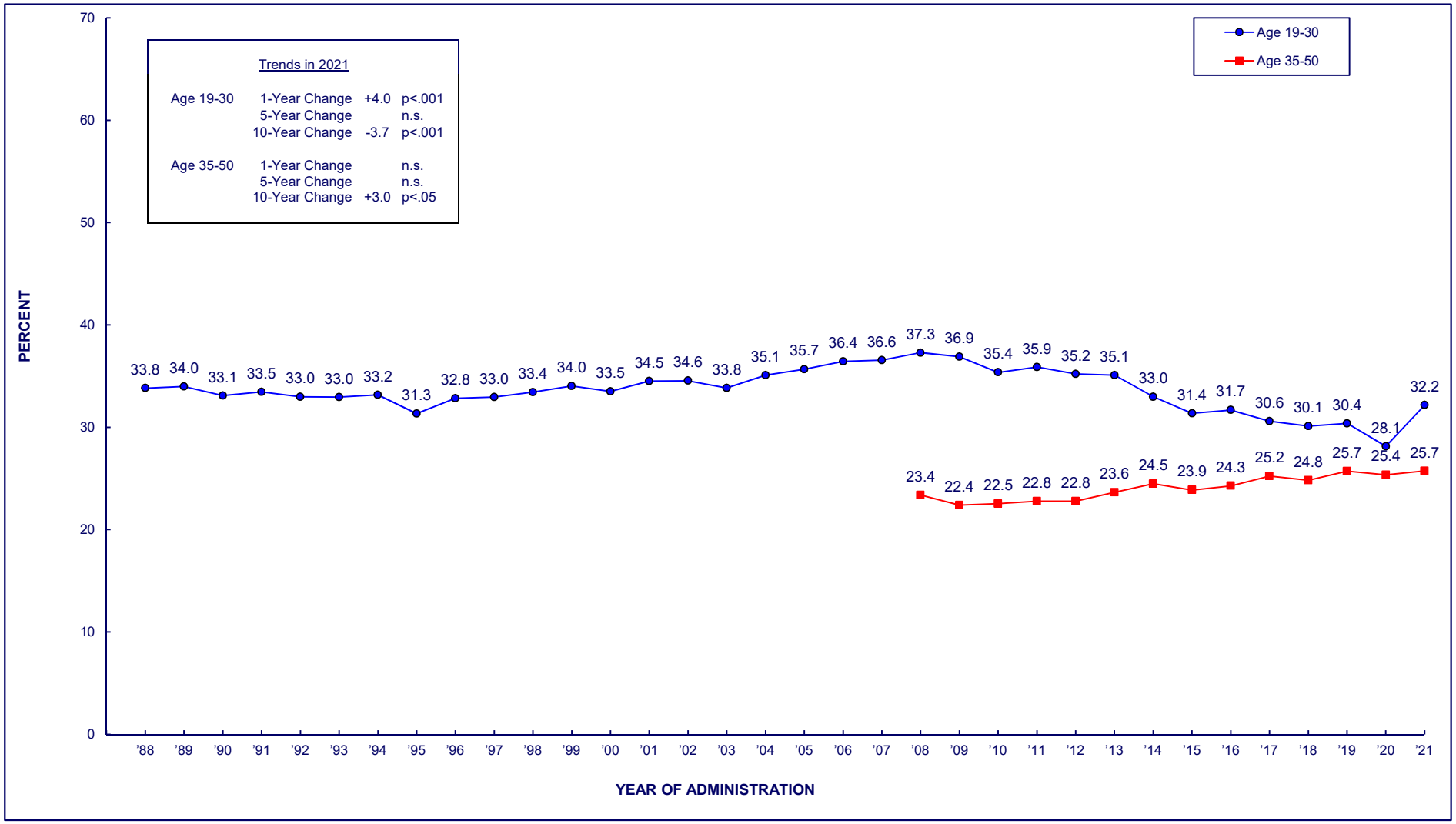
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	5.6												
1977	6.1												
1978	5.7	7.8											
1979	6.9	7.5											
1980	6.0	7.3	8.6										
1981	6.0	7.4	7.9										
1982	5.7	7.9	8.1	8.5									
1983	5.5	5.7	8.3	8.8									
1984	4.8	5.9	8.3	7.4	7.9								
1985	5.0	5.9	6.9	7.4	7.9								
1986	4.8	5.2	6.6	6.7	5.7	7.7							
1987	4.8	6.0	7.2	6.4	7.1	7.4							
1988	4.2	4.9	7.5	6.6	6.8	6.0	8.2						
1989	4.2	4.7	5.2	5.8	6.3	7.0	5.8						
1990	3.7	4.4	4.9	5.9	5.3	4.9	6.2						
1991	3.6	4.1	5.0	5.7	5.1	6.6	6.6						
1992	3.4	3.7	4.5	4.6	6.7	4.7	6.1						
1993	2.5	3.1	4.8	4.8	5.6	5.3	5.0						
1994	2.9	3.6	4.2	4.2	3.4	5.6	5.2	7.9					
1995	3.5	3.1	3.5	4.3	4.1	4.5	4.4	5.9					
1996	3.7	3.0	5.0	6.1	4.3	3.9	5.3	7.8					
1997	3.9	4.9	4.4	4.3	5.4	4.4	6.0	4.9					
1998	3.9	3.5	5.7	4.0	3.9	4.0	3.9	6.5	7.3				
1999	3.4	4.3	6.2	4.9	5.7	4.3	5.1	5.3	7.9				
2000	2.9	3.8	5.9	4.2	3.8	4.5	4.5	5.5	6.9				
2001	3.6	3.8	6.0	4.6	5.6	3.2	3.9	6.2	7.7				
2002	3.5	3.7	5.4	5.3	5.8	4.6	4.1	5.1	7.1				
2003	3.2	4.3	6.0	6.7	4.9	5.5	3.9	4.2	7.9	8.2			
2004	2.8	4.9	6.4	5.7	4.8	3.4	4.3	6.6	6.5	9.0			
2005	3.1	3.6	6.9	5.8	6.4	5.2	6.3	6.4	7.8	8.7			
2006	3.0	4.5	6.2	6.0	5.3	6.2	4.9	4.9	7.8	9.5			
2007	3.1	3.4	7.0	6.8	7.3	6.2	5.6	8.7	6.9	8.9			
2008	2.8	2.3	5.5	6.5	7.1	6.6	4.9	5.5	7.5	10.4	10.6		
2009	2.5	2.4	5.9	7.2	8.6	6.9	7.0	7.0	9.2	9.7	9.3		
2010	2.7	1.7	5.4	4.8	5.2	6.6	7.0	6.5	8.1	7.5	10.4		
2011	2.1	2.4	6.0	5.0	6.7	7.7	5.7	8.7	7.5	8.1	11.2		
2012	2.5	2.3	4.8	7.0	5.5	8.6	8.1	7.0	8.3	9.7	11.1		
2013	2.2	3.0	4.6	5.0	6.3	6.8	7.3	7.0	9.4	8.1	11.3	10.7	
2014	1.9	2.6	4.4	4.7	6.2	5.4	7.8	7.6	7.1	9.1	10.4	10.5	
2015	1.9	2.0	3.7	5.1	5.3	7.1	8.1	9.8	9.0	9.9	9.6	11.2	
2016	1.3	1.7	6.2	3.9	6.0	7.3	7.2	7.8	8.0	7.7	10.0	14.4	
2017	1.6	1.4	6.0	7.0	5.0	7.0	5.4	9.9	9.5	9.6	9.9	11.2	
2018	1.2	1.2	4.1	5.4	5.5	5.5	6.7	9.2	8.8	9.7	10.1	11.0	12.8
2019	1.7	0.5	4.7	3.8	6.6	4.7	6.2	9.2	7.1	8.2	9.8	11.5	11.9
2020	2.7	2.2	2.8	5.3	8.2	5.8	8.0	13.3	11.6	12.7	10.6	12.9	12.2
2021	0.9	1.2	4.2	4.6	5.1	6.0	6.1	8.5	7.7	9.9	8.1	10.2	14.7

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 9

ALCOHOL

Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 10

ALCOHOL

Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 18 through 60, by Age Group

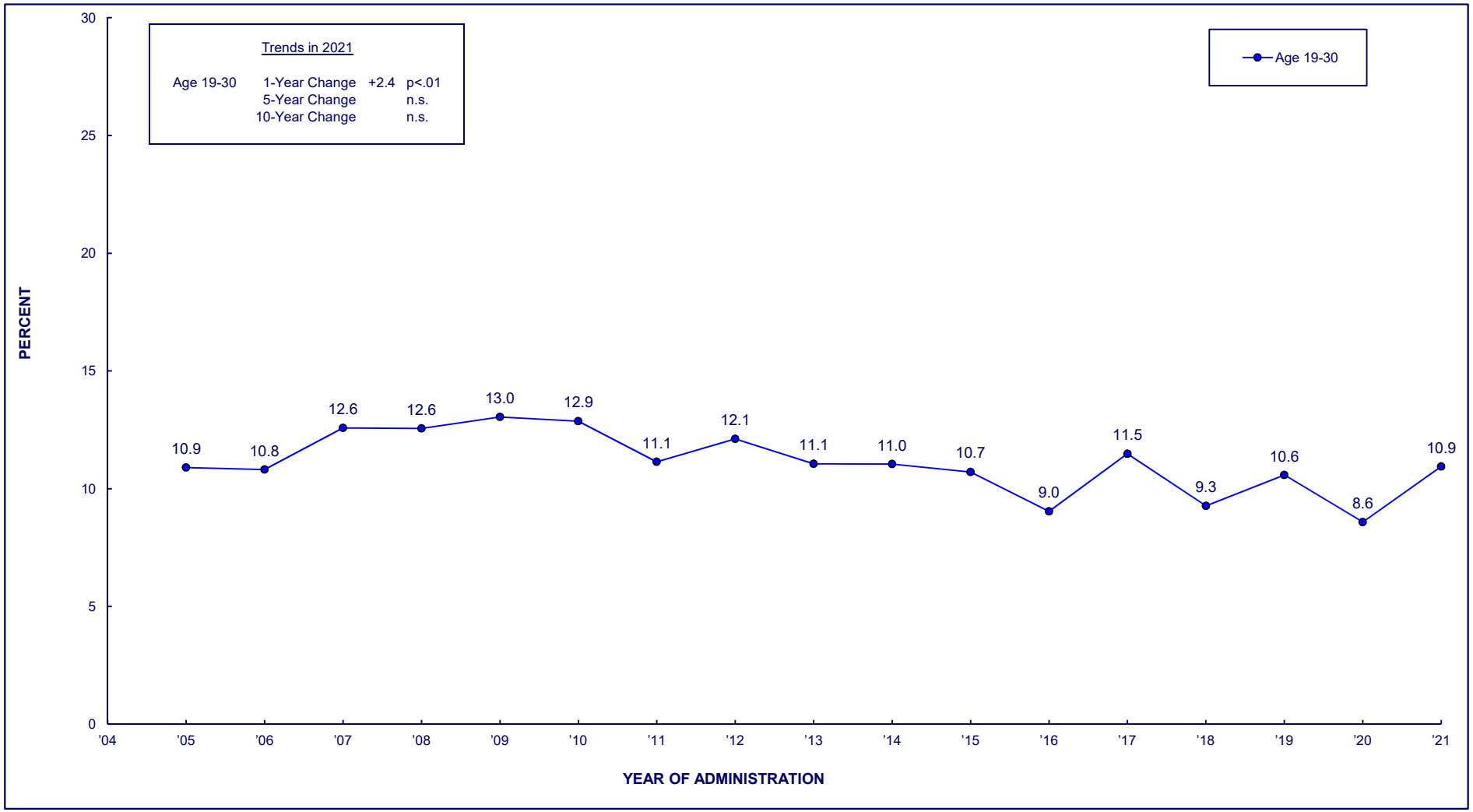
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	37.1												
1977	39.4												
1978	40.3	41.6											
1979	41.2	42.1											
1980	41.2	43.1	41.6										
1981	41.4	43.6	43.9										
1982	40.5	42.3	41.8	38.2									
1983	40.8	41.6	43.1	40.0									
1984	38.7	41.5	41.9	36.0	34.0								
1985	36.7	42.9	41.1	38.4	34.5								
1986	36.8	40.8	40.7	36.3	32.2	30.9							
1987	37.5	37.8	42.4	37.6	33.9	32.4							
1988	34.7	36.6	41.7	36.8	31.6	28.9	27.3						
1989	33.0	36.1	40.9	36.6	33.4	30.4	27.0						
1990	32.2	35.7	37.7	36.3	32.8	30.1	26.7						
1991	29.8	37.1	39.4	35.8	32.8	30.4	25.5						
1992	27.9	35.0	39.2	34.8	32.4	30.2	26.6						
1993	27.5	33.6	39.9	34.7	33.7	30.2	26.4						
1994	28.2	35.1	41.9	33.0	31.8	29.2	28.8	22.5					
1995	29.8	31.4	37.8	34.6	28.3	28.8	27.5	21.1					
1996	30.2	32.8	38.0	37.8	31.4	31.3	26.0	23.0					
1997	31.3	36.9	38.5	32.9	31.9	29.6	28.3	22.6					
1998	31.5	35.0	39.4	35.7	33.3	30.1	27.6	21.7	20.7				
1999	30.8	35.9	40.2	37.5	32.0	32.1	27.0	22.5	21.3				
2000	30.0	34.7	40.9	37.0	33.3	31.1	24.9	24.1	19.1				
2001	29.7	36.4	41.3	39.5	34.0	29.6	27.1	22.5	22.1				
2002	28.6	35.9	39.3	39.0	35.1	29.9	28.7	25.1	21.0				
2003	27.9	34.3	38.7	38.6	35.7	30.5	26.2	25.3	22.2	21.8			
2004	29.2	37.1	39.9	40.0	35.7	31.6	27.9	22.3	21.9	20.5			
2005	27.1	35.5	39.2	39.0	38.9	32.3	30.2	23.5	23.6	20.7			
2006	25.4	34.5	42.5	43.2	36.6	33.5	29.8	22.9	21.5	20.9			
2007	25.9	30.5	45.8	40.8	39.3	33.3	30.1	24.8	22.1	19.6			
2008	24.6	30.8	42.0	44.1	38.8	36.0	32.4	26.2	24.3	22.5	20.5		
2009	25.2	27.6	40.4	42.9	41.4	35.7	33.4	22.6	25.1	22.9	18.6		
2010	23.2	26.7	38.0	39.8	37.8	35.9	33.6	24.9	23.7	23.6	18.4		
2011	21.6	30.7	38.4	39.1	39.3	36.2	31.2	27.0	22.5	21.5	20.2		
2012	23.7	27.5	37.5	38.6	36.0	36.8	35.0	26.2	23.5	21.4	20.1		
2013	22.1	27.4	39.1	36.9	37.7	35.4	33.8	25.2	26.5	21.4	21.9	17.5	
2014	19.4	27.5	34.9	33.8	33.5	35.7	31.8	25.5	23.5	25.4	23.6	18.4	
2015	17.2	23.5	34.0	36.0	33.7	31.4	28.9	30.6	20.3	21.2	23.9	20.0	
2016	15.5	22.3	37.9	33.4	34.7	30.8	30.4	26.1	23.7	24.3	23.2	20.5	
2017	16.6	21.6	39.0	29.8	32.5	32.1	28.6	28.8	26.7	24.9	21.2	18.1	
2018	13.8	18.9	32.7	35.0	32.5	29.0	31.6	30.3	23.2	24.9	21.3	20.0	17.3
2019	14.4	18.4	34.3	33.8	34.2	31.0	30.9	31.8	22.5	23.5	26.1	23.9	18.1
2020	16.8	17.7	30.3	30.6	31.4	29.5	27.3	29.1	26.3	24.0	22.3	20.7	17.0
2021	11.8	25.1	31.3	34.8	35.0	33.1	31.3	27.6	28.9	23.8	23.1	23.0	18.5

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 10

ALCOHOL

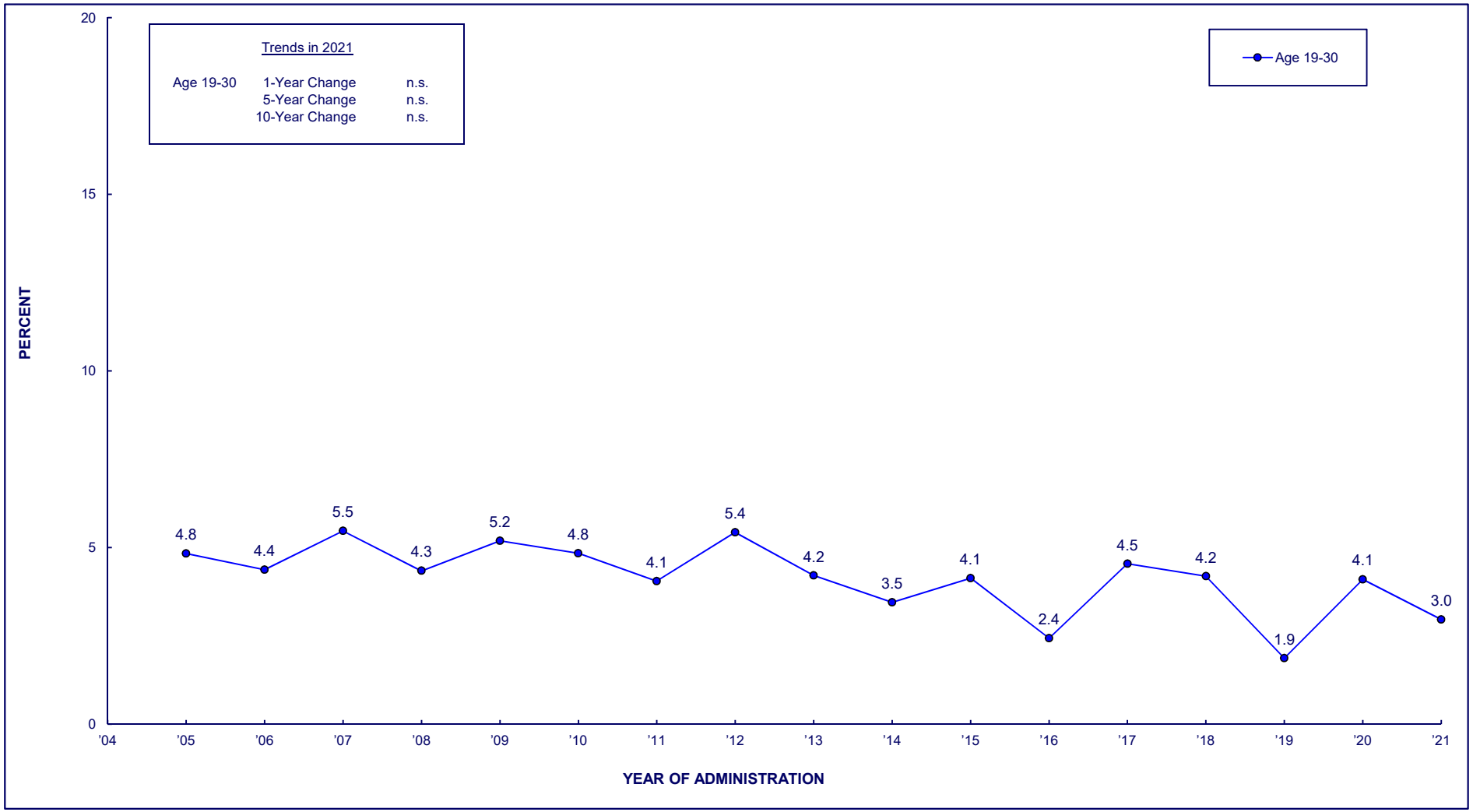
Trends in Two-Week Prevalence of High-Intensity Drinking (10+ Drinks in a Row) among Respondents of Modal Ages 19 through 30



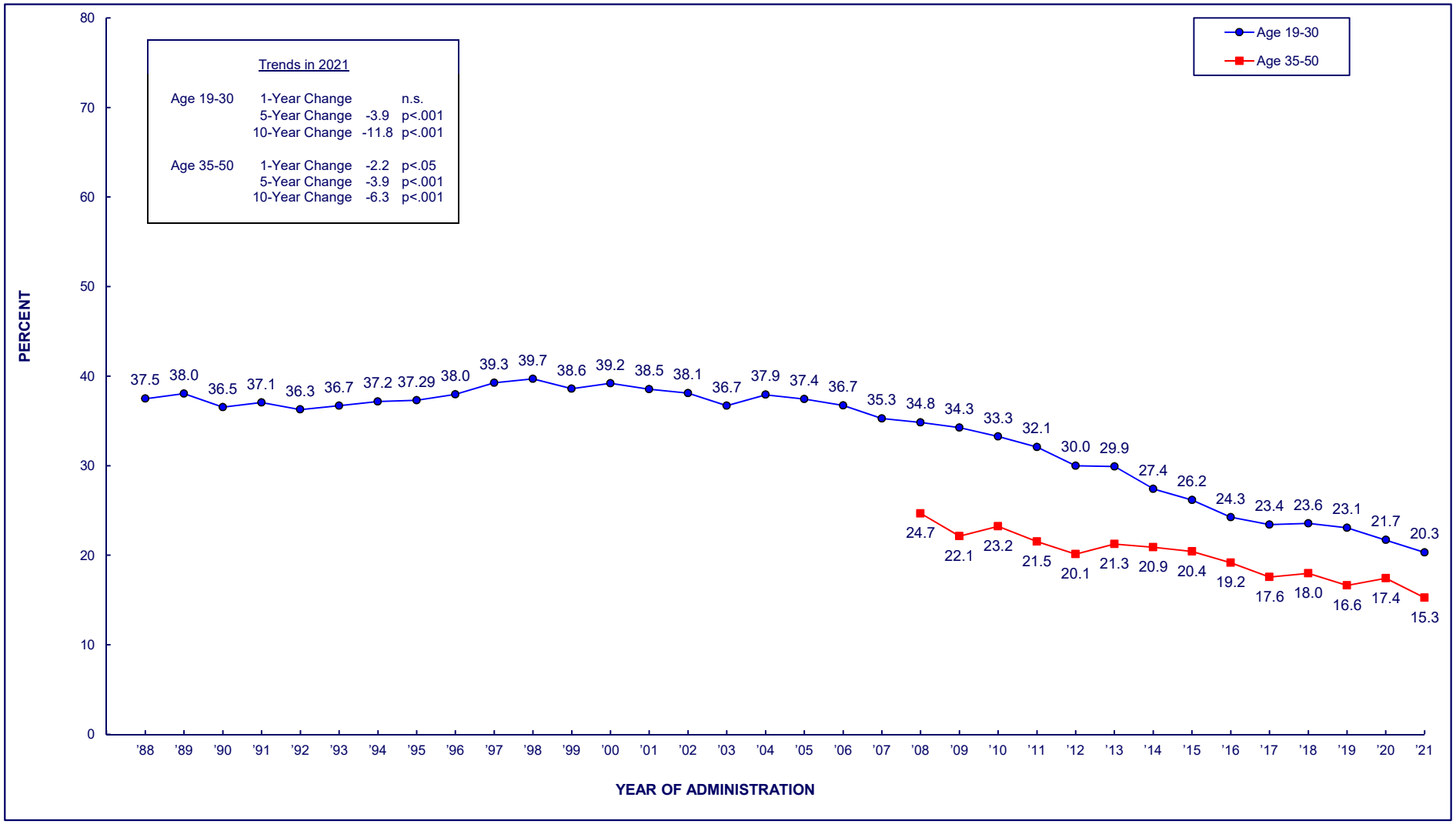
UPDATED FIGURE 11

ALCOHOL

Trends in Two-Week Prevalence of High-Intensity Drinking (15+ Drinks in a Row) among Respondents of Modal Ages 19 through 30



UPDATED FIGURE 12
CIGARETTES
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



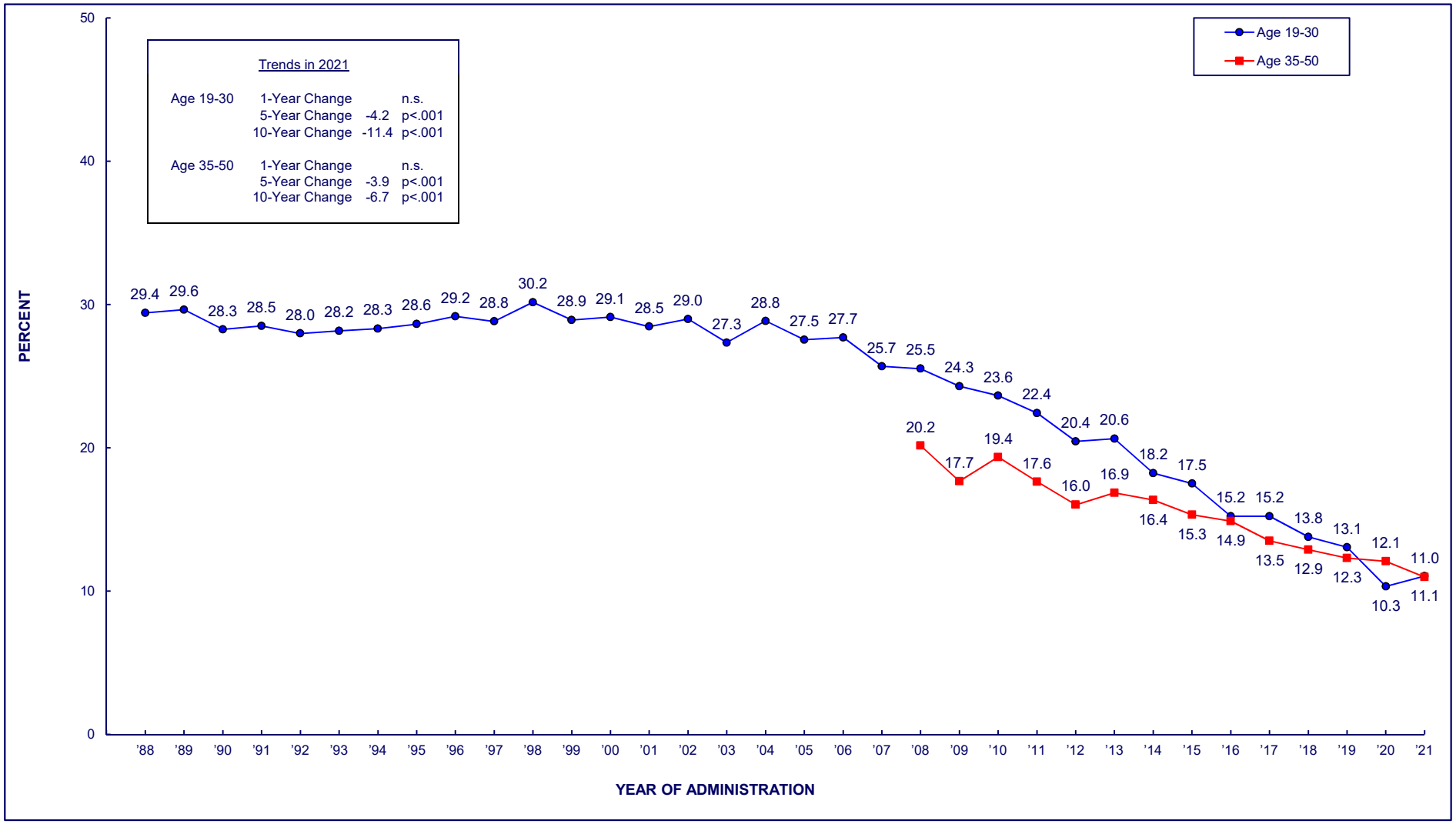
(Age-specific data provided in the following table.)

UPDATED TABLE 11
CIGARETTES
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

Year	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1978	49.7											
1979	51.3											
1980	47.9	47.3										
1981	45.1	47.6										
1982	45.1	46.0	44.5									
1983	45.1	43.7	45.2									
1984	43.9	42.2	41.8	41.4								
1985	43.6	43.8	39.7	42.1								
1986	43.3	41.2	39.6	39.5	39.7							
1987	43.4	43.4	41.3	36.0	38.2							
1988	41.6	40.6	36.9	35.5	35.3	35.1						
1989	42.0	39.4	39.5	37.9	33.7	35.8						
1990	40.4	39.4	37.7	36.1	32.7	33.3						
1991	42.0	39.4	37.4	36.5	35.6	31.7						
1992	41.5	40.4	37.4	34.0	34.6	30.3						
1993	42.4	41.5	36.0	35.2	32.7	33.0						
1994	45.2	41.2	37.8	34.8	33.3	31.4	29.7					
1995	44.3	41.9	37.3	35.7	33.0	31.7	29.5					
1996	45.9	44.6	39.8	35.5	32.6	29.9	32.0					
1997	48.1	44.0	38.6	39.0	34.3	32.1	28.3					
1998	47.0	45.5	42.8	38.6	33.9	31.0	29.7	27.4				
1999	47.7	43.9	42.8	34.5	32.0	31.4	29.6	27.8				
2000	45.0	45.1	41.6	38.1	35.6	30.6	29.1	27.5				
2001	43.2	45.8	41.5	39.7	32.7	29.2	27.3	27.3				
2002	42.0	42.7	41.3	37.3	34.2	32.0	30.1	23.5				
2003	40.1	39.7	40.0	35.5	35.2	30.7	27.2	27.4	26.2			
2004	41.7	43.3	42.1	39.0	33.1	29.9	27.0	25.8	24.2			
2005	39.4	39.8	39.2	40.9	35.3	30.9	27.0	25.3	25.8			
2006	36.2	39.7	38.7	38.4	35.6	32.2	25.4	23.2	22.9			
2007	34.4	38.1	38.0	36.5	34.6	30.4	25.0	23.8	21.6			
2008	32.3	36.9	38.6	33.6	35.6	31.9	29.4	24.2	22.5	22.9		
2009	32.1	36.7	36.3	34.5	32.4	33.2	23.9	20.3	23.3	20.8		
2010	30.5	35.2	34.8	34.9	32.1	31.8	26.1	20.9	23.3	22.7		
2011	31.1	35.3	34.7	33.4	29.5	28.0	28.8	17.6	19.0	21.0		
2012	26.7	30.0	32.3	32.9	30.8	26.9	24.6	16.7	20.0	19.1		
2013	28.2	32.4	31.7	30.8	29.2	26.9	23.0	23.2	19.2	19.9	17.8	
2014	25.9	27.6	28.9	25.7	28.8	27.4	27.2	18.8	18.9	19.2	18.5	
2015	26.9	27.9	27.7	28.6	25.9	20.3	26.9	19.7	15.5	20.2	18.4	
2016	17.4	27.5	25.9	25.7	23.1	25.4	24.1	20.1	15.5	17.6	16.9	
2017	17.9	27.1	25.6	26.6	24.0	19.0	20.3	20.4	12.9	16.8	16.6	
2018	19.0	23.4	29.0	23.1	24.2	22.6	21.6	18.9	17.5	14.3	18.4	16.0
2019	17.1	25.9	22.8	26.1	23.8	22.6	19.6	18.0	13.9	15.6	16.4	14.6
2020	18.9	21.7	23.4	24.9	21.8	19.1	20.7	17.9	18.7	12.6	15.9	16.1
2021	17.0	18.3	20.2	21.5	22.8	20.6	16.7	15.8	14.0	14.6	15.1	13.8

Source.

UPDATED FIGURE 13
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



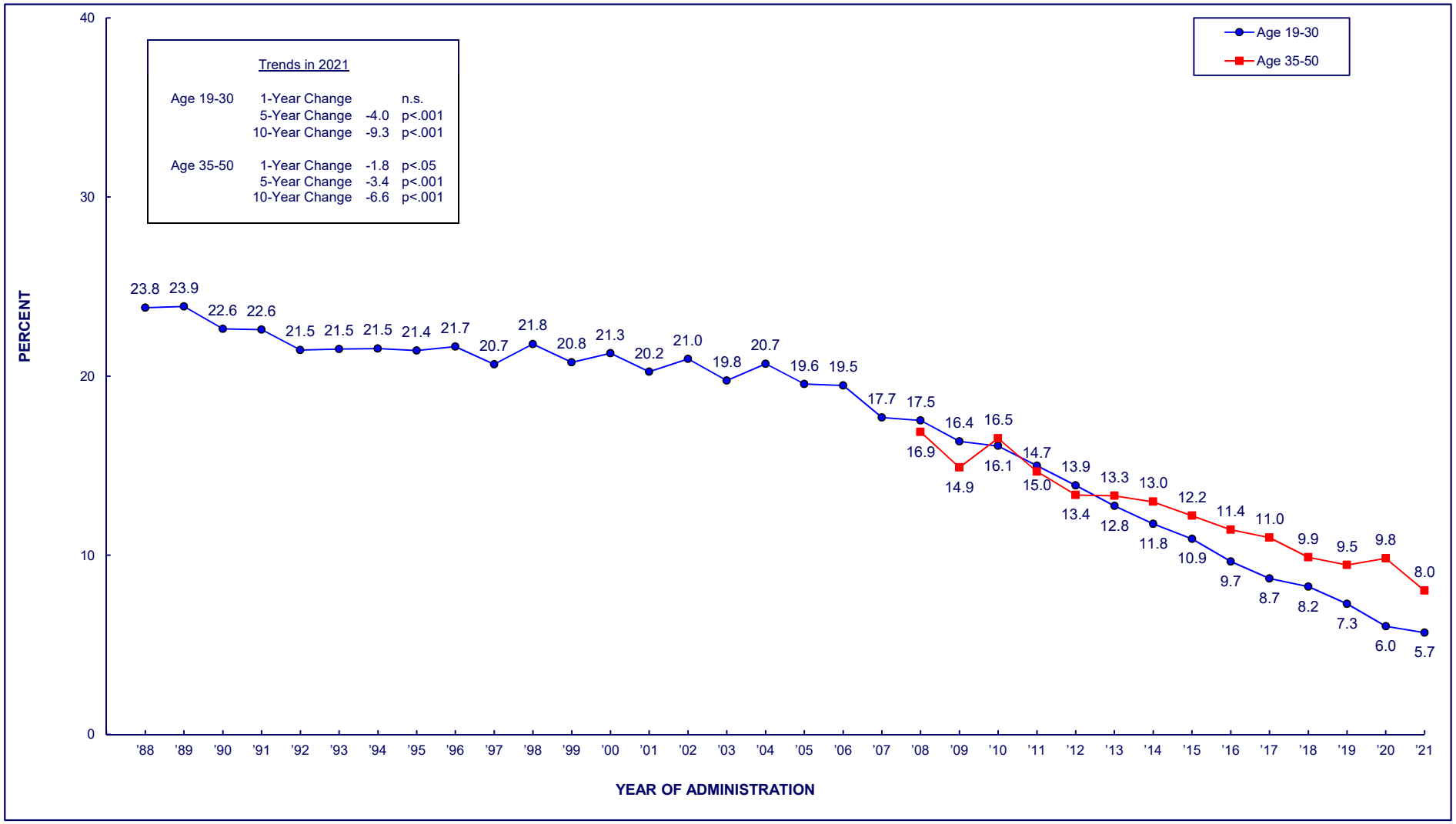
(Age-specific data provided in the following table.)

UPDATED TABLE 12
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	38.8												
1977	38.4												
1978	36.7	39.3											
1979	34.4	39.1											
1980	30.5	37.0	38.0										
1981	29.4	34.6	37.0										
1982	30.0	33.7	36.7	37.5									
1983	30.3	33.4	33.8	35.9									
1984	29.3	32.4	33.6	34.6	33.8								
1985	30.1	31.4	33.3	32.5	34.9								
1986	29.6	30.6	32.1	31.2	31.7	33.7							
1987	29.4	30.1	32.7	32.7	28.8	32.0							
1988	28.7	28.3	30.3	30.2	28.6	29.5	29.7						
1989	28.6	28.2	29.9	30.3	30.8	28.2	30.2						
1990	29.4	27.1	28.7	28.8	29.1	27.5	28.4						
1991	28.3	28.2	28.5	28.7	30.1	29.8	25.5						
1992	27.8	30.1	28.8	28.6	27.6	28.5	24.5						
1993	29.9	29.0	29.8	27.8	28.4	26.5	27.6						
1994	31.2	32.5	30.2	27.4	27.2	26.6	26.2	25.9					
1995	33.5	32.7	31.2	28.6	26.3	27.6	25.6	26.2					
1996	34.0	34.3	32.9	30.4	27.2	26.3	24.1	27.0					
1997	36.5	33.9	31.4	28.3	28.5	25.4	25.7	22.8					
1998	35.1	34.0	33.3	32.3	30.8	26.1	24.9	25.1	24.1				
1999	34.6	36.0	32.8	32.6	25.9	23.3	23.6	23.8	24.5				
2000	31.4	32.0	34.5	30.6	29.2	26.6	22.4	24.9	23.5				
2001	29.5	31.9	33.6	31.4	28.8	24.8	21.0	21.3	24.1				
2002	26.7	30.4	32.4	32.9	27.8	25.6	25.3	24.1	19.7				
2003	24.4	28.3	29.4	29.9	27.4	26.5	23.0	20.4	24.1	22.0			
2004	25.0	29.0	31.8	33.3	31.1	26.0	22.7	20.4	21.1	21.0			
2005	23.2	26.5	29.4	28.4	31.2	27.0	23.2	21.1	21.6	22.5			
2006	21.6	26.1	29.0	28.4	30.3	27.4	25.2	18.3	18.6	19.8			
2007	21.6	21.6	28.2	28.4	26.9	26.2	23.1	18.6	19.4	18.4			
2008	20.4	21.2	26.5	28.2	24.5	27.8	24.9	22.2	19.1	19.7	19.8		
2009	20.1	20.9	25.3	24.8	25.4	24.4	24.9	17.9	16.1	19.0	17.5		
2010	19.2	20.6	23.1	24.3	24.4	23.2	26.0	20.0	17.7	19.6	20.0		
2011	18.7	19.5	24.2	22.9	24.6	21.9	21.1	21.8	15.3	16.2	17.3		
2012	17.1	16.9	20.3	20.5	22.3	22.9	19.7	18.9	12.9	16.4	15.8		
2013	16.3	18.7	22.3	21.5	20.4	21.4	19.2	18.1	19.0	13.9	16.8	14.7	
2014	13.6	15.9	18.2	18.8	16.5	20.2	19.7	19.4	14.5	16.2	15.5	15.1	
2015	11.4	17.0	18.8	19.3	19.4	15.6	14.9	19.0	14.7	11.5	16.4	15.6	
2016	10.5	9.7	16.1	16.0	16.4	15.6	16.9	17.3	14.8	12.8	15.0	14.5	
2017	9.7	9.7	17.8	17.5	18.2	15.8	12.0	15.5	14.5	9.9	14.1	13.2	
2018	7.6	11.2	12.4	16.8	14.2	13.9	13.9	12.3	13.2	14.4	11.5	15.3	13.9
2019	5.7	8.4	13.3	10.8	15.2	15.4	14.9	13.0	13.8	11.6	11.0	13.2	12.2
2020	7.5	8.1	7.8	11.4	11.6	10.9	11.5	12.0	13.0	13.4	9.9	12.1	13.1
2021	4.1	7.2	8.3	9.4	11.2	15.0	13.2	12.4	11.1	9.0	11.4	11.4	10.1

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 14
CIGARETTES
Trends in 30-Day Prevalence of Daily Use
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 13
CIGARETTES
Trends in 30-Day Prevalence of Daily Use among Respondents of Modal Ages 18 through 60, by Age Group

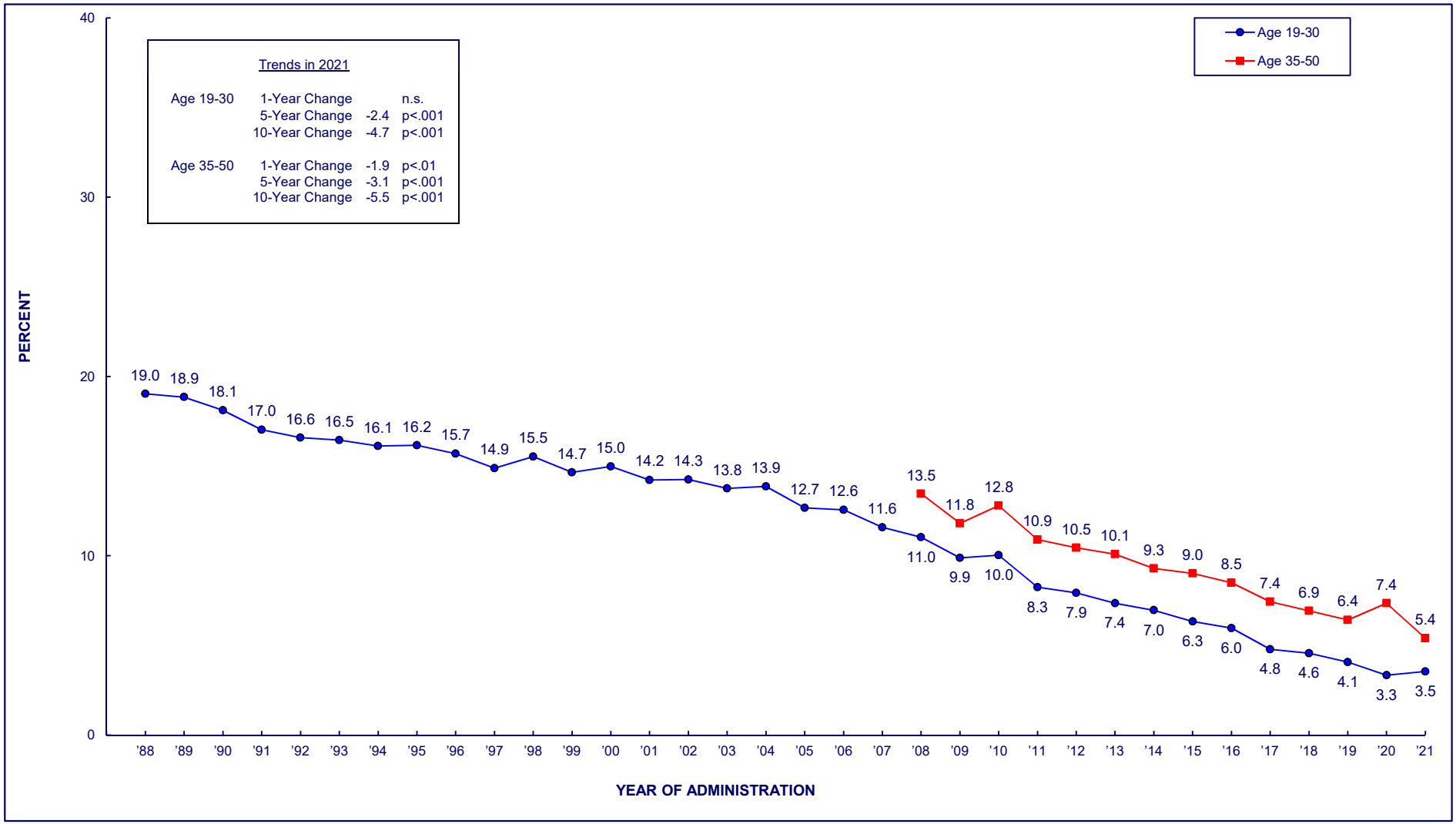
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	28.8												
1977	28.8												
1978	27.5	31.0											
1979	25.4	30.7											
1980	21.3	30.0	31.3										
1981	20.3	25.7	30.7										
1982	21.1	25.1	29.1	30.7									
1983	21.2	25.2	26.4	29.8									
1984	18.7	25.1	26.6	29.0	28.9								
1985	19.5	23.7	26.1	25.7	29.9								
1986	18.7	22.3	25.2	26.3	27.8	28.9							
1987	18.7	22.7	24.8	27.0	24.3	27.7							
1988	18.1	19.6	22.8	24.6	24.0	25.6	26.3						
1989	18.9	19.5	22.9	24.2	26.3	23.9	26.3						
1990	19.1	19.3	20.5	23.2	24.4	23.2	25.0						
1991	18.5	20.2	20.7	22.6	24.4	25.4	21.9						
1992	17.2	21.0	21.3	21.3	21.5	22.8	20.8						
1993	19.0	21.1	20.7	20.3	22.2	21.1	23.4						
1994	19.4	23.0	22.4	20.0	20.6	22.0	21.4	23.5					
1995	21.6	21.8	24.0	20.7	20.0	21.7	20.5	23.2					
1996	22.2	22.8	23.6	23.0	21.3	19.9	19.4	23.4					
1997	24.6	22.9	21.4	21.0	20.2	18.2	20.5	19.0					
1998	22.4	24.1	22.9	22.1	22.6	20.2	19.1	21.9	21.6				
1999	23.1	25.3	23.3	21.6	20.0	16.4	18.5	21.0	21.8				
2000	20.6	22.5	26.0	21.7	20.9	20.1	16.9	20.9	20.9				
2001	19.0	21.4	23.1	22.9	21.3	17.7	15.4	17.4	21.2				
2002	16.9	21.0	24.0	24.6	20.2	18.2	18.0	20.1	17.5				
2003	15.8	19.5	20.9	20.6	21.1	19.5	17.1	16.8	21.1	20.2			
2004	15.6	18.9	21.3	24.9	23.8	18.5	17.3	15.3	17.4	18.5			
2005	13.6	16.8	20.1	19.5	23.3	19.1	18.6	16.4	18.2	20.1			
2006	12.2	15.2	18.7	20.0	23.0	21.2	18.9	13.9	15.8	17.4			
2007	12.3	12.1	18.9	19.4	19.4	19.7	16.8	14.2	16.7	16.4			
2008	11.4	13.8	16.9	18.7	17.1	20.3	18.2	17.4	15.8	16.8	17.6		
2009	11.2	12.3	15.2	17.1	18.3	17.6	17.7	14.2	12.4	17.0	15.9		
2010	10.7	11.8	15.9	16.4	16.1	17.8	18.5	15.7	14.9	17.3	18.1		
2011	10.3	11.6	15.9	13.3	18.8	14.8	15.5	16.9	12.3	14.2	15.3		
2012	9.3	9.6	12.5	12.9	15.7	16.9	15.8	14.3	10.6	14.2	14.1		
2013	8.5	12.1	12.5	13.1	11.0	14.6	13.2	12.7	14.7	11.3	14.5	13.9	
2014	6.7	8.4	10.9	11.4	11.8	13.9	13.8	15.0	10.8	12.3	13.9	13.4	
2015	5.5	8.2	11.6	12.2	11.9	10.0	11.1	13.1	12.2	9.7	13.9	13.6	
2016	4.8	4.2	9.0	10.1	10.3	10.3	13.1	12.5	10.5	10.7	12.2	12.7	
2017	4.2	5.0	8.7	9.9	10.2	10.9	7.0	11.7	11.6	7.9	12.6	11.7	
2018	3.6	6.8	5.4	8.8	8.3	9.9	9.8	8.5	10.2	11.0	9.7	13.3	12.8
2019	2.4	3.2	5.9	6.1	10.4	8.5	9.0	9.5	9.4	9.7	9.3	11.9	9.9
2020	3.1	4.1	3.9	6.4	6.7	6.9	7.6	10.0	10.6	11.0	7.7	11.1	12.2
2021	2.0	3.4	3.1	3.9	5.8	8.1	8.4	7.7	8.1	6.8	9.4	10.7	9.4

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 15

CIGARETTES

Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 14

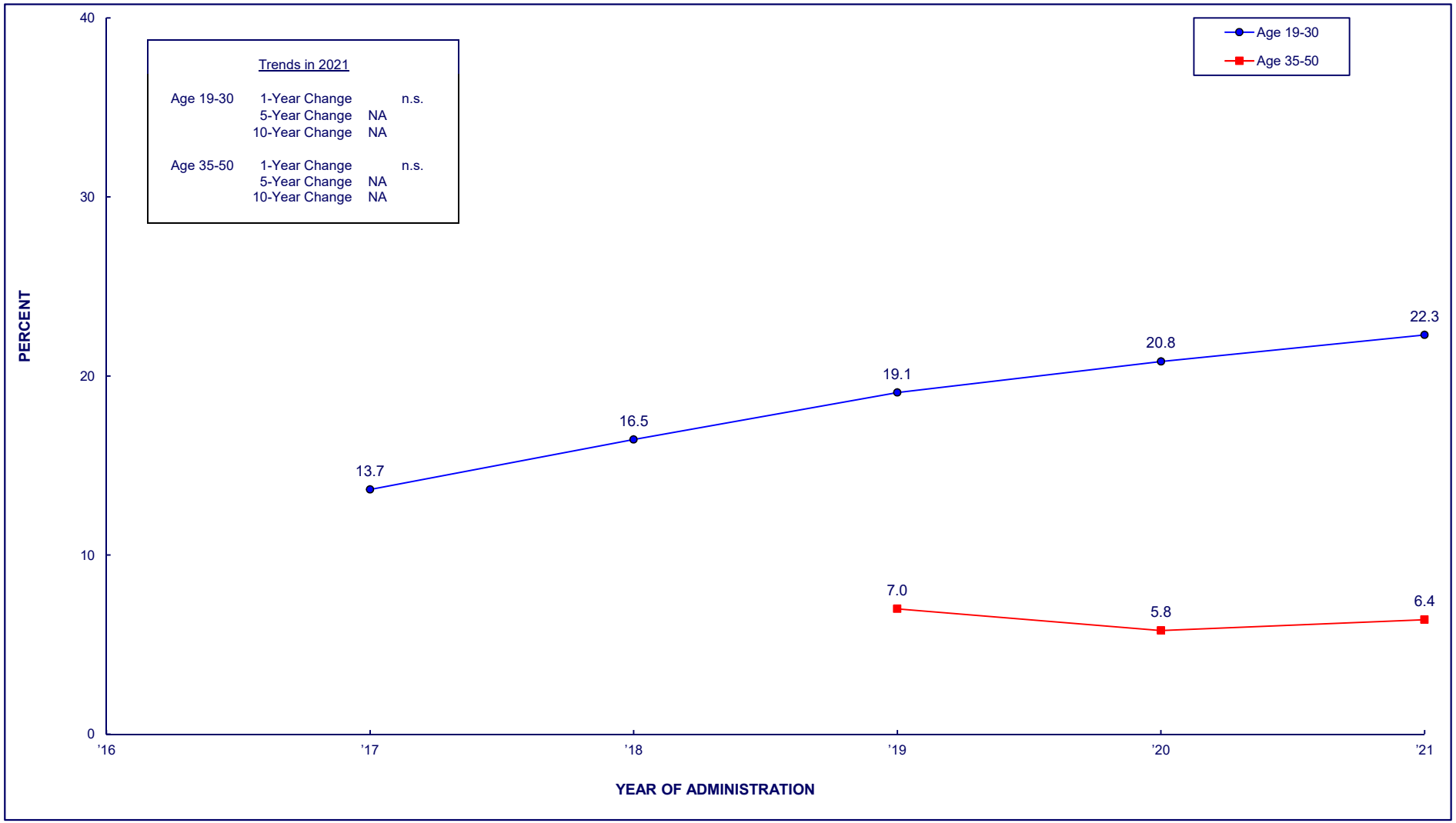
CIGARETTES

Trends in 30-Day Prevalence of Smoking a Half Pack or More per Day among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	19.2												
1977	19.4												
1978	18.8	23.5											
1979	16.5	24.3											
1980	14.3	22.4	25.2										
1981	13.5	19.6	24.7										
1982	14.2	18.8	23.2	25.0									
1983	13.8	17.8	20.2	24.6									
1984	12.3	18.2	22.0	23.6	24.2								
1985	12.5	17.2	20.9	21.3	24.4								
1986	11.4	16.5	20.1	21.8	22.2	24.1							
1987	11.4	15.9	19.6	22.4	20.3	22.9							
1988	10.6	13.7	17.8	19.1	19.4	21.0	23.3						
1989	11.2	13.3	16.7	19.4	21.7	19.9	21.7						
1990	11.3	14.7	15.0	18.4	20.5	18.8	21.0						
1991	10.7	13.1	14.4	17.4	19.3	20.0	17.7						
1992	10.0	14.8	15.6	16.0	16.6	18.7	17.5						
1993	10.9	14.7	14.7	15.2	17.4	17.2	19.2						
1994	11.2	15.1	16.4	14.9	15.7	16.8	17.8	19.7					
1995	12.4	14.9	18.2	15.6	15.0	16.4	17.0	19.2					
1996	13.0	14.6	16.7	16.8	15.3	15.2	15.6	19.3					
1997	14.3	15.5	14.7	16.0	13.6	13.4	16.2	16.0					
1998	12.6	17.3	16.1	15.3	15.9	15.3	13.4	17.6	18.1				
1999	13.2	15.7	15.9	14.4	15.1	12.9	14.1	18.2	17.6				
2000	11.3	14.3	17.9	14.4	15.2	15.1	13.1	15.6	17.3				
2001	10.3	13.9	14.9	16.2	15.6	12.9	11.9	14.1	16.9				
2002	9.1	12.4	13.5	16.6	14.2	14.3	14.3	14.4	14.5				
2003	8.4	11.8	14.2	14.7	14.0	14.6	13.0	13.3	16.7	17.8			
2004	8.0	11.7	12.6	16.2	16.6	12.7	13.2	11.1	14.8	15.9			
2005	6.9	9.5	12.0	13.4	14.5	13.1	13.4	12.9	16.0	16.5			
2006	5.9	8.7	11.2	13.0	14.7	14.3	13.4	10.9	12.9	14.8			
2007	5.7	6.8	11.0	11.3	14.8	13.4	12.3	10.5	12.6	13.1			
2008	5.4	7.3	9.8	12.4	10.9	12.3	13.4	12.8	12.4	14.1	14.5		
2009	5.0	7.3	8.7	9.3	11.3	12.3	10.6	11.7	8.5	14.2	12.7		
2010	4.7	6.2	9.5	10.2	10.8	11.6	11.8	11.9	11.0	13.9	14.3		
2011	4.3	4.6	8.6	8.0	10.9	7.6	9.7	11.8	8.6	11.3	12.0		
2012	4.0	4.2	7.4	7.9	8.0	11.0	9.1	11.1	7.7	11.1	11.8		
2013	3.4	6.4	6.4	8.3	5.9	9.5	7.6	9.3	10.6	9.0	11.3	11.4	
2014	2.6	4.5	6.1	7.4	7.2	8.6	7.7	9.9	7.4	9.1	10.7	10.6	
2015	2.1	4.0	5.6	7.5	6.9	5.8	8.0	8.0	9.5	7.3	11.2	11.2	
2016	1.8	2.7	4.3	6.7	6.6	6.7	8.1	9.5	6.6	8.2	9.8	9.6	
2017	1.7	2.9	4.6	6.8	4.9	5.3	4.0	6.4	7.6	5.6	9.8	9.3	
2018	1.5	3.1	3.2	4.8	4.3	6.3	5.5	5.8	6.9	8.2	6.7	10.7	10.1
2019	0.9	2.1	2.1	3.7	6.5	4.0	5.6	5.1	5.6	7.6	7.1	9.5	7.7
2020	1.4	1.4	1.3	4.1	4.2	4.9	3.6	7.7	7.2	9.0	5.5	9.1	9.4
2021	0.8	2.6	2.6	2.4	2.7	5.5	4.8	4.5	5.2	4.8	7.0	8.1	7.1

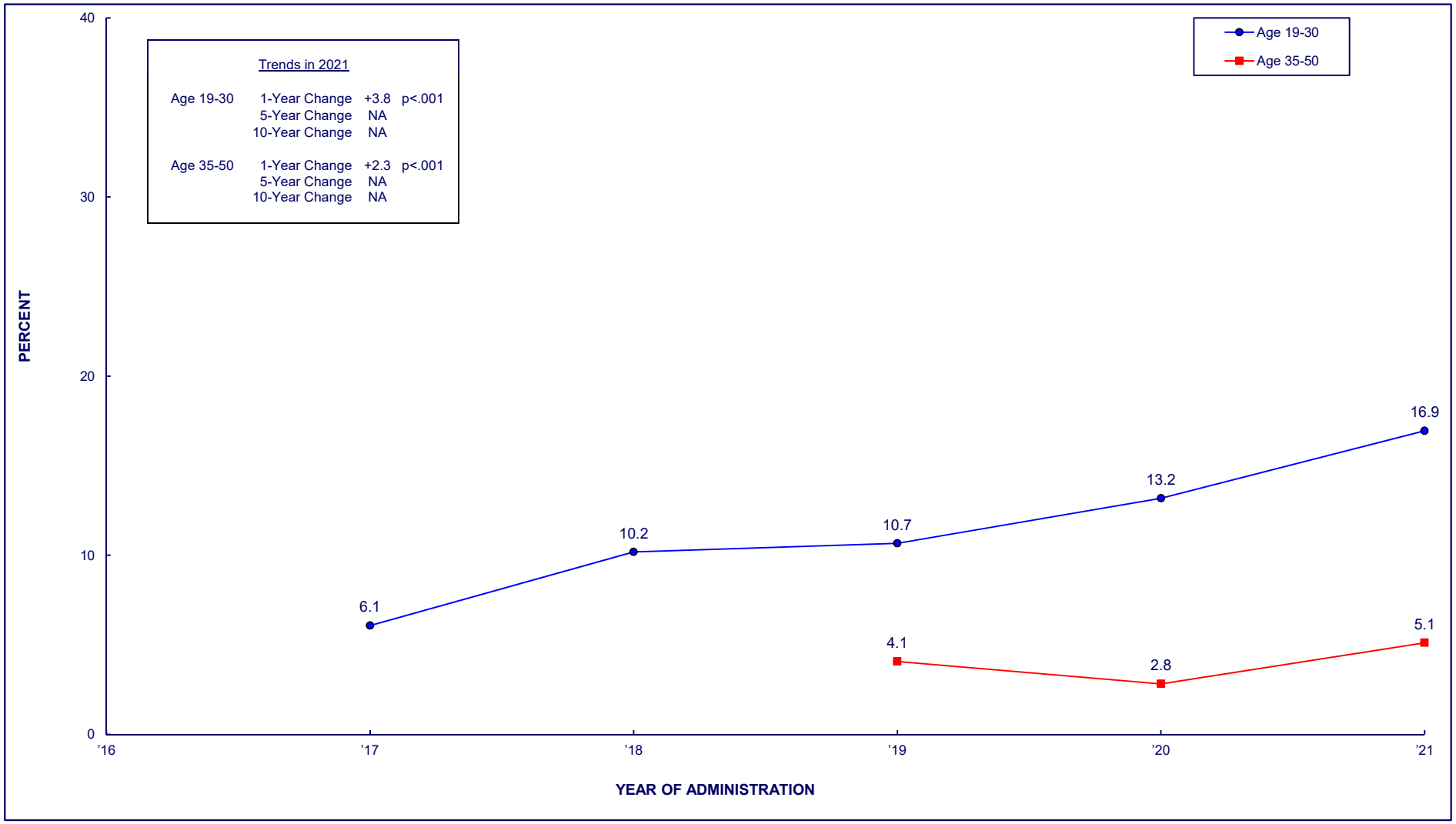
Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 16
VAPING NICOTINE
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED FIGURE 17
VAPING NICOTINE
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



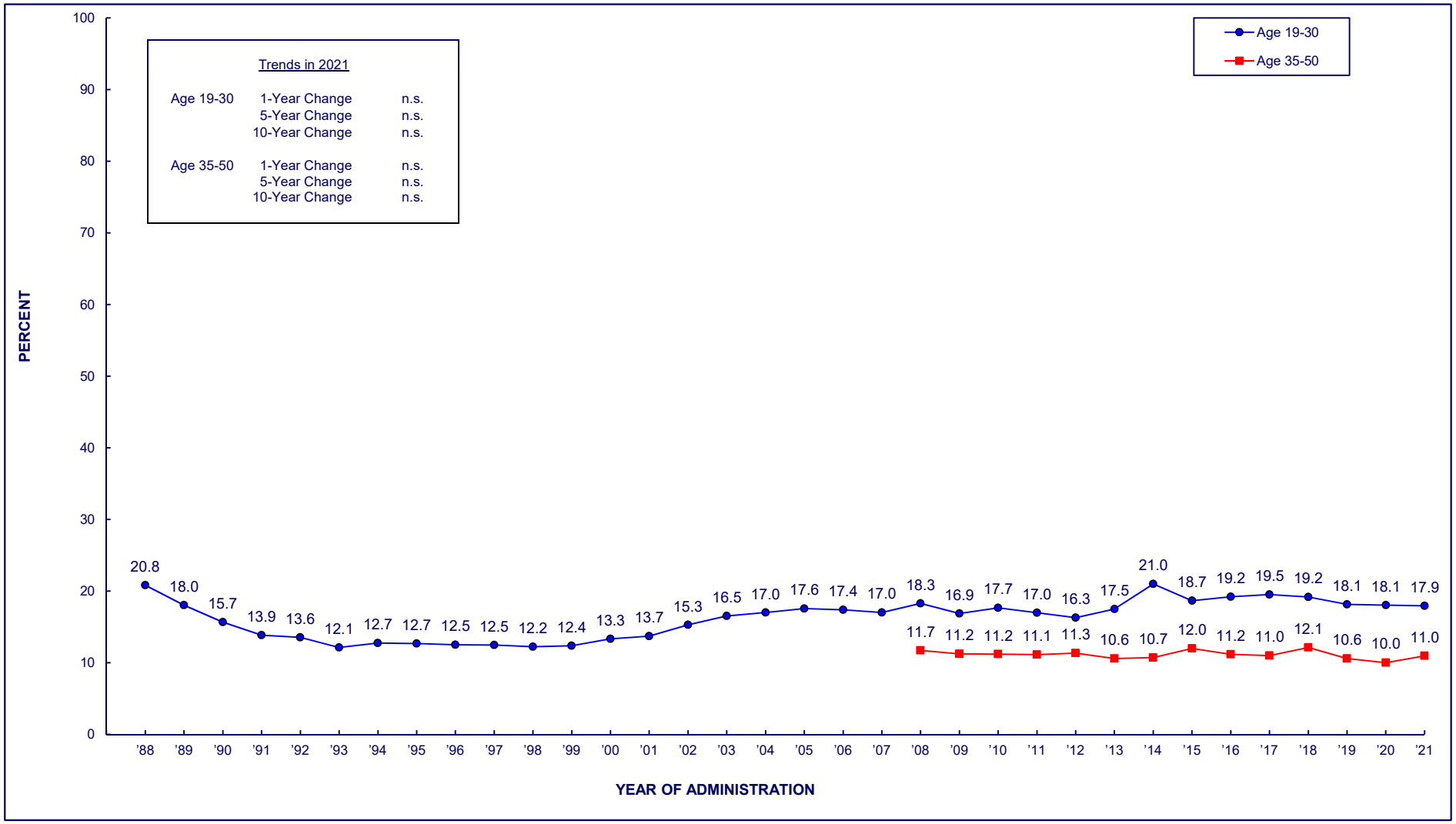
(Age-specific data provided in the following table.)

UPDATED TABLE 15
VAPING NICOTINE
Trends in 30-Day Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
2017	11.0	5.9	6.2	7.7	5.4	7.3	4.0						
2018	20.9	13.6	14.6	11.3	9.7	5.8	7.0						
2019	25.5	16.4	13.5	12.5	8.4	6.8	7.3	6.5	4.2	3.1	3.0	3.7	1.7
2020	24.7	18.9	19.9	12.9	13.7	9.1	6.9	3.3	3.0	2.3	2.8	1.6	1.7
2021	19.6	21.0	24.2	19.4	17.4	11.5	10.6	7.5	5.7	4.0	3.5	2.3	0.8

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 18
ANY DRUG OTHER THAN MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 16
ANY DRUG OTHER THAN MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 50 [1], by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50
1976	25.4										
1977	26.0										
1978	27.1	27.7									
1979	28.2	29.3									
1980	30.4	33.2	35.4								
1981	34.0	34.1	36.0								
1982	30.1	32.2	33.8	34.9							
1983	28.4	29.4	33.3	32.8							
1984	28.0	27.5	31.6	29.3	30.1						
1985	27.4	28.3	29.4	33.0	30.0						
1986	25.9	24.9	28.9	29.8	25.6	26.6					
1987	24.1	22.8	25.9	23.1	25.4	23.1					
1988	21.1	20.4	22.6	21.1	21.1	20.7	18.9				
1989	20.0	17.0	19.9	19.4	17.4	18.5	16.2				
1990	17.9	15.9	16.8	17.5	17.0	15.6	11.5				
1991	16.2	14.0	14.3	14.7	15.0	13.8	11.3				
1992	14.9	13.9	14.7	14.6	13.6	13.9	10.6				
1993	17.1	13.4	13.4	12.4	13.3	11.9	8.7				
1994	18.0	15.4	14.7	12.7	12.4	11.1	10.3	11.6			
1995	19.4	18.0	14.5	11.6	11.2	11.6	9.2	10.3			
1996	19.8	17.4	14.2	13.7	10.1	11.0	9.0	11.3			
1997	20.7	17.4	17.0	11.7	10.5	8.6	9.9	10.1			
1998	20.2	16.1	15.2	14.3	11.2	9.7	7.2	7.8	9.3		
1999	20.7	18.5	14.3	14.7	11.7	8.5	7.0	9.5	8.4		
2000	20.4	19.4	16.4	14.1	13.5	10.3	6.9	9.3	7.8		
2001	21.6	17.3	19.4	14.2	13.3	11.6	7.1	8.9	7.2		
2002	20.9	18.9	18.5	17.4	14.6	13.2	9.6	10.3	9.3		
2003	19.8	19.8	20.8	20.1	14.2	15.1	10.1	10.6	6.8	9.6	
2004	20.5	19.5	20.4	21.0	16.0	14.9	11.2	10.6	9.2	10.1	
2005	19.7	19.5	20.5	17.5	19.6	14.2	14.6	11.0	10.1	8.5	
2006	19.2	18.0	21.8	18.6	17.3	15.5	13.6	10.7	10.1	10.0	
2007	18.5	16.9	19.9	19.3	17.2	16.9	12.2	11.2	12.0	10.9	
2008	18.3	17.2	19.4	20.8	18.9	19.0	14.6	13.8	11.8	10.6	10.7
2009	17.0	14.0	22.0	17.3	18.1	14.4	15.4	13.2	10.4	10.4	11.0
2010	17.3	16.7	20.1	20.2	19.3	16.6	13.0	12.6	9.6	11.9	10.8
2011	17.6	17.7	17.5	18.6	17.8	16.3	13.5	14.7	9.2	10.3	10.4
2012	17.0	15.9	17.6	18.9	15.4	16.9	12.6	12.8	10.6	11.4	10.5
2013	17.8	17.7	21.3	17.6	17.9	16.6	13.5	13.2	11.3	10.4	8.1
2014	15.9	22.0	23.0	21.7	22.3	19.3	17.8	16.1	9.1	8.6	9.4
2015	15.2	17.9	21.8	22.1	18.7	17.8	13.6	16.0	10.6	10.4	11.3
2016	14.3	17.2	24.4	19.6	18.8	19.3	16.0	14.8	12.3	8.7	9.6
2017	13.3	16.7	20.9	23.2	21.5	18.1	16.6	13.6	11.2	9.7	9.9
2018	12.4	13.3	22.0	22.2	20.5	19.2	17.4	15.0	10.7	11.2	11.9
2019	11.5	11.5	20.5	19.5	19.3	19.4	18.6	14.3	11.2	9.4	8.1
2020	11.4	14.5	19.4	19.2	21.3	18.2	15.2	13.7	10.8	8.8	7.1
2021	7.2	15.2	15.0	20.1	21.7	18.3	16.6	13.2	10.2	12.0	8.6

Source. The Monitoring the Future study, the University of Michigan.

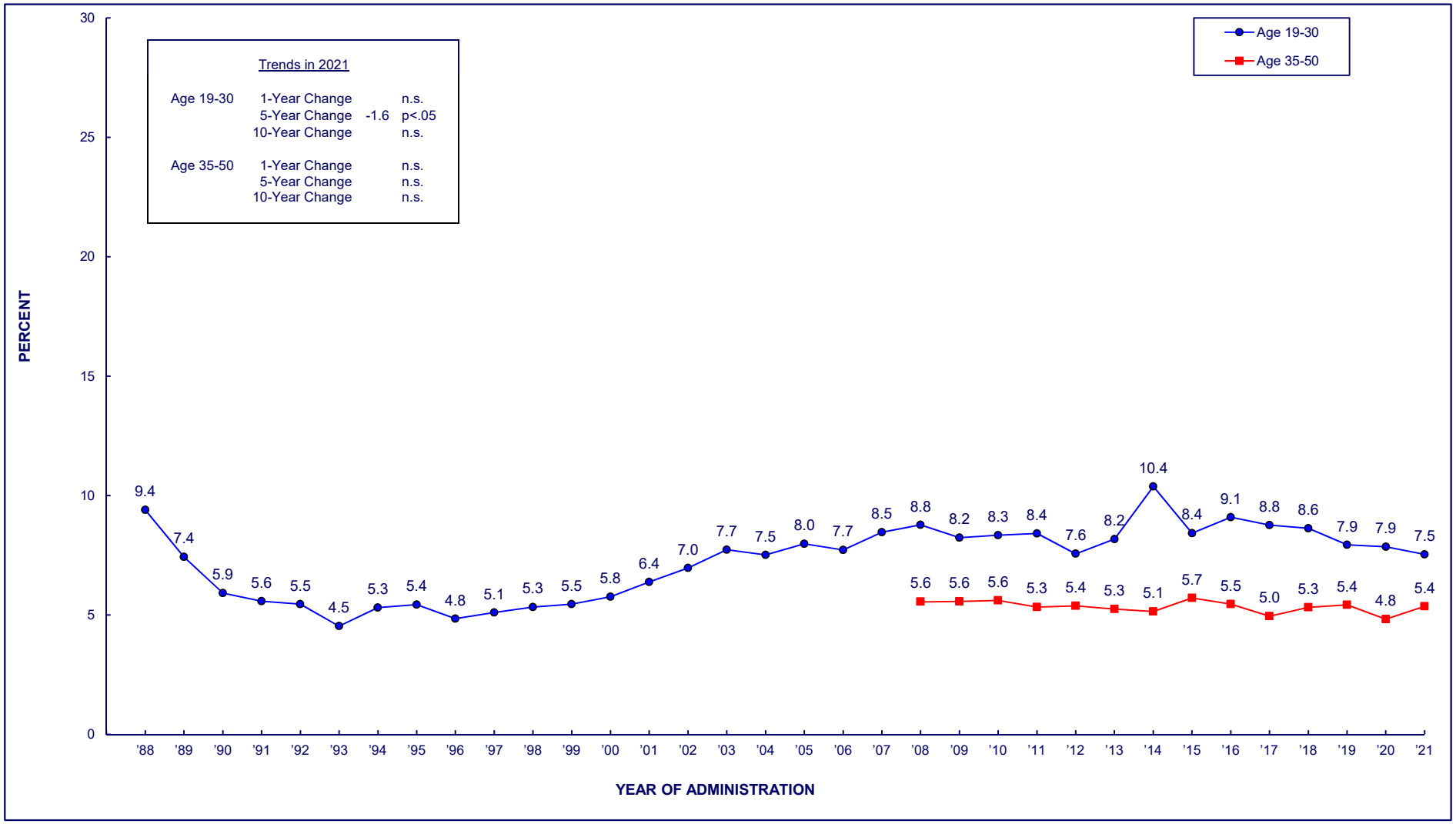
[1]Questions about the use of hallucinogens were not included in the questionnaires for 55- and 60-year-olds. Therefore, we only present estimates through age 50 here.

UPDATED FIGURE 19

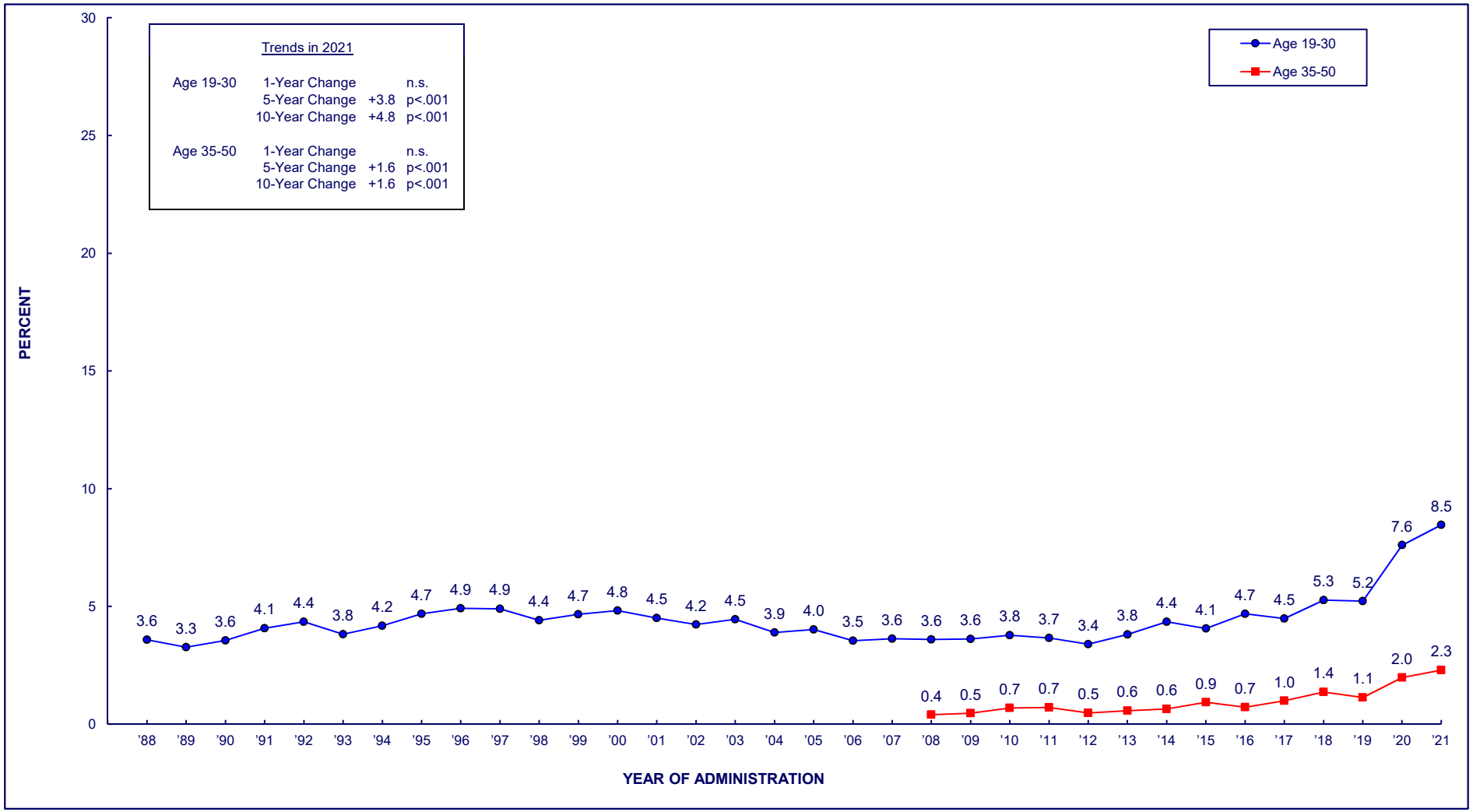
ANY DRUG OTHER THAN MARIJUANA

Trends in 30-Day Prevalence

among Respondents of Modal Ages 19 through 50, by Age Group



UPDATED FIGURE 20
HALLUCINOGENS
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 17
HALLUCINOGENS [1]
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 50, [2] by Age Group

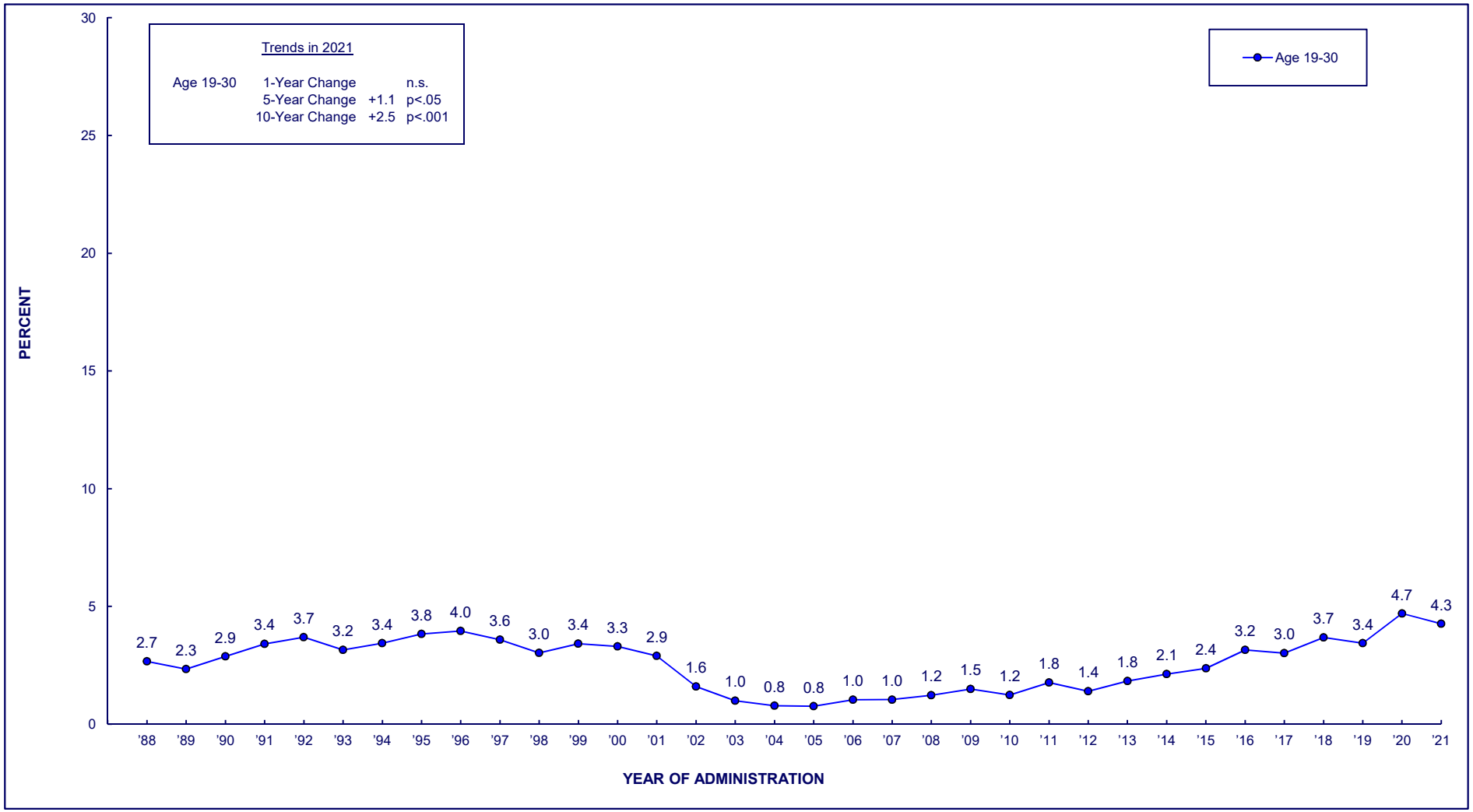
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50
1976	9.4										
1977	8.8										
1978	9.6	9.1									
1979	9.9	10.8									
1980	9.3	9.8	9.8								
1981	9.0	9.2	11.0								
1982	8.1	10.1	9.2	7.9							
1983	7.3	7.6	7.6	7.5							
1984	6.5	6.1	7.5	5.5	4.7						
1985	6.3	5.9	6.0	4.8	5.0						
1986	6.0	7.1	5.5	4.7	3.1	2.5					
1987	6.4	6.3	5.4	4.1	2.5	2.8					
1988	5.5	5.8	6.0	3.8	2.6	1.4	2.1				
1989	5.6	5.9	4.6	3.9	2.1	1.7	1.6				
1990	5.9	6.3	5.3	4.5	2.3	1.9	1.3				
1991	5.8	6.5	5.9	4.7	3.3	2.6	1.5				
1992	5.9	7.1	6.9	4.2	3.9	2.3	2.0				
1993	7.4	7.1	4.9	4.6	3.2	2.1	1.4				
1994	7.6	7.5	7.0	4.3	2.7	2.5	1.5	0.7			
1995	9.3	9.5	5.9	4.8	3.6	2.4	1.9	0.6			
1996	10.1	10.6	6.8	5.6	3.3	2.1	1.3	0.6			
1997	9.8	10.1	7.6	5.0	3.8	1.7	1.6	1.1			
1998	9.0	7.6	6.6	5.7	3.5	2.2	1.2	0.4	0.8		
1999	9.4	9.4	7.1	6.0	2.7	1.5	1.5	0.8	0.4		
2000	8.1	8.5	7.4	4.6	4.2	2.8	1.9	0.5	1.1		
2001	9.1	8.7	8.0	4.6	3.2	1.8	1.5	0.7	0.1		
2002	6.6	7.0	5.9	5.3	3.0	2.3	2.4	0.2	0.6		
2003	5.9	7.8	7.1	5.7	3.0	2.4	1.5	0.6	0.5	0.6	
2004	6.2	6.1	6.5	4.2	3.2	2.3	1.6	0.9	0.5	0.3	
2005	5.5	6.2	5.6	3.8	4.1	2.2	2.4	0.3	0.4	0.1	
2006	4.9	5.8	5.5	4.4	2.3	2.1	1.4	0.3	0.1	0.1	
2007	5.4	5.4	4.7	4.0	3.3	2.9	1.5	0.4	0.5	0.3	
2008	5.9	5.3	5.0	3.5	3.2	1.9	2.7	1.2	0.1	0.1	0.2
2009	4.7	4.7	5.3	4.0	3.5	2.2	2.0	0.9	0.4	0.3	0.3
2010	5.5	5.3	5.0	4.8	3.5	2.0	1.9	1.9	0.5	0.3	0.2
2011	5.2	5.0	5.4	3.4	3.1	2.8	2.2	1.5	0.6	0.6	0.1
2012	4.8	5.4	4.1	3.5	2.7	2.2	2.4	1.0	0.2	0.5	0.2
2013	4.5	5.4	4.6	4.2	3.0	2.9	2.7	1.4	0.7	0.2	0.0
2014	4.0	7.0	5.9	4.8	3.3	2.7	2.7	1.3	0.3	0.6	0.4
2015	4.2	5.7	6.2	3.5	4.6	2.1	2.6	2.8	0.6	0.1	0.4
2016	4.3	4.7	6.5	4.9	5.6	2.5	4.1	1.4	1.0	0.2	0.4
2017	4.4	4.7	5.4	5.8	5.4	3.5	2.2	1.7	1.3	0.7	0.3
2018	4.3	5.6	6.2	5.0	5.1	6.5	3.4	1.7	2.1	1.1	0.6
2019	4.6	5.1	6.9	5.3	5.3	3.7	5.2	2.9	1.1	0.6	0.2
2020	5.3	7.5	10.1	8.8	8.6	5.5	5.5	2.9	2.5	1.7	1.0
2021	4.1	10.9	7.0	9.3	9.6	7.7	7.5	3.5	3.1	2.3	0.5

Source. The Monitoring the Future study, the University of Michigan.

[1]Unadjusted for the possible underreporting of PCP.

[2]Questions about the use of hallucinogens were not included in the questionnaires for 55- and 60-year-olds.

UPDATED FIGURE 21
LSD
Trends in 12-Month Prevalence among Respondents of Modal Ages 19 through 30



(Age-specific data provided in the following table.)

UPDATED TABLE 18
LSD
Trends in 12-Month Prevalence among Respondents of Modal Ages 18 through 35, by Age Group

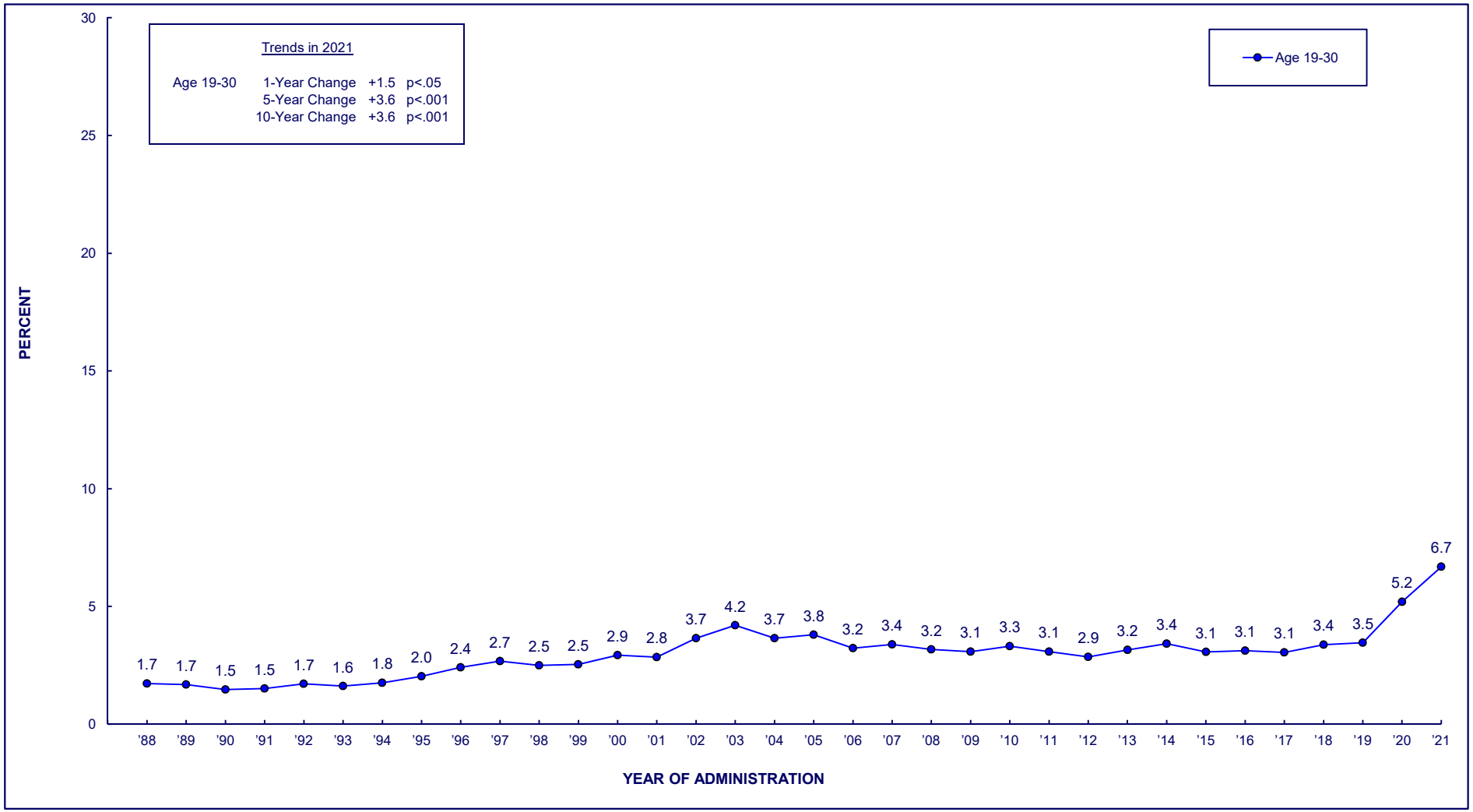
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35 [1]
1976	6.4							
1977	5.5							
1978	6.3	5.9						
1979	6.6	8.0						
1980	6.5	7.4	7.4					
1981	6.5	6.8	8.2					
1982	6.1	7.8	6.8	5.9				
1983	5.4	5.6	5.2	4.7				
1984	4.7	4.3	5.2	3.2	2.7			
1985	4.4	3.9	3.4	2.8	3.1			
1986	4.5	5.0	4.2	2.8	1.5	1.7		
1987	5.2	5.2	3.9	2.4	1.6	2.0		
1988	4.8	4.8	4.3	2.9	1.8	0.9	1.4	
1989	4.9	4.5	3.5	2.7	1.4	1.2	0.8	
1990	5.4	5.4	4.4	3.6	1.8	1.6	0.9	
1991	5.2	5.7	5.1	4.1	2.7	2.0	1.1	
1992	5.6	6.7	5.7	3.5	3.3	1.7	1.5	
1993	6.8	6.2	4.2	3.4	2.6	1.8	1.0	
1994	6.9	6.9	6.0	3.3	2.2	1.6	1.0	0.4
1995	8.4	8.1	5.0	4.1	2.5	1.8	1.5	0.4
1996	8.8	9.2	5.4	4.9	2.1	1.6	0.9	0.5
1997	8.4	8.0	5.2	3.9	2.7	1.3	0.8	0.5
1998	7.6	5.7	4.4	4.0	2.2	1.1	0.9	0.2
1999	8.1	7.9	4.7	4.4	2.0	1.1	0.7	0.6
2000	6.6	6.7	4.8	2.6	3.0	1.8	1.2	0.3
2001	6.6	6.5	4.7	2.7	1.8	1.4	0.9	0.5
2002	3.5	3.3	1.9	2.2	0.9	0.6	1.0	*
2003	1.9	1.7	1.5	1.3	0.7	0.6	0.4	*
2004	2.2	1.4	1.5	0.9	0.6	0.3	0.2	0.3
2005	1.8	1.4	1.0	0.8	0.8	0.2	0.4	0.2
2006	1.7	2.2	1.5	0.9	0.9	0.7	0.2	*
2007	2.1	1.4	1.2	1.4	1.3	0.7	0.4	—
2008	2.7	1.9	2.3	0.9	1.0	0.6	0.6	—
2009	1.9	2.5	2.3	1.7	1.4	1.0	0.3	—
2010	2.6	2.4	1.6	1.5	1.1	0.6	0.3	—
2011	2.7	3.1	3.0	1.6	1.2	0.4	1.2	—
2012	2.4	2.6	1.7	1.6	1.3	0.5	0.5	—
2013	2.2	2.8	2.8	2.2	1.6	0.7	0.9	—
2014	2.5	3.7	3.2	2.4	1.6	1.1	0.7	—
2015	2.9	3.5	4.2	2.0	2.8	0.7	1.1	—
2016	3.0	4.1	4.0	3.7	3.9	1.1	2.3	—
2017	3.3	3.1	4.0	4.1	3.9	2.4	0.8	—
2018	3.2	4.8	5.0	2.6	3.2	4.5	2.2	—
2019	3.6	3.5	4.1	3.7	4.5	1.9	3.1	—
2020	3.9	5.7	7.4	4.9	5.6	2.8	2.4	—
2021	2.5	7.0	4.3	3.9	5.8	3.3	2.6	—

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a percentage of less than 0.05%. ' — ' indicates data not available.

[1]Questions about LSD use were not included in the questionnaires administered to the 40-, 45-, 50-, 55-, and 60-year-olds, or the 35-year-olds after 2006.

UPDATED FIGURE 22
HALLUCINOGENS OTHER THAN LSD
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30



(Age-specific data provided in the following table.)

UPDATED TABLE 19
HALLUCINOGENS OTHER THAN LSD [1]
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 30, by Age Group

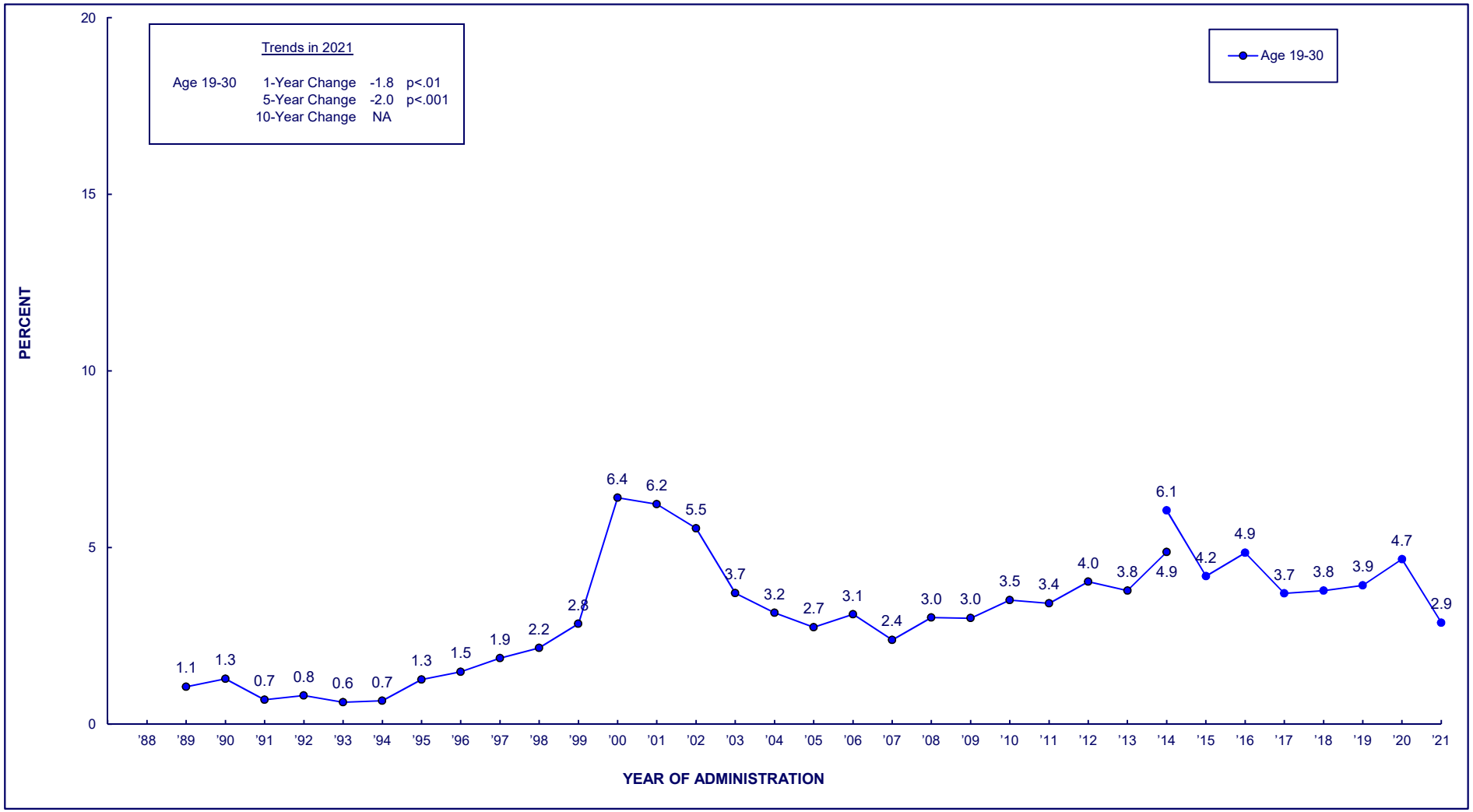
Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30
1976	7.0						
1977	6.9						
1978	7.3	6.9					
1979	6.8	7.2					
1980	6.2	5.5	5.7				
1981	5.6	4.8	6.5				
1982	4.7	6.2	5.2	3.9			
1983	4.1	4.0	4.3	4.2			
1984	3.8	3.3	4.1	3.5	3.1		
1985	3.6	3.7	3.8	2.9	2.8		
1986	3.0	3.9	2.4	2.7	2.0	1.4	
1987	3.2	2.6	2.7	2.6	1.3	1.5	
1988	2.1	2.4	3.2	1.8	1.2	0.7	1.0
1989	2.2	3.0	2.2	2.0	1.3	0.7	1.0
1990	2.1	2.4	2.7	1.6	0.9	0.8	0.6
1991	2.0	2.5	2.2	1.5	1.2	1.1	0.5
1992	1.7	2.2	3.0	1.8	1.6	0.8	0.9
1993	2.2	2.8	1.8	2.2	1.4	0.8	0.8
1994	3.1	2.4	3.0	2.0	1.1	1.3	0.8
1995	3.8	3.9	3.0	1.8	1.7	1.2	0.6
1996	4.4	4.4	3.9	3.0	1.6	1.0	0.7
1997	4.6	5.3	4.9	2.3	1.6	0.9	1.2
1998	4.6	4.4	3.5	3.1	1.9	1.5	0.6
1999	4.3	4.0	4.4	3.7	1.5	0.7	1.0
2000	4.4	4.8	4.7	3.4	2.1	1.7	1.1
2001	5.9	5.2	5.6	3.0	1.9	0.9	0.9
2002	5.4	6.2	5.4	4.3	2.6	1.9	2.0
2003	5.4	7.4	6.9	5.4	2.7	2.2	1.4
2004	5.6	5.8	6.1	3.8	3.1	2.2	1.5
2005	5.0	6.0	5.2	3.6	3.8	2.2	2.2
2006	4.6	5.3	5.1	4.2	2.0	1.7	1.3
2007	4.8	5.1	4.6	3.5	2.7	2.8	1.5
2008	5.0	4.8	4.3	3.2	2.8	1.7	2.3
2009	4.2	4.0	4.3	3.3	3.1	1.9	1.9
2010	4.8	4.7	4.4	4.1	3.0	1.8	1.8
2011	4.3	3.9	4.2	2.9	3.0	2.7	1.7
2012	4.0	4.5	3.5	2.7	2.1	2.1	2.2
2013	3.7	4.4	3.7	3.5	2.3	2.6	2.4
2014	3.0	5.7	4.7	3.4	2.5	2.2	2.2
2015	2.9	4.3	4.3	2.7	3.3	1.9	2.2
2016	2.7	3.0	4.8	3.4	2.8	1.8	3.0
2017	2.9	3.1	3.3	3.7	4.1	2.4	1.8
2018	2.7	2.8	3.8	3.6	3.4	3.7	2.9
2019	2.7	3.1	4.5	3.4	3.9	2.7	3.3
2020	2.8	5.4	6.8	6.5	5.4	3.8	3.6
2021	2.9	8.3	4.8	6.9	7.8	6.7	6.2

Source. The Monitoring the Future study, the University of Michigan.

Notes. '— ' indicates data not available.

[1]Unadjusted for the possible underreporting of PCP.

UPDATED FIGURE 23
MDMA (ECSTASY, MOLLY)
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30



(Age-specific data provided in the following table.)

UPDATED TABLE 20
MDMA (Ecstasy, Molly)
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 30, [1,2]
by Age Group

	Age 18		Ages 19–20		Ages 21–22		Ages 23–24		Ages 25–26		Ages 27–28		Ages 29–30	
Year	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised
1989			1.9		2.1		1.2		0.3		0.9		0.2	
1990			2.1		2.2		1.4		1.1		0.9		0.2	
1991			0.5		1.0		0.9		0.6		0.7		0.6	
1992			2.0		1.7		0.4		0.7		0.4		*	
1993			1.0		0.4		1.2		0.6		0.7		*	
1994			0.7		1.6		1.1		0.3		0.3		0.3	
1995			2.2		1.7		1.2		1.0		1.4		0.3	
1996	4.6		3.9		1.6		1.2		1.3		0.7		0.6	
1997	4.0		3.0		3.5		1.3		1.8		0.5		1.5	
1998	3.6		3.4		3.3		2.5		1.7		2.5		*	
1999	5.6		4.6		4.5		3.2		3.2		1.6		0.6	
2000	8.2		9.8		9.3		6.4		8.1		2.5		3.0	
2001	9.2		10.1		10.4		6.7		4.7		3.8		2.2	
2002	7.4		5.9		9.7		7.8		3.9		3.4		2.9	
2003	4.5		4.7		5.3		4.9		3.9		2.8		1.2	
2004	4.0		4.2		2.8		3.3		3.9		3.7		1.1	
2005	3.0		3.4		3.5		2.6		2.3		2.8		1.9	
2006	4.1		4.4		4.2		4.2		2.0		1.9		2.3	
2007	4.5		3.1		2.5		2.8		2.1		1.8		2.1	
2008	4.3		5.0		4.2		2.6		2.3		2.0		2.1	
2009	4.3		3.2		4.1		3.5		2.7		2.3		2.1	
2010	4.5		5.2		5.5		4.3		1.5		2.1		2.3	
2011	5.3		4.7		5.2		3.4		2.2		3.1		2.0	
2012	3.8		5.9		5.6		4.2		3.1		2.2		3.1	
2013	4.0		5.3		5.7		5.1		3.0		1.9		1.7	
2014	3.6	5.0	6.2	6.0	6.9	6.7	4.7	2.3	4.5	10.6	4.9	6.4	2.0	4.0
2015	—	3.6	—	5.8	—	4.2	—	5.2	—	4.2	—	3.3	—	2.7
2016	—	2.7	—	4.9	—	7.9	—	4.1	—	3.8	—	5.0	—	3.7
2017	—	2.6	—	1.7	—	6.2	—	5.4	—	3.8	—	2.3	—	2.9
2018	—	2.2	—	2.5	—	3.5	—	3.9	—	4.3	—	3.5	—	4.7
2019	—	2.2	—	1.6	—	5.7	—	4.4	—	5.1	—	3.0	—	3.9
2020	—	1.8	—	3.6	—	5.2	—	5.5	—	5.2	—	3.9	—	4.5
2021	—	1.1	—	1.3	—	2.7	—	3.0	—	4.7	—	2.4	—	2.5

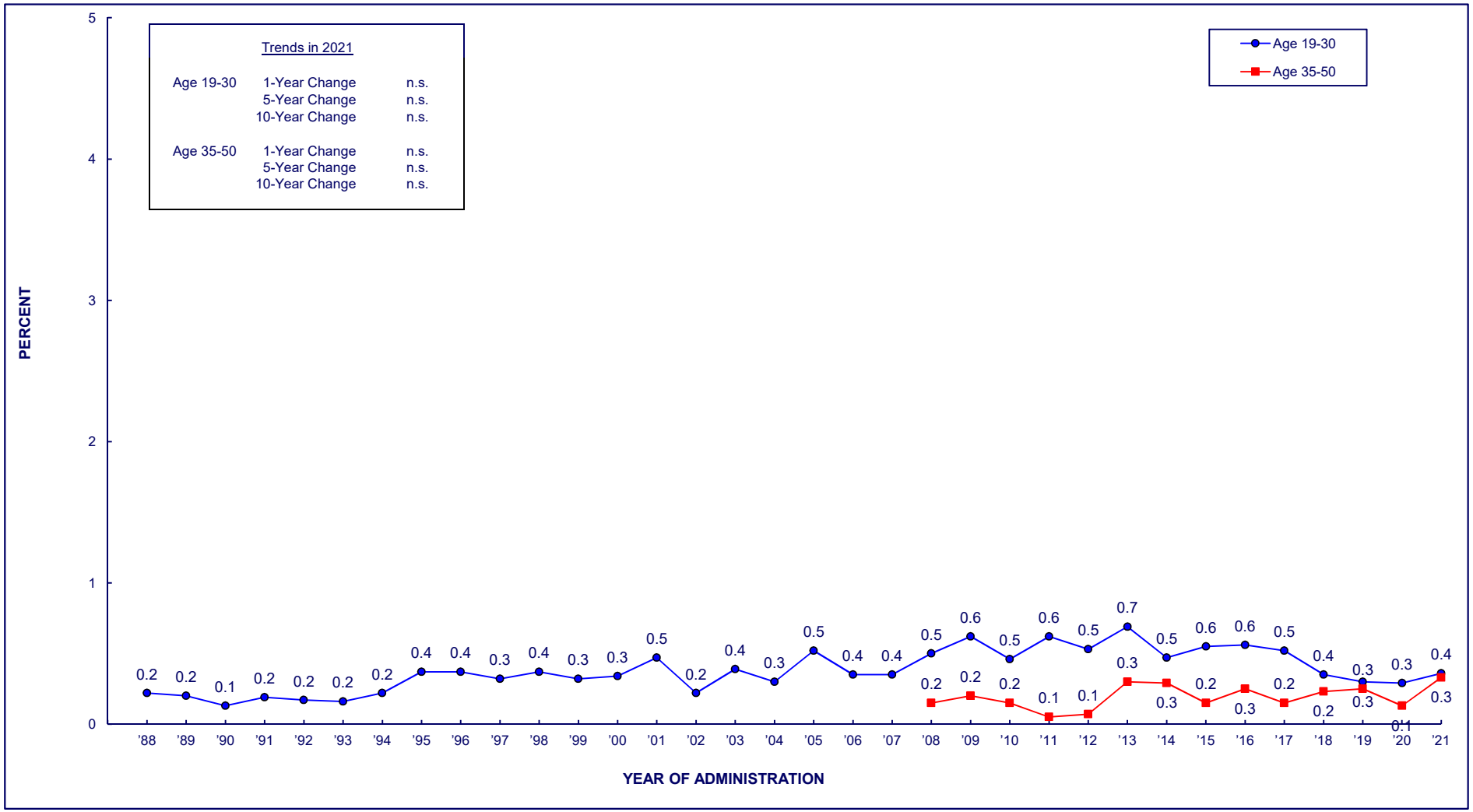
Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a percentage of less than 0.05%. ' — ' indicates data not available.

[1]Questions about use of ecstasy (MDMA, Molly) were not included in the questionnaires administered to those ages 35+.

[2]In 2014, a version of the question was added to an additional form that included "molly" in the description. In 2015 the remaining forms changed to this updated wording. Data for both versions of the question are included here.

UPDATED FIGURE 24
HEROIN
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 21

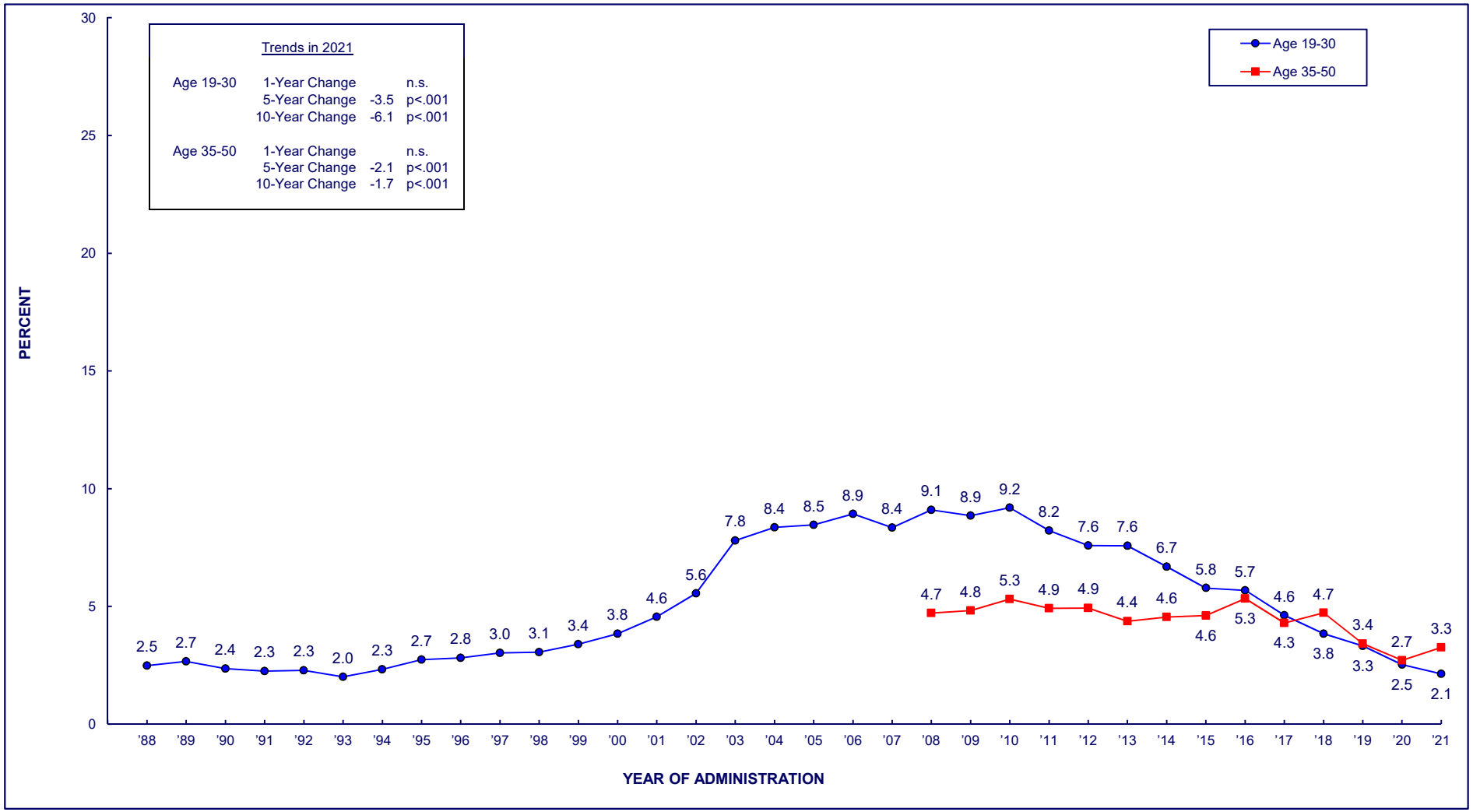
HEROIN

Trends in 12-Month Prevalence among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	0.8												
1977	0.8												
1978	0.8	0.4											
1979	0.5	0.3											
1980	0.5	0.2	0.7										
1981	0.5	0.5	0.4										
1982	0.6	0.2	0.4	0.2									
1983	0.6	0.2	0.3	0.5									
1984	0.5	0.2	0.3	0.2	0.3								
1985	0.6	0.1	0.3	0.3	0.3								
1986	0.5	0.1	0.2	0.1	0.2	0.3							
1987	0.5	0.2	0.3	0.1	0.3	0.3							
1988	0.5	0.1	0.2	0.2	0.1	0.3	0.4						
1989	0.6	0.2	0.2	0.1	0.1	0.3	0.3						
1990	0.5	0.2	0.2	0.2	0.1	*	0.2						
1991	0.4	0.1	0.2	0.2	0.2	0.1	0.3						
1992	0.6	0.1	0.3	0.2	0.1	0.2	0.1						
1993	0.5	0.2	0.2	0.1	0.2	0.2	0.1						
1994	0.6	0.1	0.3	0.1	0.2	0.2	0.4	0.3					
1995	1.1	0.6	0.2	0.8	0.1	0.1	0.4	0.2					
1996	1.0	0.8	0.5	0.4	0.2	0.2	0.1	0.2					
1997	1.2	0.3	0.6	0.2	0.3	0.2	0.4	0.1					
1998	1.0	1.0	0.4	0.3	0.4	0.1	0.2	0.1	0.7				
1999	1.1	0.5	0.4	0.5	0.2	0.2	0.1	0.5	*				
2000	1.5	0.6	0.5	0.4	0.3	0.1	0.1	*	0.1				
2001	0.9	1.1	0.4	0.5	0.3	0.4	0.2	0.0	0.1				
2002	1.0	0.5	0.1	0.3	0.2	0.1	0.2	0.2	0.3				
2003	0.8	0.3	0.4	0.6	0.1	0.7	0.2	0.3	0.4	0.5			
2004	0.9	0.3	0.5	0.3	0.2	0.1	0.4	0.1	0.1	0.3			
2005	0.8	0.5	0.7	0.3	0.2	0.5	0.8	*	*	0.1			
2006	0.8	0.5	0.6	0.2	0.6	*	0.1	0.4	0.2	0.2			
2007	0.9	0.3	0.5	0.4	0.3	0.3	0.4	0.1	0.1	0.1			
2008	0.7	0.6	1.1	0.6	0.3	0.2	0.2	0.1	*	*	0.5		
2009	0.7	0.7	0.8	0.8	0.7	0.3	0.3	0.3	*	0.1	0.4		
2010	0.9	0.5	0.3	0.9	0.7	0.3	0.1	0.3	0.1	*	0.2		
2011	0.8	0.7	0.4	0.7	0.8	0.7	0.4	0.1	*	0.1	*		
2012	0.6	0.4	0.5	0.4	1.0	0.3	0.6	0.1	*	0.0	0.1		
2013	0.6	0.4	1.0	0.6	1.0	0.7	0.4	0.6	0.2	0.3	0.1	0.1	
2014	0.6	0.4	0.3	0.4	0.8	0.7	0.2	0.8	*	0.1	0.3	0.2	
2015	0.5	0.3	0.3	0.8	0.8	0.5	0.6	0.3	0.1	*	0.3	0.1	
2016	0.3	0.1	0.9	0.4	0.6	0.5	0.9	0.7	*	0.0	0.3	0.1	
2017	0.4	*	0.2	0.5	0.8	0.9	0.6	0.1	0.2	0.3	*	0.2	
2018	0.4	0.2	0.3	0.4	0.4	0.5	0.3	0.4	0.3	0.2	0.1	0.2	0.2
2019	0.4	*	0.1	0.4	0.1	0.4	0.8	0.4	0.4	0.2	*	0.2	0.2
2020	0.3	*	*	0.1	0.9	0.4	0.2	0.5	*	*	*	*	*
2021	0.1	1.1	0.4	0.1	0.2	*	0.6	0.9	0.3	*	0.1	0.1	0.2

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 25
NARCOTICS OTHER THAN HEROIN
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 22
NARCOTICS OTHER THAN HEROIN [1]
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	5.7												
1977	6.4												
1978	6.0	4.5											
1979	6.2	4.7											
1980	6.3	5.8	4.8										
1981	5.9	5.0	5.0										
1982	5.3	4.4	3.4	4.6									
1983	5.1	4.4	4.1	3.1									
1984	5.2	4.1	3.3	3.6	2.5								
1985	5.9	3.7	3.9	3.8	3.4								
1986	5.2	4.4	3.6	2.7	2.0	2.5							
1987	5.3	3.9	3.7	2.6	2.7	3.0							
1988	4.6	3.1	3.5	2.3	2.4	1.7	1.9						
1989	4.4	3.0	3.4	2.5	2.3	2.9	2.0						
1990	4.5	3.6	2.8	2.7	2.1	1.5	1.7						
1991	3.5	3.2	2.2	2.3	2.3	1.9	1.7						
1992	3.3	2.3	3.3	2.2	2.6	1.7	1.6						
1993	3.6	2.6	2.7	2.0	2.1	1.3	1.4						
1994	3.8	2.7	3.5	2.7	1.5	2.1	1.6	1.6					
1995	4.7	4.5	2.8	2.7	1.9	2.7	1.9	1.4					
1996	5.4	4.8	2.8	3.3	2.1	1.9	2.1	1.8					
1997	6.2	4.5	4.6	2.7	2.1	1.9	2.5	1.9					
1998	6.3	4.1	4.0	3.9	3.1	1.9	1.6	1.1	1.6				
1999	6.7	5.8	4.3	4.0	2.8	1.9	1.7	2.4	1.6				
2000	7.0	6.8	4.9	4.0	2.9	2.1	2.5	1.9	1.8				
2001	6.7	7.1	7.1	4.4	3.4	3.1	2.6	2.3	1.4				
2002	9.4	7.4	7.2	6.7	4.5	4.3	3.5	4.5	3.3				
2003	9.3	10.4	9.5	10.3	6.1	6.4	4.9	3.5	2.2	2.7			
2004	9.5	10.4	9.0	9.5	7.7	7.9	6.0	4.3	3.1	3.4			
2005	9.0	9.1	10.0	7.7	9.1	6.9	8.0	4.4	3.8	3.1			
2006	9.0	8.5	12.4	9.9	9.2	6.9	7.0	4.9	4.3	3.2			
2007	9.2	8.0	9.3	9.5	8.6	8.0	6.8	3.9	6.2	4.5			
2008	9.1	9.0	8.1	10.9	10.1	9.5	7.3	7.2	5.1	3.2	3.5		
2009	9.2	7.0	11.0	8.1	10.5	6.9	9.6	6.1	4.6	4.5	4.1		
2010	8.7	8.2	9.6	10.4	10.6	8.9	7.3	6.9	4.2	5.5	4.7		
2011	8.7	8.2	7.8	7.3	10.2	8.0	7.7	6.1	4.9	4.2	4.6		
2012	7.9	6.7	7.1	8.4	8.4	8.2	6.8	6.3	4.5	4.7	4.3		
2013	7.1	8.6	7.5	7.3	7.7	7.7	6.6	6.7	4.9	3.5	2.9	2.3	
2014	6.1	5.9	6.6	6.4	7.8	6.7	6.6	7.0	3.6	3.9	3.9	2.8	
2015	5.4	4.6	5.0	6.4	5.7	6.5	6.2	5.7	4.5	3.7	4.7	3.5	
2016	4.8	4.3	6.1	5.4	6.9	5.7	5.7	7.4	5.6	4.8	3.9	3.6	
2017	4.2	3.5	3.9	4.1	4.9	4.7	6.5	4.6	4.9	4.1	3.6	3.2	
2018	3.4	2.0	3.8	3.8	3.6	5.0	4.6	5.6	4.6	4.2	4.7	3.3	2.8
2019	2.7	1.4	3.3	3.6	2.8	3.8	5.0	3.3	3.8	2.7	4.0	2.0	1.9
2020	2.1	1.3	2.4	2.1	2.8	3.0	3.2	3.8	2.5	2.9	1.7	2.6	3.1
2021	1.0	1.4	1.6	1.2	2.5	2.3	3.3	2.9	3.4	4.1	2.7	2.6	2.7

Source. The Monitoring the Future study, the University of Michigan.

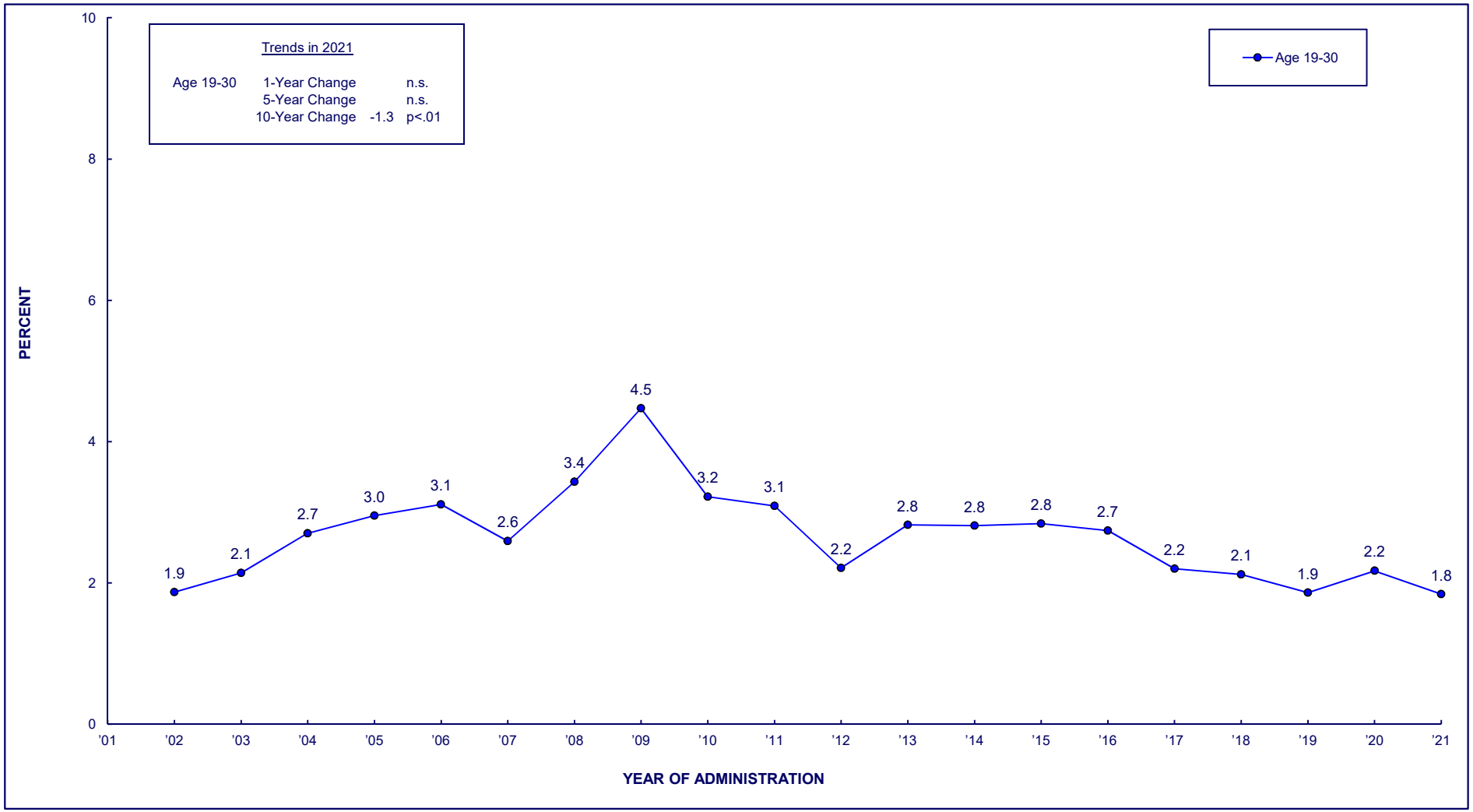
[1]In 2002 the question text was changed on half of the questionnaire forms for 18- to 30-year-olds. The list of examples of narcotics other than heroin was updated. Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced by Vicodin, OxyContin, and Percocet. The 2001 data presented here are based on all forms. The 2002 data are based on the changed forms only. In 2003 the remaining forms were changed to the new wording. The data are based on all forms in 2003. Beginning in 2002 data were based on the changed question text for 35- and 40-year-olds.

UPDATED FIGURE 26

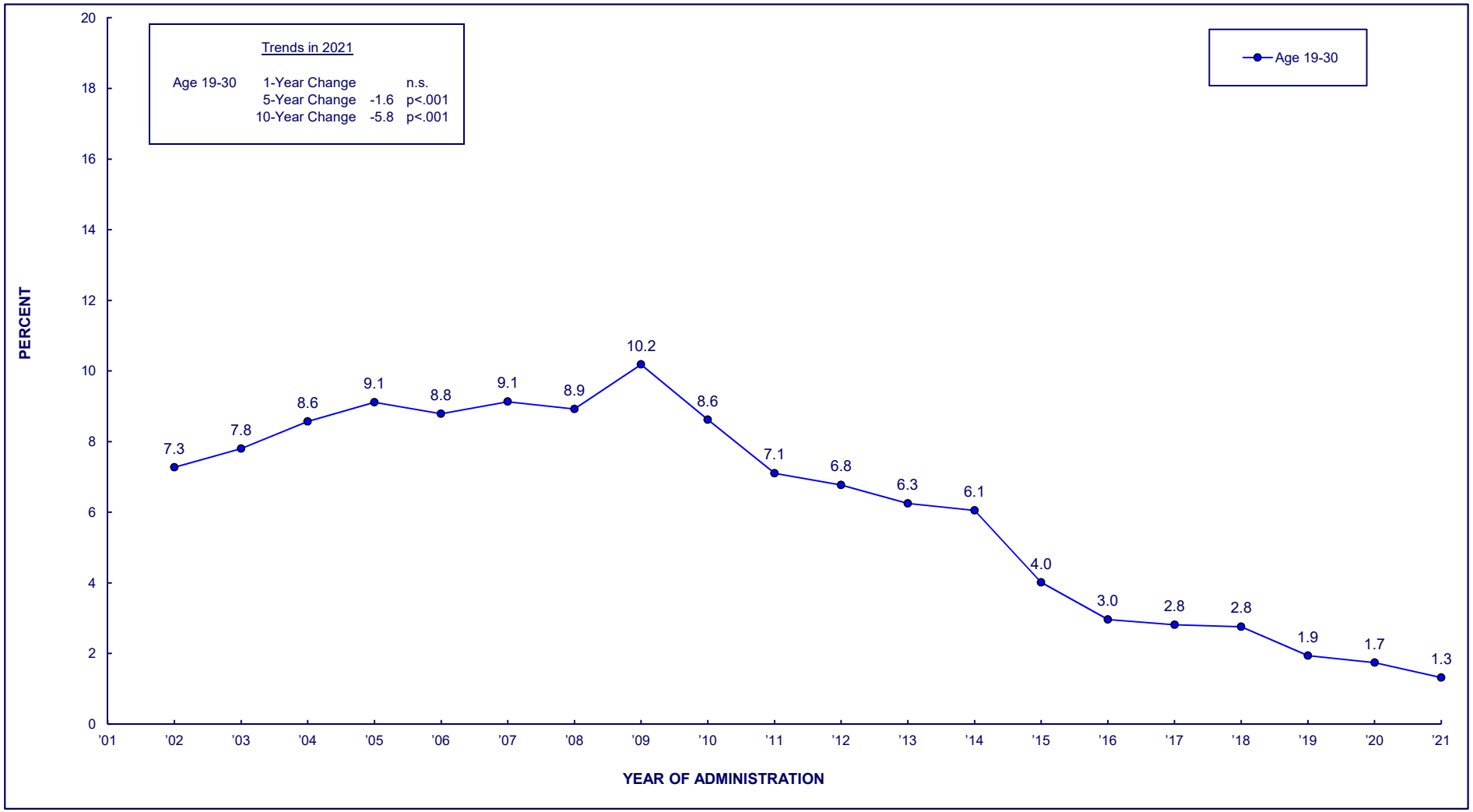
OXYCONTIN

Trends in 12-Month Prevalence

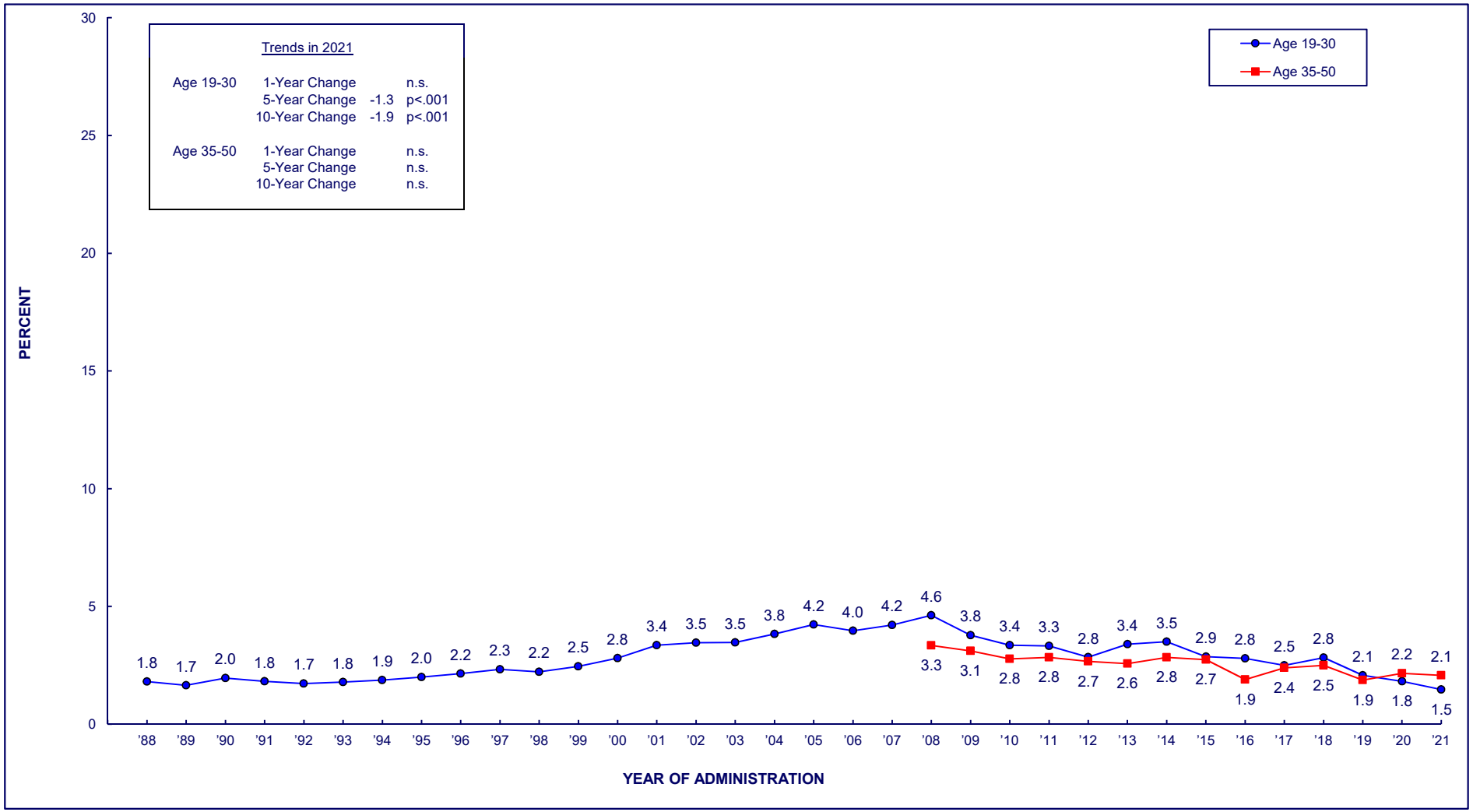
among Respondents of Modal Ages 19 through 30



UPDATED FIGURE 27
VICODIN
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30



UPDATED FIGURE 28
SEDATIVES (BARBITURATES)
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 23

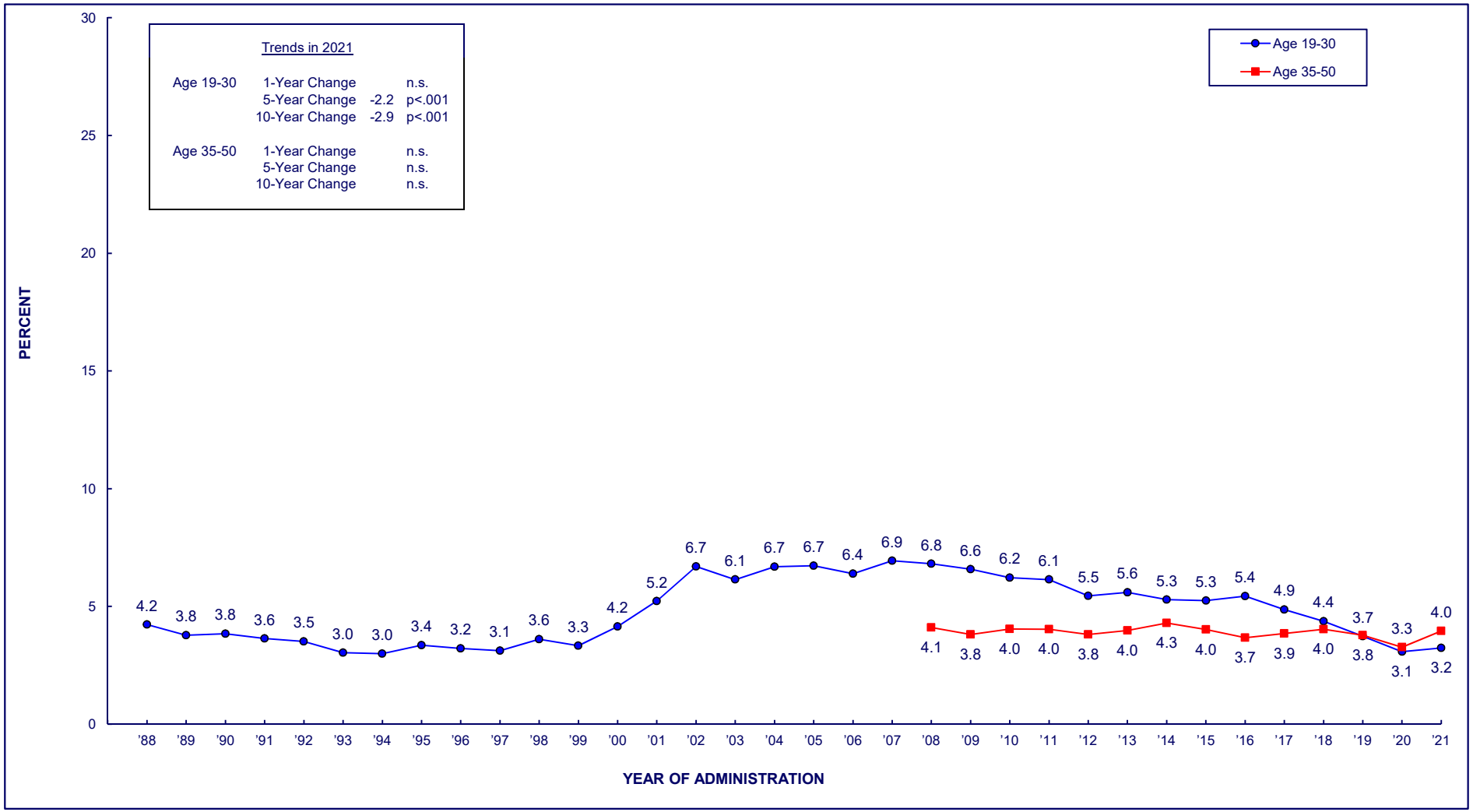
SEDATIVES (BARBITURATES)

Trends in 12-Month Prevalence among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	9.6												
1977	9.3												
1978	8.1	6.3											
1979	7.5	6.9											
1980	6.8	4.7	5.6										
1981	6.6	5.1	5.8										
1982	5.5	4.5	4.2	4.1									
1983	5.2	3.7	3.4	3.8									
1984	4.9	3.4	2.5	2.7	3.2								
1985	4.6	2.2	2.3	3.1	3.5								
1986	4.2	2.5	2.7	2.3	1.9	2.2							
1987	3.6	2.0	2.7	1.6	2.2	2.4							
1988	3.2	2.0	2.0	2.2	1.5	1.3	2.0						
1989	3.3	1.5	1.9	1.9	1.4	1.9	1.4						
1990	3.4	1.8	1.9	2.4	2.2	1.8	1.7						
1991	3.4	1.8	1.3	2.2	2.5	1.3	1.9						
1992	2.8	1.7	1.7	1.9	1.5	1.4	2.0						
1993	3.4	1.9	1.8	1.7	2.1	2.2	1.1						
1994	4.1	2.8	2.3	1.7	1.3	1.7	1.4	1.7					
1995	4.7	3.3	2.8	1.5	1.3	1.5	1.7	1.6					
1996	4.9	3.7	2.5	2.4	1.0	2.0	1.5	1.6					
1997	5.1	4.1	3.6	1.7	1.5	1.3	1.9	1.4					
1998	5.5	3.4	3.0	2.5	1.6	1.8	1.1	1.0	0.9				
1999	5.8	5.0	2.6	3.0	2.0	1.0	1.2	1.5	1.5				
2000	6.2	4.6	3.5	3.8	2.6	1.6	1.1	0.7	1.7				
2001	5.7	5.4	4.8	4.0	2.6	2.2	1.3	1.8	1.4				
2002	6.7	5.6	3.8	4.1	2.7	2.8	2.0	1.9	1.1				
2003	6.0	5.3	4.6	3.9	2.6	3.4	1.5	1.2	0.8	0.9			
2004	6.5	5.8	4.3	4.9	3.3	2.6	2.4	1.2	1.1	1.0			
2005	7.2	5.0	5.2	3.8	4.1	2.7	4.6	1.6	1.2	1.5			
2006	6.6	4.3	5.2	4.8	3.2	2.7	3.8	0.9	1.4	1.4			
2007	6.2	4.5	4.2	4.4	4.2	4.3	3.6	3.6	2.7	2.7			
2008	5.8	5.7	5.2	5.1	4.8	3.9	3.1	3.9	3.3	3.2	3.0		
2009	5.2	3.8	5.9	2.7	4.6	3.0	2.8	3.1	3.4	2.8	3.2		
2010	4.8	3.0	3.7	3.7	2.7	4.5	2.6	3.2	1.9	3.0	3.0		
2011	4.3	3.2	3.0	3.7	4.4	2.7	2.8	4.6	1.9	2.0	2.9		
2012	4.5	2.5	3.1	2.8	2.2	3.6	2.9	2.7	3.0	2.5	2.4		
2013	4.8	3.0	4.0	3.4	4.5	2.7	2.8	2.6	3.2	3.0	1.7	2.1	
2014	4.3	3.9	4.6	3.1	2.8	3.7	3.0	3.8	2.8	2.5	2.3	1.7	
2015	3.6	2.7	3.9	3.0	2.6	2.9	2.2	2.3	2.2	3.0	3.4	2.5	
2016	3.0	2.4	3.3	2.6	2.5	2.9	3.1	2.0	2.0	2.0	1.6	2.4	
2017	2.9	2.1	2.3	2.5	2.9	2.7	2.4	2.9	2.0	2.7	2.0	1.7	
2018	2.7	2.0	3.3	3.2	3.0	3.0	2.4	3.0	2.0	1.9	3.3	1.7	1.8
2019	2.5	1.5	2.2	2.4	1.8	2.8	1.7	1.8	1.9	1.3	2.4	3.0	1.9
2020	2.4	1.8	0.9	2.1	2.4	1.7	2.0	3.4	1.7	1.9	1.7	2.0	2.0
2021	1.8	1.4	1.6	1.5	1.4	1.4	1.6	1.4	1.3	3.1	2.3	2.2	2.7

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 29
TRANQUILIZERS
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



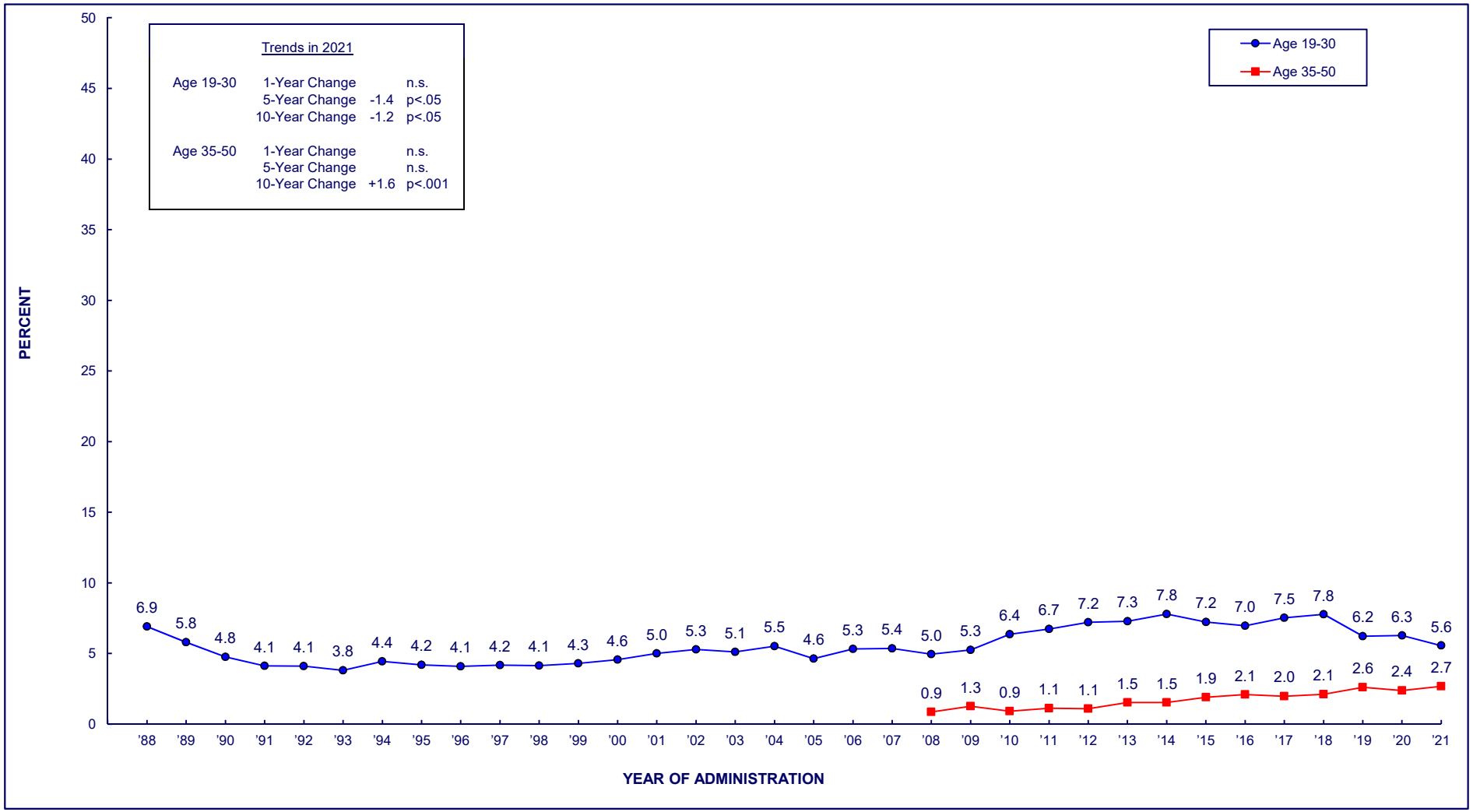
(Age-specific data provided in the following table.)

UPDATED TABLE 24
TRANQUILIZERS
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	10.3												
1977	10.8												
1978	9.9	9.3											
1979	9.6	9.7											
1980	8.7	8.9	8.7										
1981	8.0	7.6	7.2										
1982	7.0	5.6	7.1	8.4									
1983	6.9	5.3	6.1	6.4									
1984	6.1	5.3	5.4	5.8	6.6								
1985	6.1	4.5	4.8	6.2	6.9								
1986	5.8	4.3	5.5	5.1	5.6	6.5							
1987	5.5	4.2	5.4	4.2	5.9	6.1							
1988	4.8	3.5	4.4	4.1	4.0	5.0	4.4						
1989	3.8	3.4	3.5	4.0	2.9	4.9	4.0						
1990	3.5	3.0	3.7	4.1	4.8	3.2	4.3						
1991	3.6	2.7	3.2	4.0	4.0	3.7	4.3						
1992	2.8	2.3	3.8	3.5	4.6	3.3	3.5						
1993	3.5	2.2	3.0	3.1	3.8	3.6	2.6						
1994	3.7	2.1	3.1	2.9	3.3	3.7	2.9	3.0					
1995	4.4	3.6	3.4	3.2	2.9	3.5	3.6	3.5					
1996	4.6	3.7	4.1	3.0	2.2	3.2	3.0	3.5					
1997	4.7	4.7	3.5	2.7	1.8	2.2	3.9	3.1					
1998	5.5	3.8	4.4	4.1	3.4	3.1	2.9	1.8	2.8				
1999	5.8	4.3	4.1	4.1	3.3	2.3	1.9	3.2	2.2				
2000	5.7	5.2	5.1	4.9	4.1	2.9	2.9	3.0	2.9				
2001	6.9	5.7	7.0	5.8	5.1	3.9	4.0	4.1	3.4				
2002	7.7	8.4	7.6	6.3	7.1	5.9	5.1	4.4	3.9				
2003	6.7	7.6	6.8	7.1	6.2	5.3	4.2	4.1	2.1	2.7			
2004	7.3	7.6	7.1	8.1	6.3	6.0	5.3	3.6	3.9	3.5			
2005	6.8	6.3	8.2	6.5	7.5	4.3	7.6	4.7	4.0	2.8			
2006	6.6	5.9	7.7	6.8	5.6	6.1	6.3	3.9	3.5	3.9			
2007	6.2	5.7	7.5	7.5	7.7	7.9	5.5	3.6	4.9	4.1			
2008	6.2	7.8	6.1	8.3	6.7	5.8	6.4	5.7	2.9	3.8	4.0		
2009	6.3	4.7	7.2	6.9	7.3	6.0	7.3	4.8	4.5	3.0	2.9		
2010	5.6	5.0	6.9	7.3	7.1	5.3	5.6	4.4	3.6	4.5	3.8		
2011	5.6	6.1	5.3	6.7	7.2	5.4	6.1	6.2	3.0	4.0	3.0		
2012	5.3	5.1	4.7	5.8	5.8	7.0	4.2	2.9	3.2	4.5	4.5		
2013	4.6	5.4	5.3	6.7	4.1	6.3	5.8	4.7	4.3	3.4	3.7	2.5	
2014	4.7	6.4	3.7	4.0	5.7	6.0	5.9	6.8	3.9	2.7	3.8	2.7	
2015	4.7	5.4	5.0	5.4	5.1	4.7	5.8	5.0	4.2	3.6	3.3	3.5	
2016	4.9	4.1	7.7	5.3	4.9	4.5	6.2	3.5	3.5	3.7	4.0	2.9	
2017	4.7	3.8	4.8	4.8	5.9	5.0	4.7	4.5	4.2	2.2	4.4	3.0	
2018	3.9	3.6	3.9	4.5	5.2	3.8	5.1	5.3	3.0	3.7	4.1	3.3	2.9
2019	3.4	2.3	4.2	3.4	3.9	4.1	4.5	4.7	4.1	3.6	2.9	3.4	2.8
2020	3.2	2.3	2.5	2.9	4.4	3.2	3.1	3.7	3.6	3.3	2.5	3.3	3.2
2021	1.2	2.2	3.2	2.6	3.3	3.3	4.3	4.0	3.4	5.0	3.4	3.0	2.9

Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 30
AMPHETAMINES
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



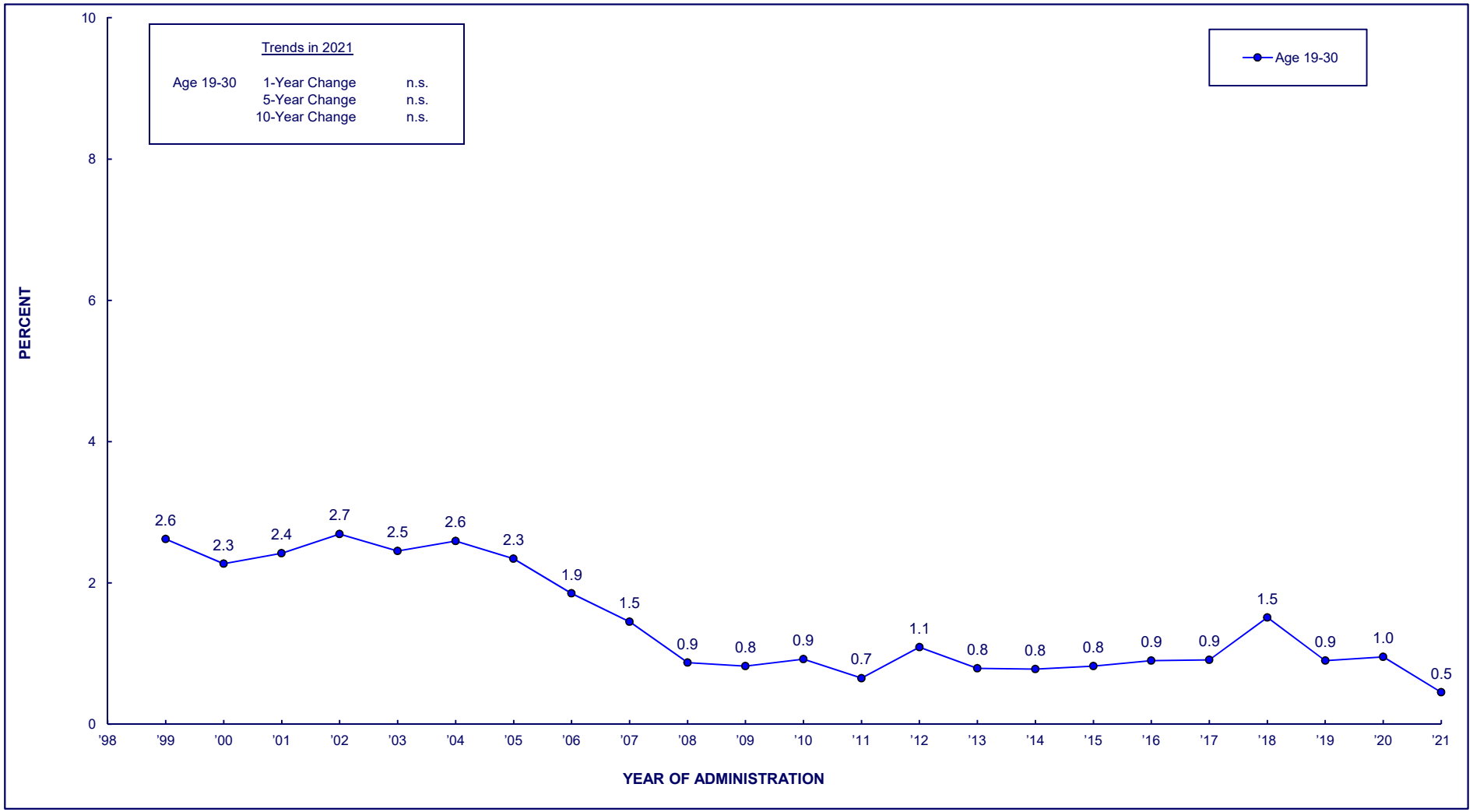
(Age-specific data provided in the following table.)

UPDATED TABLE 25
AMPHETAMINES
Trends in 12-Month Prevalence
among Respondents of Modal Ages 18 through 60, by Age Group

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	15.8												
1977	16.3												
1978	17.1	17.7											
1979	18.3	21.5											
1980	20.8	24.1	25.1										
1981	26.0	26.3	26.7										
1982	20.3	23.9	22.5	21.4									
1983	17.9	20.3	20.2	18.6									
1984	17.7	15.7	17.4	14.5	14.6								
1985	15.8	15.1	13.3	14.3	12.9								
1986	13.4	11.1	12.7	11.6	8.8	8.7							
1987	12.2	9.4	10.0	8.3	8.3	8.0							
1988	10.9	9.0	8.0	7.4	6.5	5.0	5.5						
1989	10.8	7.1	7.2	5.4	5.5	4.7	5.1						
1990	9.1	6.7	5.6	5.2	4.0	4.4	2.9						
1991	8.2	5.0	5.1	3.9	3.5	4.0	3.2						
1992	7.1	6.2	4.3	4.1	3.1	3.9	3.3						
1993	8.4	5.5	5.0	3.9	3.2	2.9	2.6						
1994	9.4	6.0	5.9	4.7	4.5	3.0	2.6	2.5					
1995	9.3	7.4	5.8	3.2	3.5	2.8	2.5	2.0					
1996	9.5	7.1	5.1	4.4	2.8	2.5	2.8	1.9					
1997	10.2	6.0	7.2	3.7	3.2	2.1	2.9	1.8					
1998	10.1	7.2	4.8	5.0	3.4	2.6	2.0	1.7	1.6				
1999	10.2	7.9	5.1	4.6	3.4	2.5	2.6	1.8	1.4				
2000	10.5	9.2	5.8	4.5	4.3	2.7	1.5	1.5	1.5				
2001	10.9	8.5	7.8	5.6	3.7	3.4	1.8	1.9	1.1				
2002	11.1	8.2	6.8	6.0	4.5	4.4	2.2	1.5	1.4				
2003	9.9	8.2	7.7	5.7	3.5	3.6	2.7	2.6	1.1	1.5			
2004	10.0	8.7	6.7	7.0	4.9	4.0	2.5	1.9	1.1	1.1			
2005	8.6	6.5	6.9	5.4	3.9	2.5	3.0	1.3	0.8	0.5			
2006	8.1	6.2	8.2	6.3	4.7	3.5	3.3	1.3	1.5	1.4			
2007	7.5	6.7	7.6	6.6	5.1	3.8	2.5	1.3	0.8	1.2			
2008	6.8	6.1	6.5	5.9	3.8	4.7	2.6	0.7	1.3	0.9	0.6		
2009	6.6	6.3	8.0	5.1	5.4	3.9	2.9	1.7	1.5	0.9	1.1		
2010	7.4	8.5	8.7	7.6	6.3	4.0	3.0	1.4	1.0	0.6	0.7		
2011	8.2	9.3	8.8	8.8	4.8	4.6	3.8	1.5	0.4	1.3	1.3		
2012	7.9	9.1	9.0	8.0	6.6	5.6	4.8	1.9	1.2	0.9	0.4		
2013	9.2	9.2	10.9	7.4	6.4	5.1	4.7	2.2	1.9	1.3	0.9	0.7	
2014	8.1	11.2	9.2	6.7	7.9	6.6	5.4	2.9	1.3	1.1	1.0	0.2	
2015	7.7	8.8	10.1	7.9	7.0	4.9	5.0	3.7	2.0	1.1	1.0	0.3	
2016	6.7	7.9	10.9	7.4	6.0	5.2	4.9	3.6	3.0	0.9	1.2	0.7	
2017	5.9	6.0	9.7	9.2	8.0	7.3	5.1	3.7	1.9	2.0	0.6	0.8	
2018	5.5	4.6	8.5	11.4	7.9	6.7	7.4	3.0	1.8	1.3	2.4	1.2	0.7
2019	4.5	4.3	7.6	7.0	6.8	6.0	5.8	4.9	2.6	1.9	1.4	1.3	0.7
2020	4.3	5.9	6.6	7.2	7.3	6.4	4.3	3.7	2.8	2.3	0.8	1.0	0.6
2021	2.3	4.4	5.8	6.2	6.9	4.9	5.0	3.2	3.3	2.1	2.2	0.7	0.6

Source. The Monitoring the Future study, the University of Michigan.

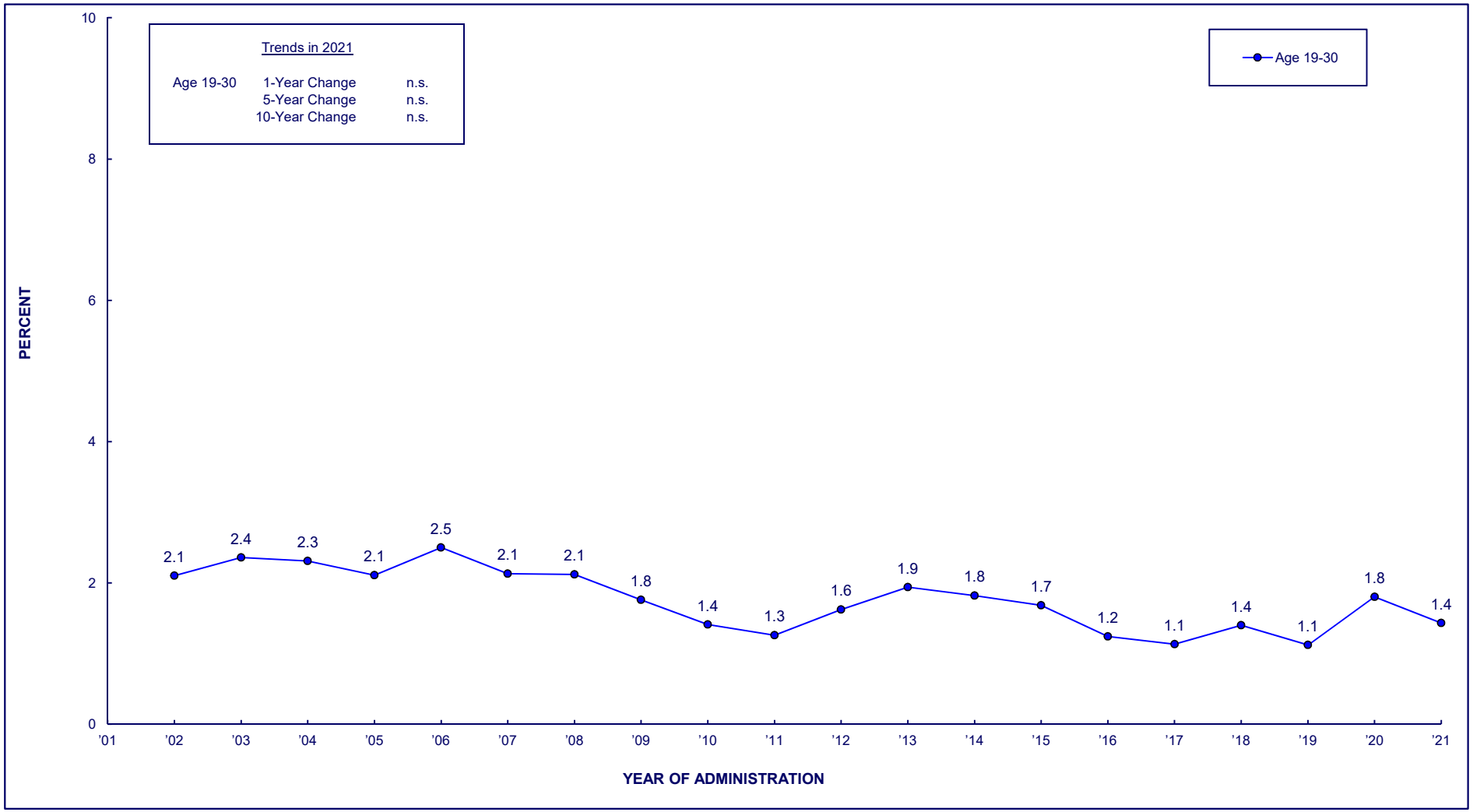
UPDATED FIGURE 31
ADDERALL
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30



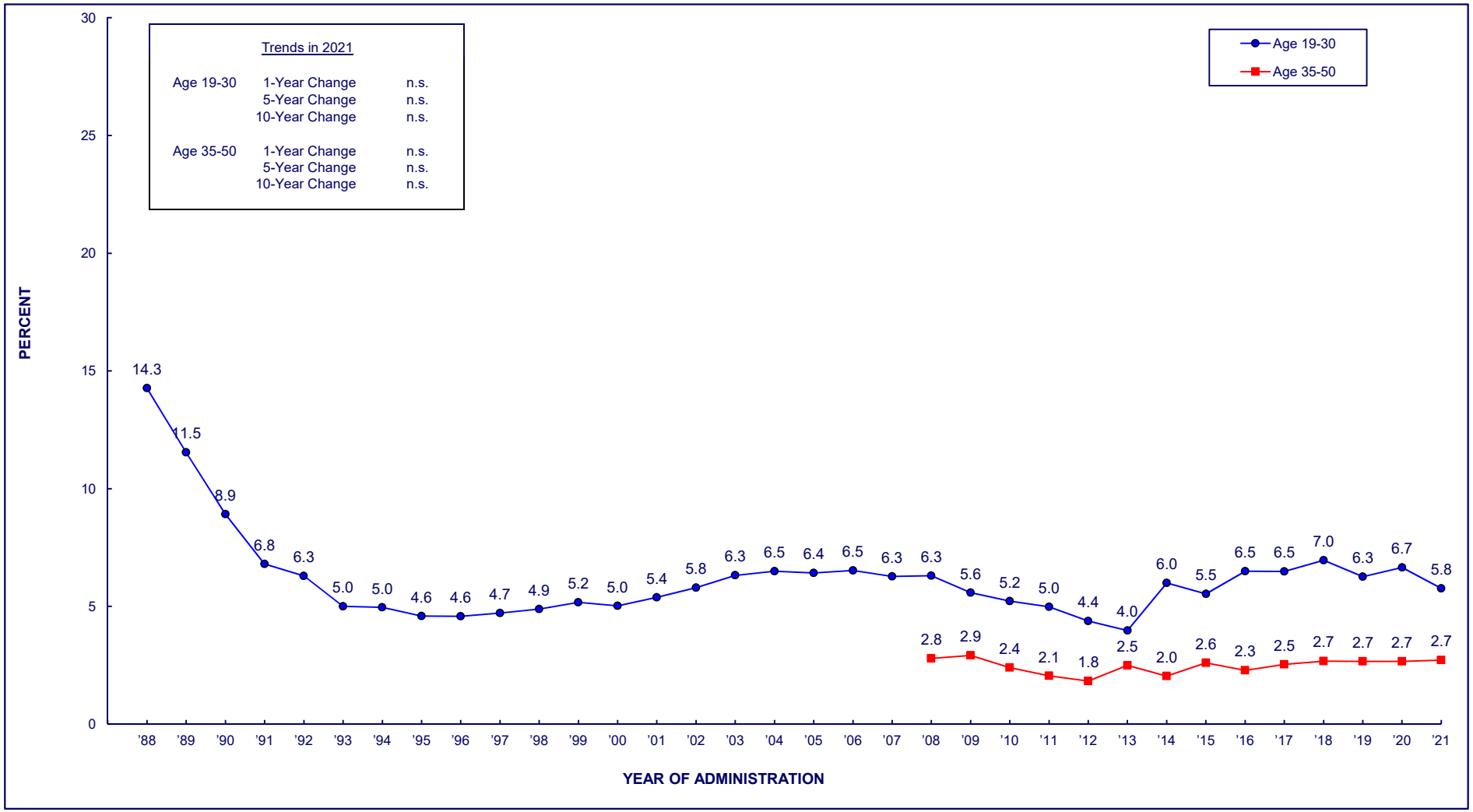
UPDATED FIGURE 32

RITALIN

Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30



UPDATED FIGURE 33
COCAINE
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 50, by Age Group



(Age-specific data provided in the following table.)

UPDATED TABLE 26

COCAINE

Trends in 12-Month Prevalence among Respondents of Modal Ages 18 through 60, by Age Group

353.0

Year	Age 18	Ages 19–20	Ages 21–22	Ages 23–24	Ages 25–26	Ages 27–28	Ages 29–30	Age 35	Age 40	Age 45	Age 50	Age 55	Age 60
1976	6.0												
1977	7.2												
1978	9.0	11.9											
1979	12.0	14.9											
1980	12.3	16.7	20.5										
1981	12.4	16.8	20.5										
1982	11.5	16.9	21.8	23.4									
1983	11.4	14.5	21.6	21.0									
1984	11.6	15.3	20.9	21.0	21.9								
1985	13.1	17.2	19.5	24.4	21.9								
1986	12.7	16.8	20.6	23.2	20.2	20.8							
1987	10.3	14.5	16.9	16.8	17.8	16.0							
1988	7.9	10.7	14.7	15.0	15.3	14.9	14.9						
1989	6.5	7.7	12.9	12.9	10.8	12.8	12.2						
1990	5.3	5.6	9.0	9.9	10.4	10.3	8.4						
1991	3.5	4.2	6.2	7.8	8.1	7.2	7.3						
1992	3.1	4.3	5.1	6.7	6.9	7.6	7.0						
1993	3.3	3.2	4.3	4.6	6.8	6.2	4.8						
1994	3.6	3.7	4.4	4.8	4.8	5.6	6.4	5.1					
1995	4.0	4.0	4.1	4.6	4.8	5.3	4.7	4.3					
1996	4.9	4.0	4.8	5.3	4.2	4.7	4.5	5.2					
1997	5.5	4.8	5.4	5.1	4.3	4.1	4.7	4.1					
1998	5.7	4.9	6.0	6.0	4.5	4.0	3.9	4.4	4.5				
1999	6.2	5.8	5.6	6.9	5.1	3.9	3.9	5.1	4.5				
2000	5.0	6.2	5.9	5.7	5.6	3.8	3.0	3.9	3.4				
2001	4.8	6.1	7.6	5.6	5.7	5.0	2.5	3.2	2.8				
2002	5.0	7.0	7.6	5.6	5.6	4.3	5.1	4.1	3.7				
2003	4.8	6.1	7.6	8.1	5.3	5.9	5.1	2.8	3.7	4.1			
2004	5.3	6.1	8.4	8.8	6.3	5.4	4.4	3.2	4.0	4.5			
2005	5.1	5.8	7.0	6.8	8.3	6.0	4.8	2.9	3.3	2.9			
2006	5.7	6.4	8.4	6.5	7.6	5.4	5.0	2.8	3.1	3.5			
2007	5.2	5.9	7.8	6.4	7.2	6.1	4.3	2.5	3.3	3.6			
2008	4.4	5.4	8.1	5.8	6.4	6.5	5.6	3.9	2.0	3.0	2.2		
2009	3.4	3.2	6.7	6.8	5.2	5.2	6.2	2.8	2.2	3.8	2.8		
2010	2.9	3.6	5.6	7.1	5.0	5.4	4.5	2.6	2.3	2.9	1.9		
2011	2.9	4.5	4.5	6.4	6.4	3.9	4.0	3.1	1.1	2.2	1.8		
2012	2.7	4.0	3.7	5.8	4.7	4.5	3.5	2.2	1.6	1.6	1.9		
2013	2.6	2.8	5.1	4.4	4.6	3.4	3.5	3.2	3.0	2.4	1.6	1.1	
2014	2.6	6.5	5.5	5.8	6.9	6.3	5.0	3.1	1.9	1.2	2.0	1.5	
2015	2.5	5.1	5.5	7.7	6.7	5.2	3.0	4.7	1.5	1.9	2.5	1.0	
2016	2.3	3.7	8.6	8.2	5.9	6.4	5.9	3.3	2.2	1.4	2.4	1.2	
2017	2.7	3.6	8.6	7.6	9.3	4.8	4.9	5.0	2.0	1.5	2.0	1.7	
2018	2.3	3.9	6.9	10.1	8.9	5.5	6.2	3.3	3.0	3.0	1.5	1.8	1.5
2019	2.2	2.9	7.1	7.4	6.7	7.1	6.3	4.7	3.4	2.3	0.6	1.4	0.9
2020	2.9	4.3	6.0	7.6	10.0	6.4	5.3	4.7	3.2	1.6	1.3	2.1	1.2
2021	1.2	2.5	4.2	6.5	8.7	6.3	5.2	4.2	2.9	2.1	1.7	1.2	0.6

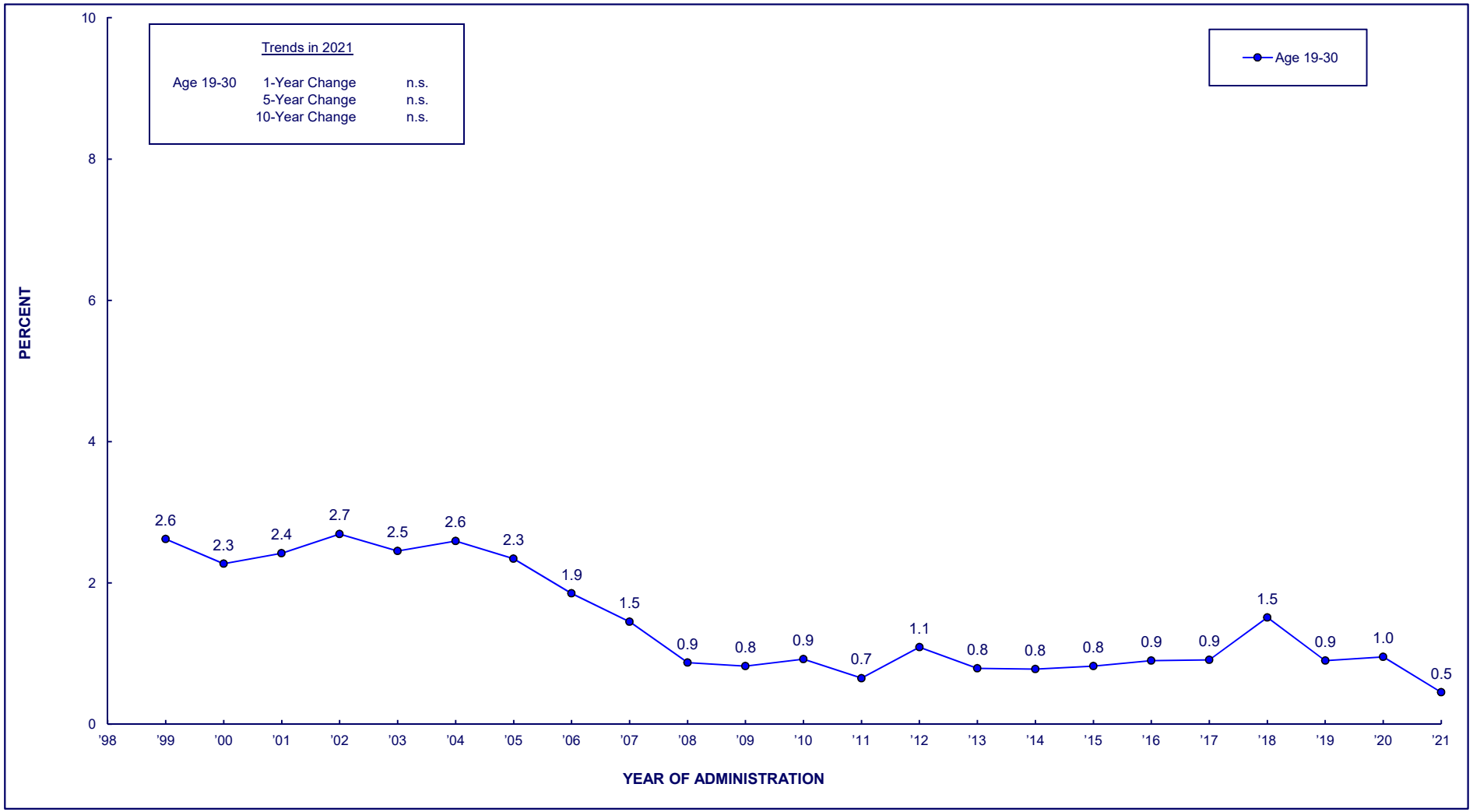
Source. The Monitoring the Future study, the University of Michigan.

UPDATED FIGURE 34

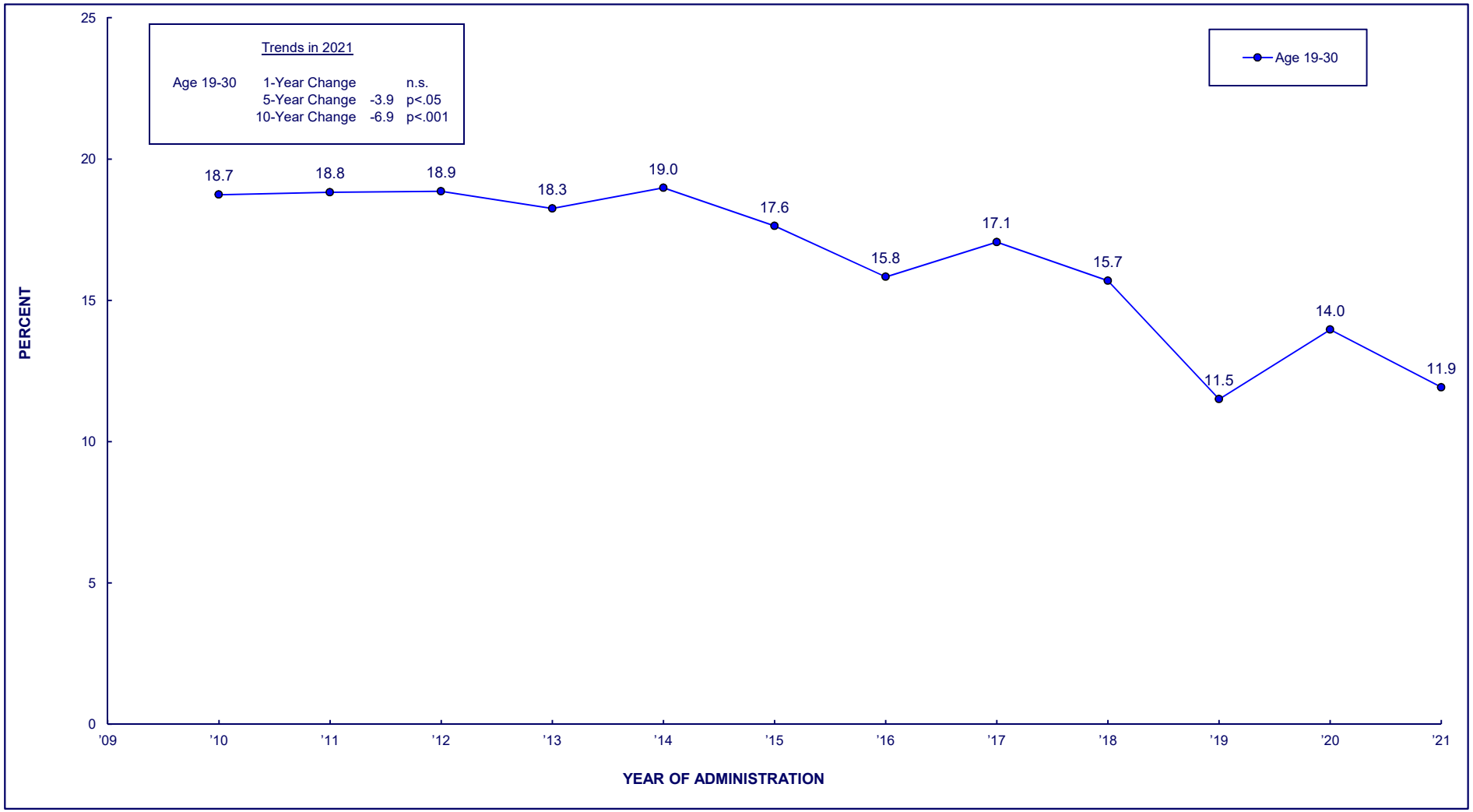
METHAMPHETAMINE

Trends in 12-Month Prevalence

among Respondents of Modal Ages 19 through 30



UPDATED FIGURE 35
SMALL CIGARS
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30

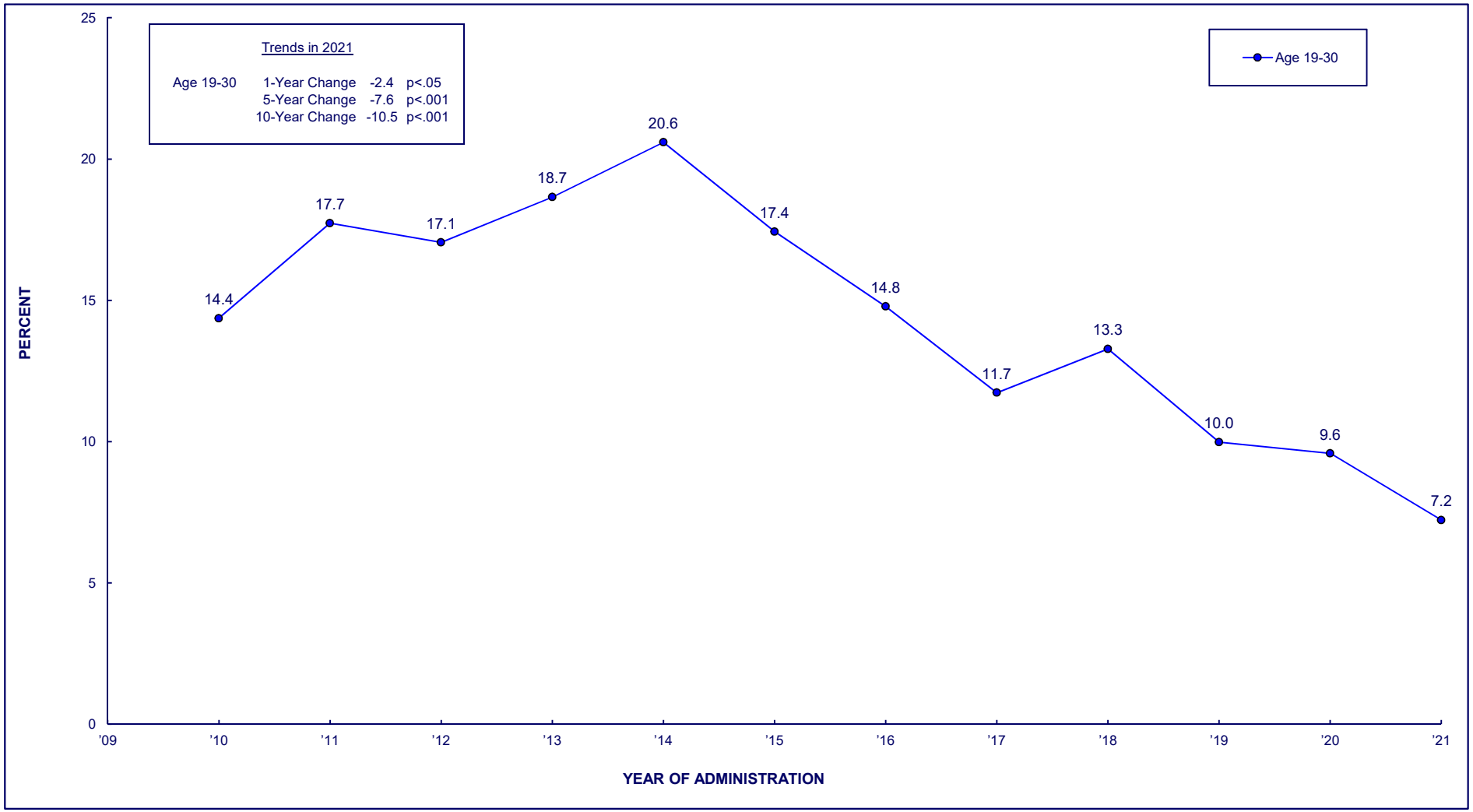


UPDATED FIGURE 36

TOBACCO WITH A HOOKAH

Trends in 12-Month Prevalence

among Respondents of Modal Ages 19 through 30

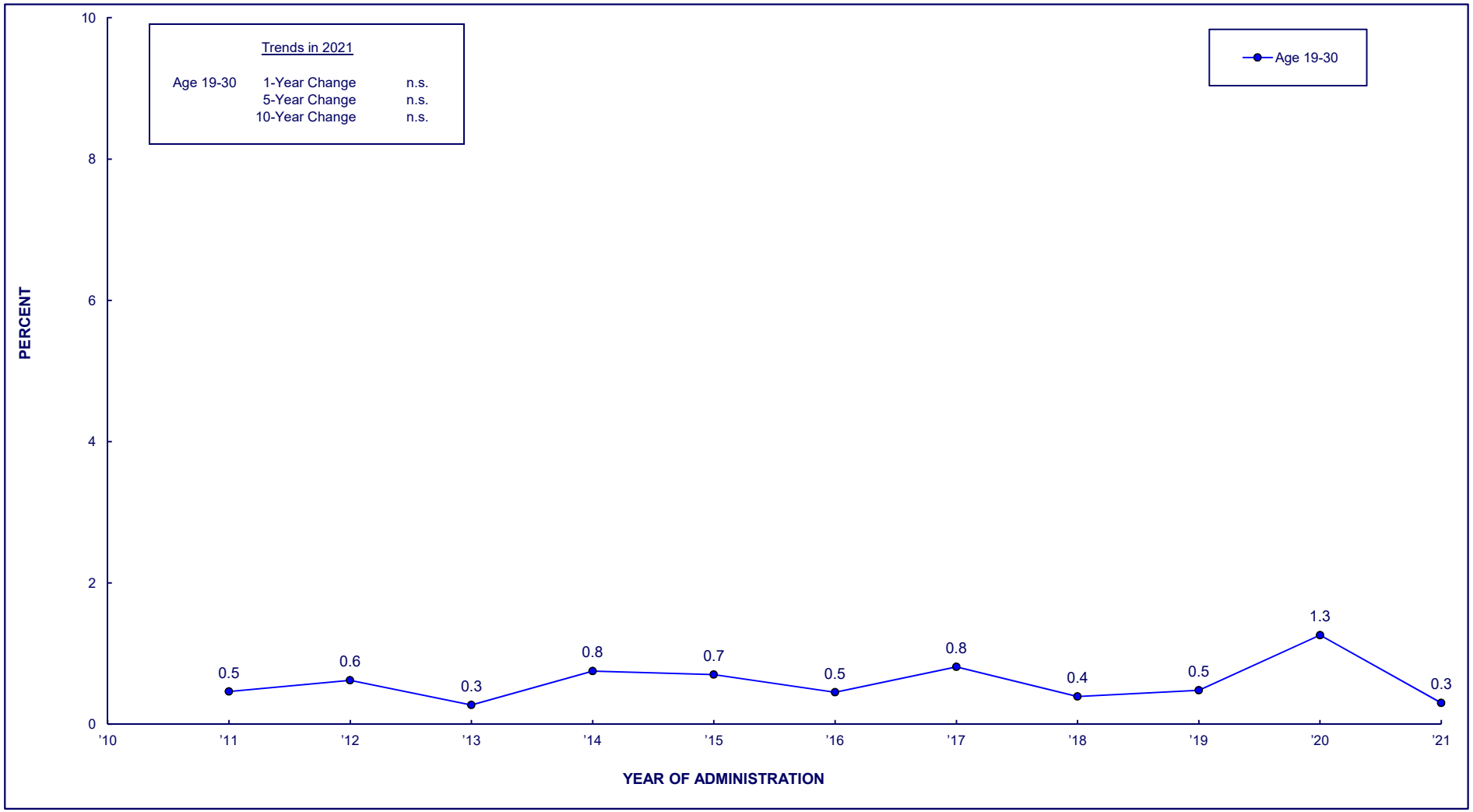


UPDATED FIGURE 37

DISSOLVABLE TOBACCO

Trends in 12-Month Prevalence

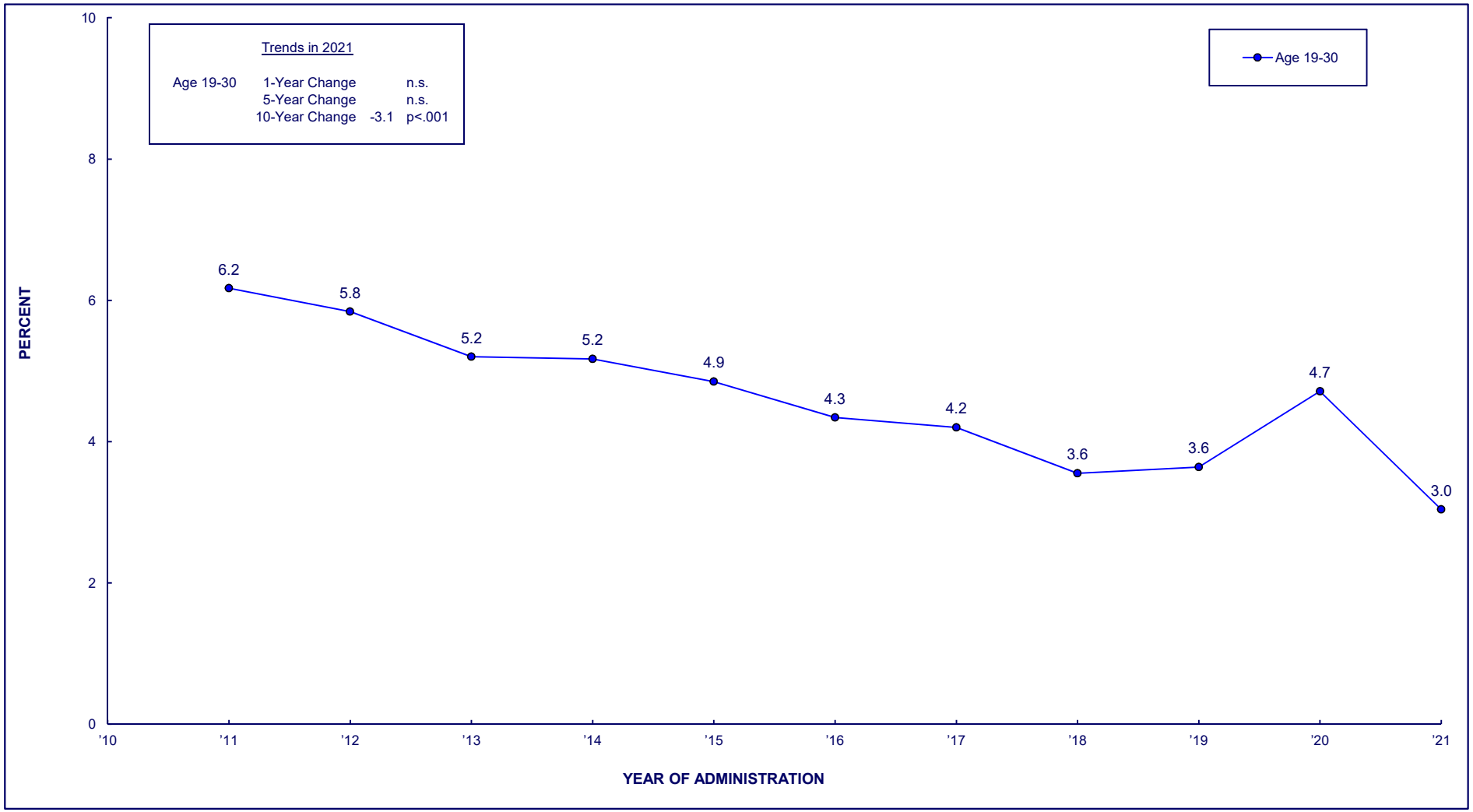
among Respondents of Modal Ages 19 through 30



UPDATED FIGURE 38

SNUS

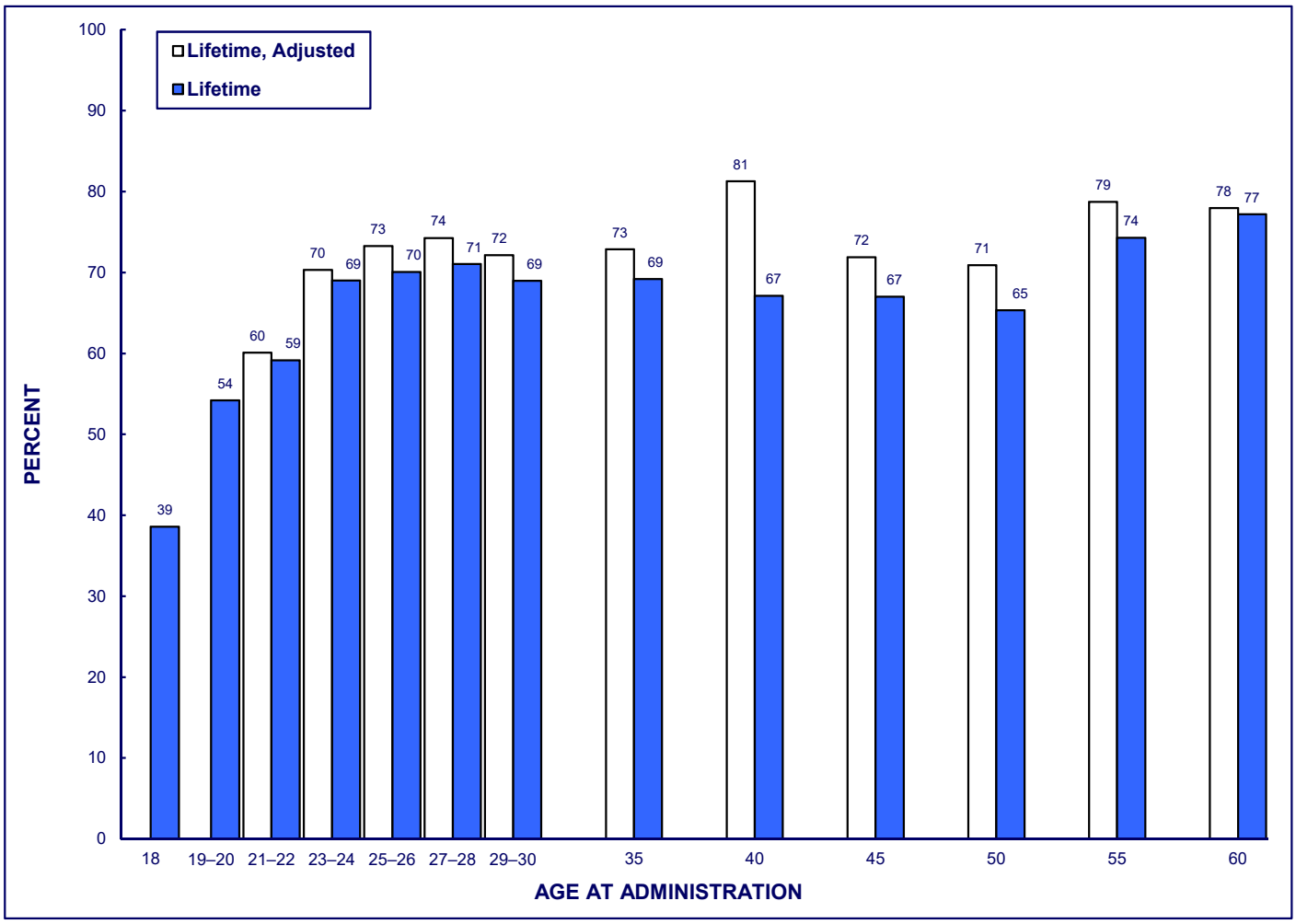
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30



Adjusted and Unadjusted Prevalence by Age Group, 2021

Updated Figures 39–47

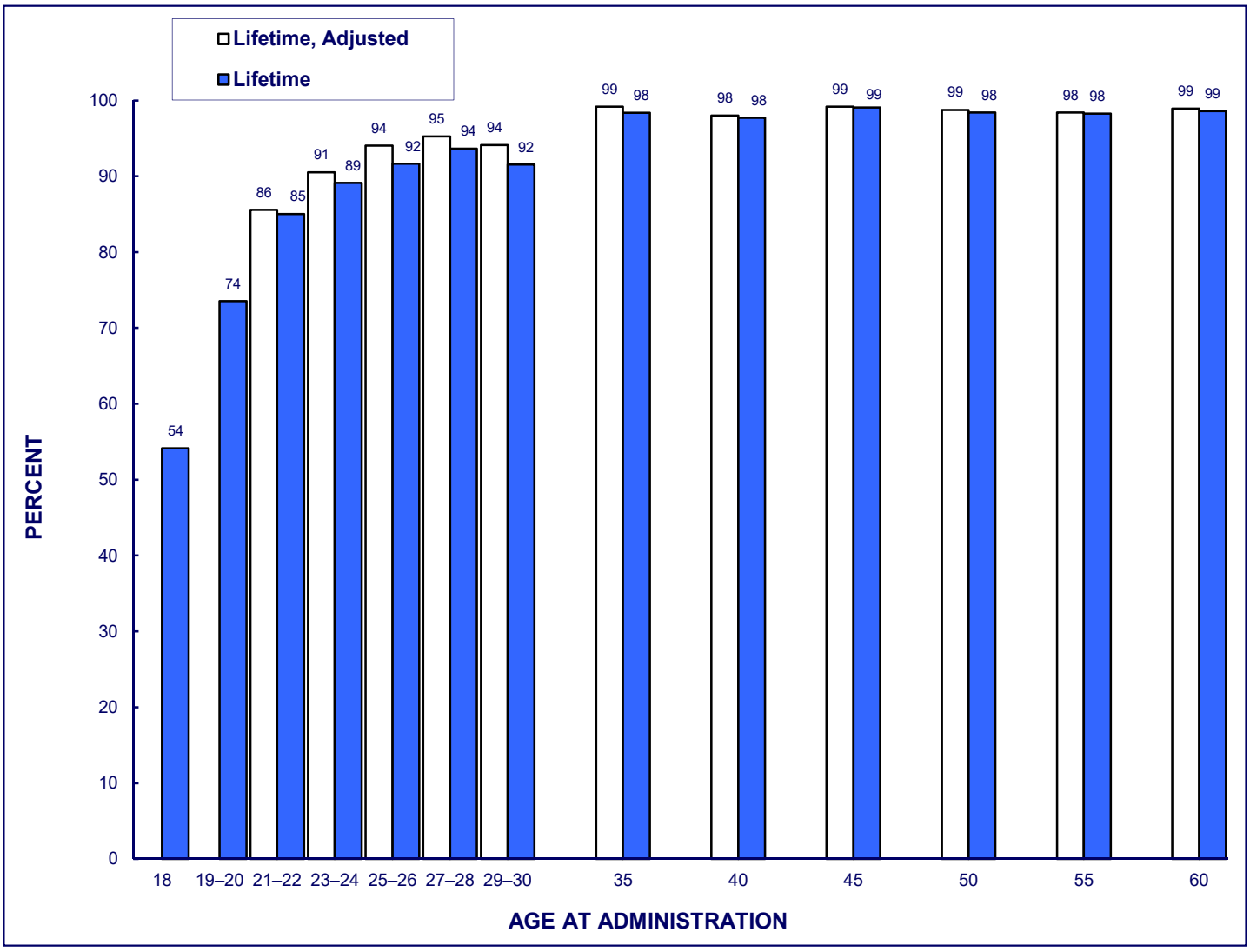
UPDATED FIGURE 39
MARIJUANA
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 60 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding some bars with the same number may have uneven height.

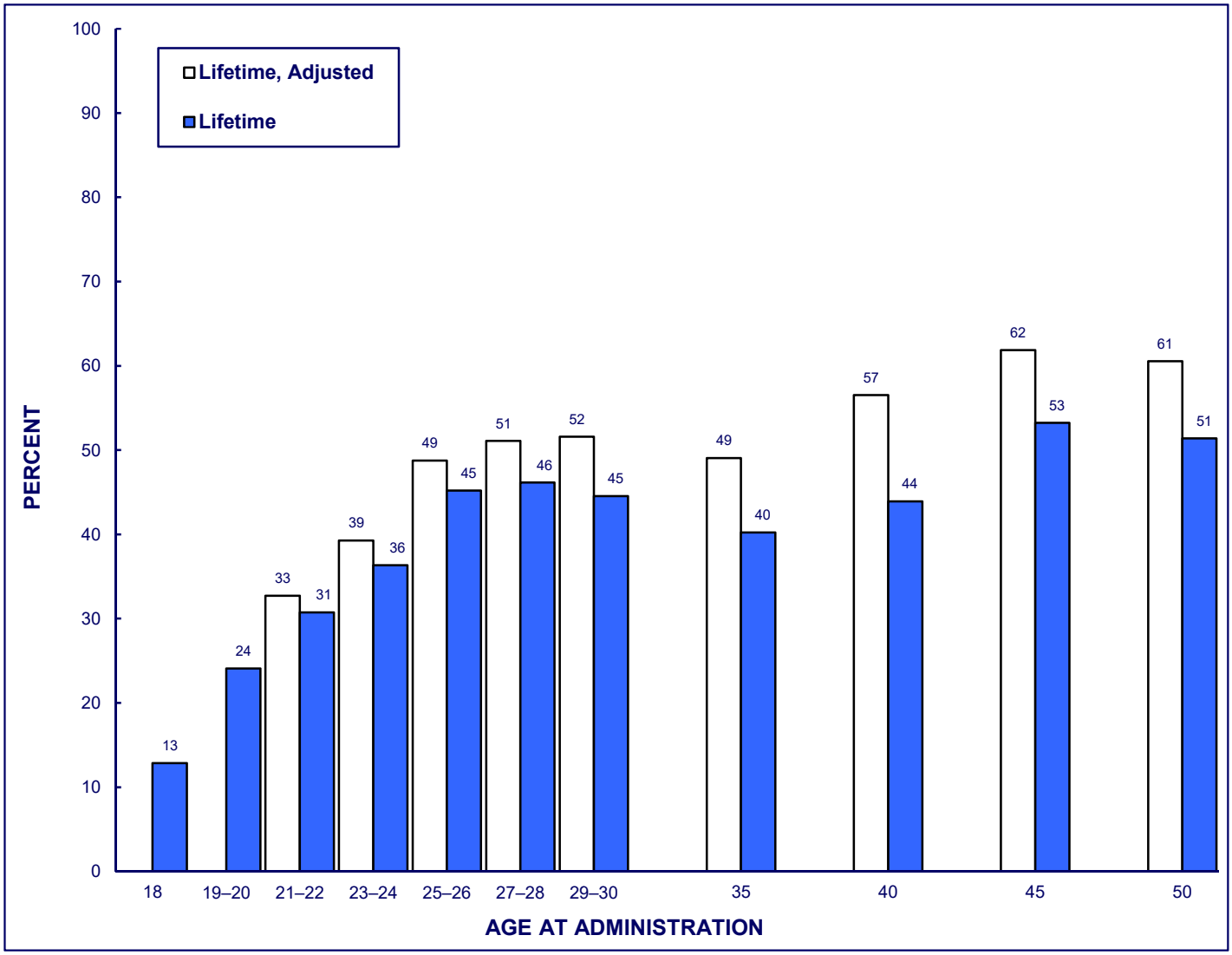
UPDATED FIGURE 40
ALCOHOL
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 60 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

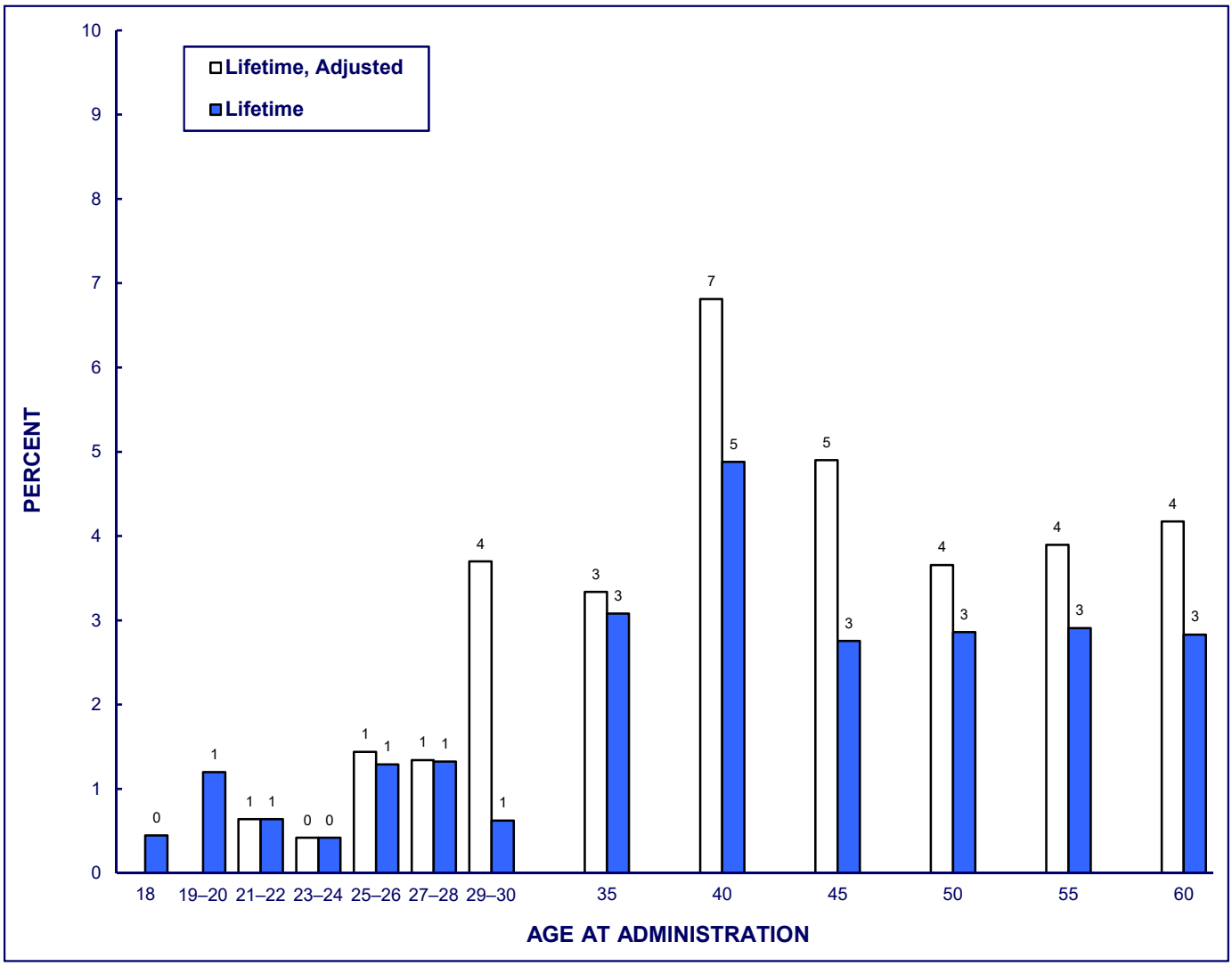
UPDATED FIGURE 41
ANY DRUG OTHER THAN MARIJUANA
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 50 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

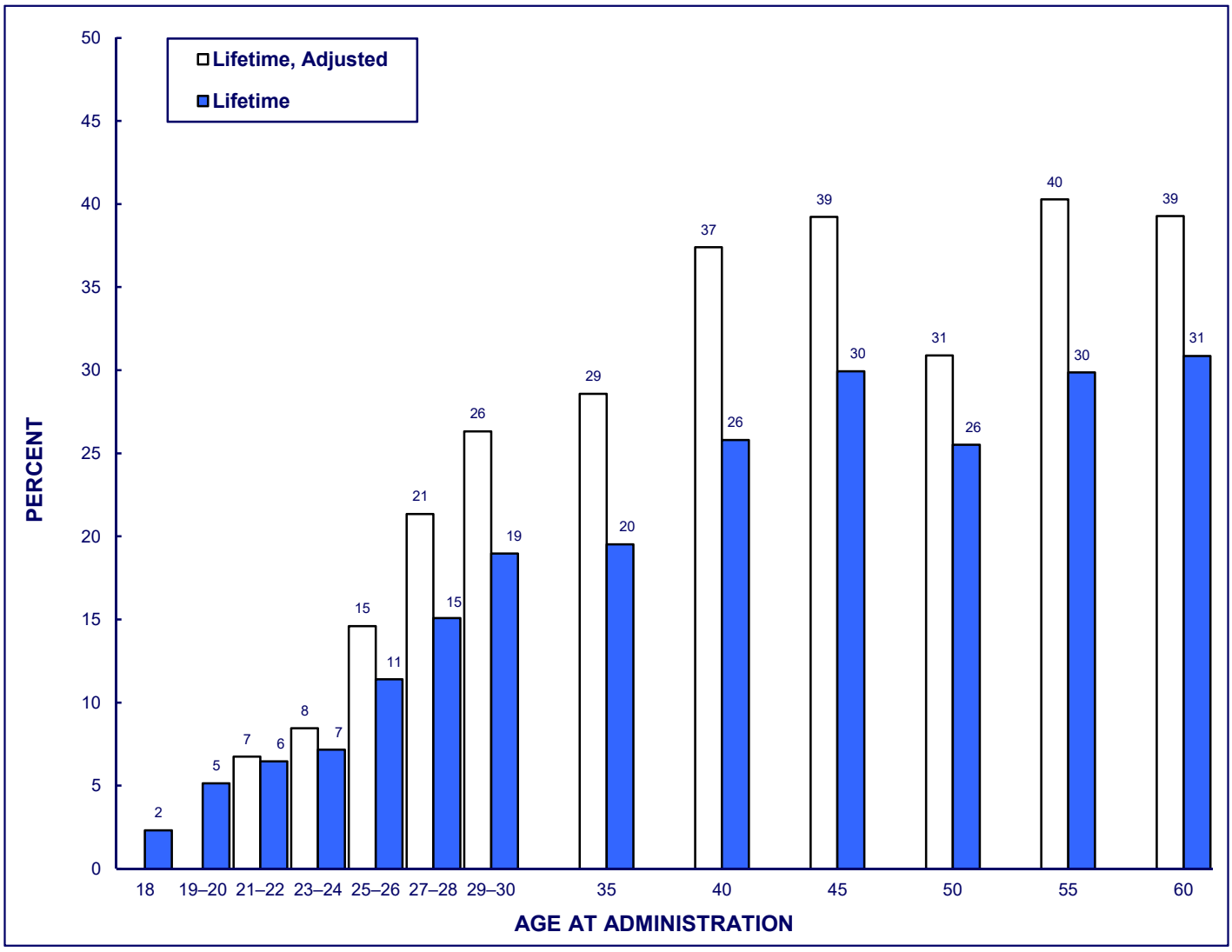
UPDATED FIGURE 42
HEROIN
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 60 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

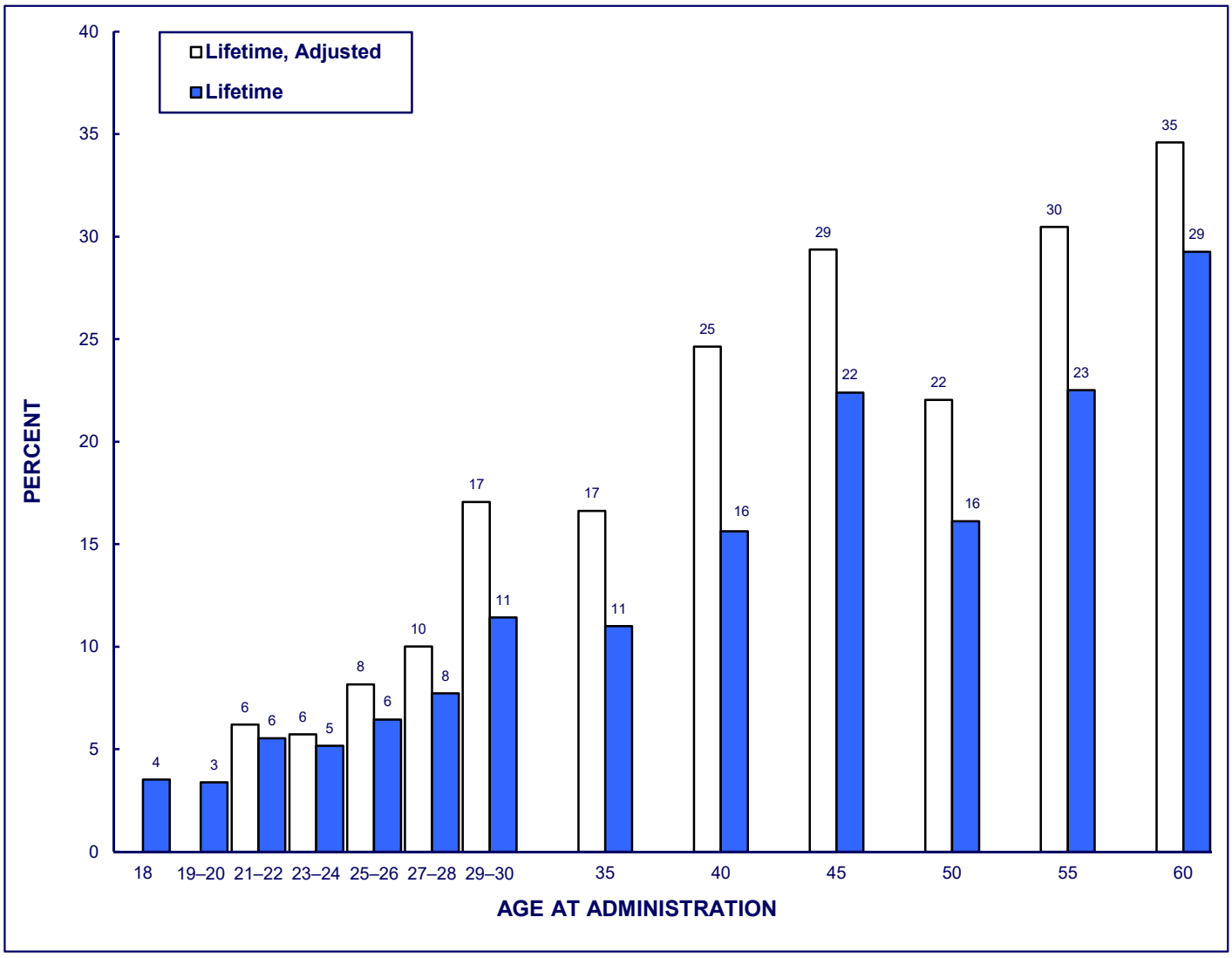
UPDATED FIGURE 43
NARCOTICS OTHER THAN HEROIN
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 60 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

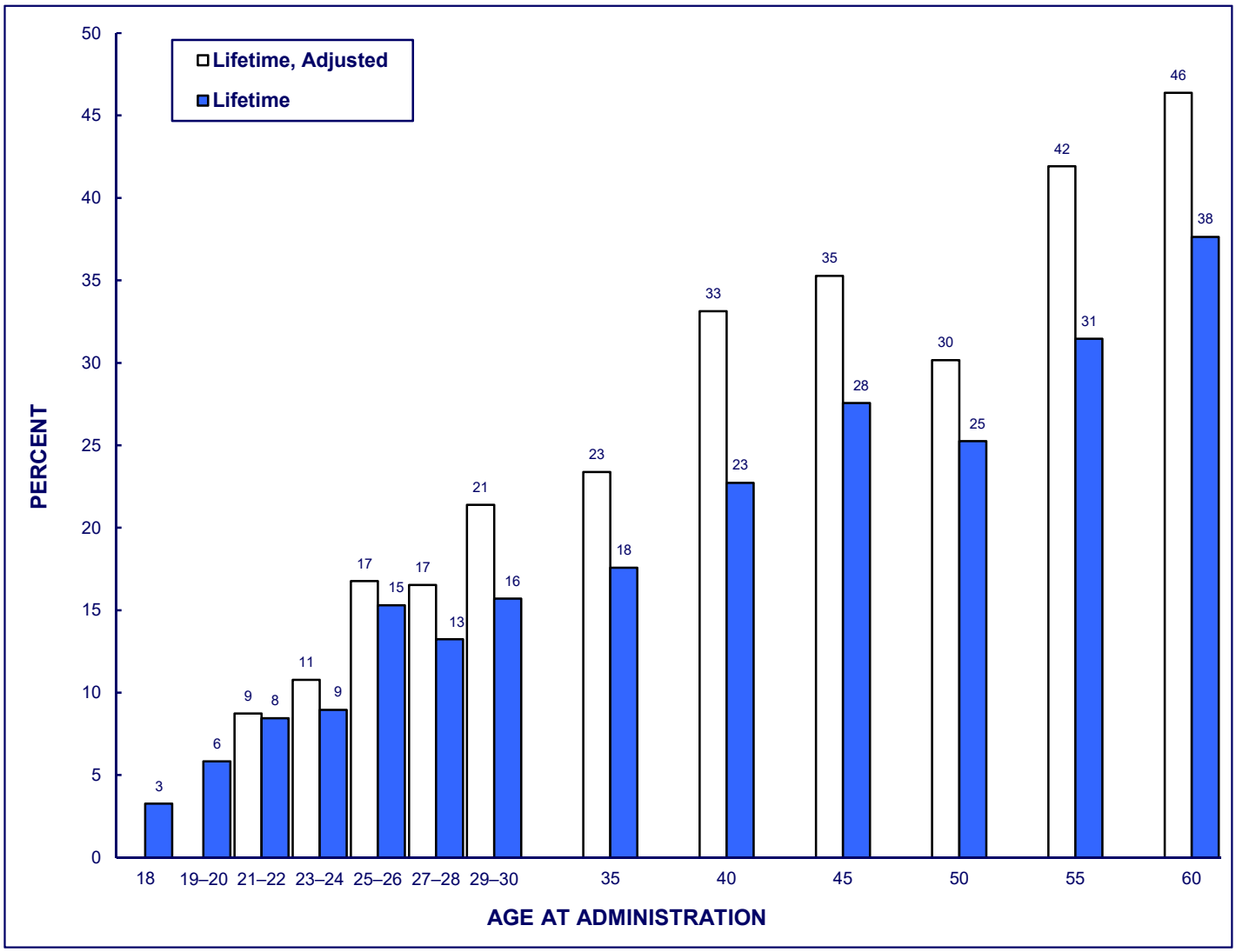
UPDATED FIGURE 44
SEDATIVES (BARBITURATES)
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 60 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

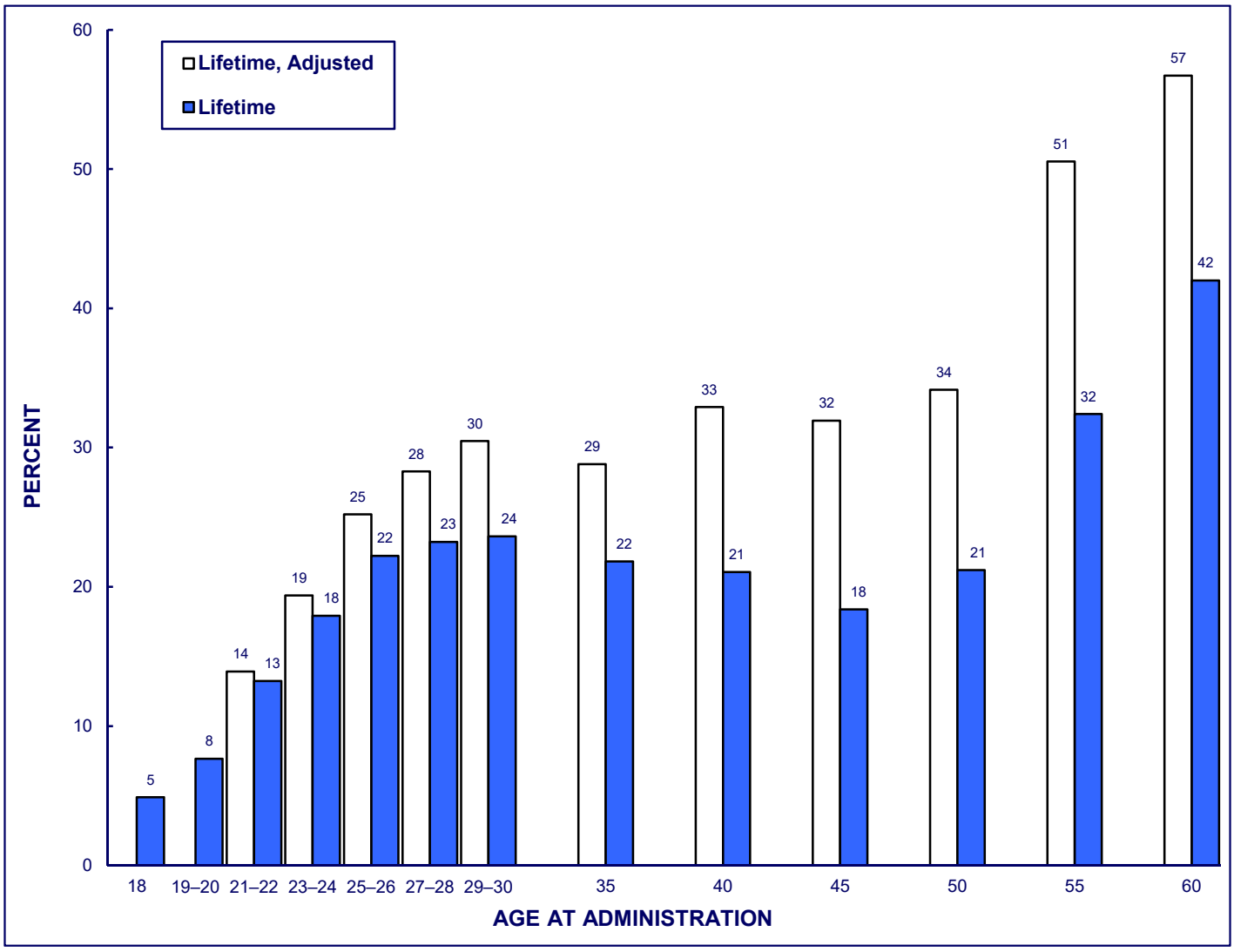
UPDATED FIGURE 45
TRANQUILIZERS
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 60 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

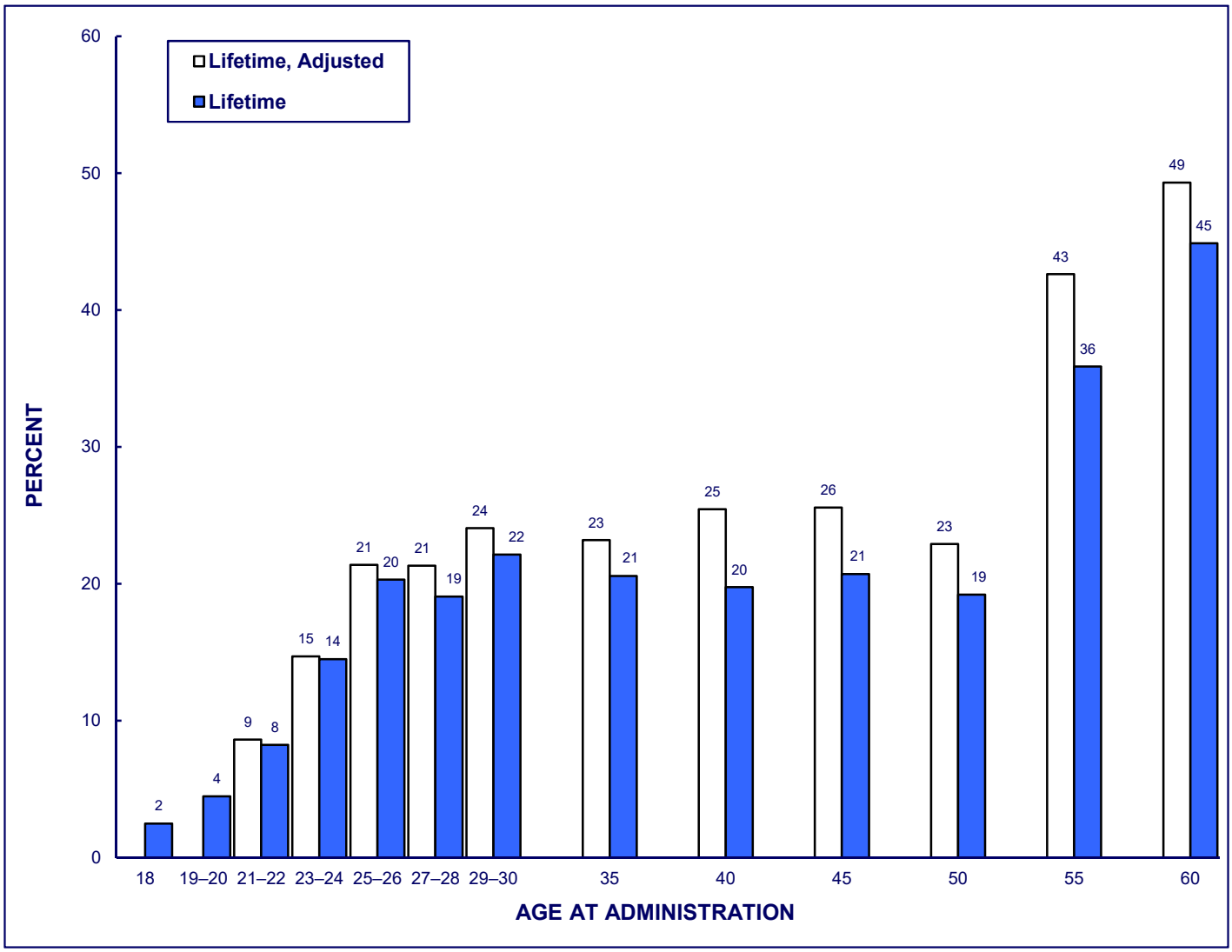
UPDATED FIGURE 46
AMPHETAMINES
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 60 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding, some bars with the same number may have uneven height.

UPDATED FIGURE 47
COCAINE
Adjusted and Unadjusted Lifetime Prevalence among Respondents of Modal Ages 18 through 60 by Age Group, 2021



Source. The Monitoring the Future study, the University of Michigan.

Notes. Lifetime prevalence estimates were adjusted for inconsistency in self-reports of drug use over time. See text for discussion.
Due to rounding some bars with the same number may have uneven height.

College and Noncollege Young Adult Substance Use Trends

Updated Tables 27–29

Updated Figures 48–61

UPDATED TABLE 27

12-Month Prevalence of Use for Various Types of Drugs, 2021: Full-Time College Students vs. Noncollege Youth among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

	Total		Men		Women	
	Full-Time College	Non-College	Full-Time College	Non-College	Full-Time College	Non-College
Marijuana	38.8	45.0	40.1	42.7	37.4	47.7
Vaping Marijuana	18.1	21.9	20.1	21.6	17.1	22.0
Alcohol	78.7	72.2	75.1	69.8	81.1	76.3
Cigarettes	15.5	20.3	20.4	25.7	12.1	15.7
Vaping Nicotine	26.1	32.8	25.7	34.6	26.3	32.3
Any Drug other than Marijuana	14.8	15.3	16.8	18.9	13.5	12.3
Hallucinogens	7.1	9.8	10.1	11.1	4.9	8.0
LSD	4.5	6.0	6.5	7.1	3.1	4.8
Hallucinogens other than LSD	4.6	7.8	7.1	8.7	2.8	6.6
Ketamine	0.8	1.8	0.6	1.2	0.9	2.5
MDMA (ecstasy, molly)	1.6	2.8	2.1	1.1	1.4	4.6
Heroin	0.2	1.1	0.6	1.5	*	0.3
Narcotics other than Heroin	0.9	2.1	1.4	3.2	0.6	0.8
OxyContin	0.6	4.1	1.4	4.2	*	4.3
Vicodin	0.8	0.4	1.4	*	0.4	0.7
Sedatives (Barbiturates)	0.6	2.5	0.6	2.4	0.6	2.8
Tranquilizers	1.2	4.4	0.9	4.3	1.5	4.4
Amphetamines, Adjusted	5.3	5.3	6.0	5.4	5.0	5.1
Adderall	5.2	3.5	5.4	3.2	5.1	4.0
Ritalin	1.1	1.8	1.0	1.5	1.2	2.3
Cocaine	4.0	3.2	4.3	3.3	3.7	2.2
Methamphetamine	0.7	0.2	1.5	*	*	0.3
Small Cigars	10.7	8.7	18.0	12.3	5.2	5.6
Tobacco using a Hookah	4.5	7.5	5.7	8.7	3.7	6.9
Dissolvable Tobacco	1.3	*	3.1	*	*	*
Snus	3.8	4.2	6.6	8.2	1.9	*
Approximate Weighted N =						

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

UPDATED TABLE 28

Thirty-Day Prevalence of Use for Various Types of Drugs, 2021: Full-Time College Students vs. Noncollege Youth among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

	Total		Men		Women	
	Full-Time College	Non-College	Full-Time College	Non-College	Full-Time College	Non-College
Marijuana	23.5	34.9	23.4	33.4	23.6	36.1
Vaping Marijuana	10.7	16.3	12.7	17.5	9.4	14.3
Alcohol	63.2	51.0	61.9	44.7	63.7	57.2
Cigarettes	6.0	9.8	7.2	11.6	5.2	8.3
Vaping Nicotine	19.6	26.6	20.2	27.6	19.0	26.6
Any Drug other than Marijuana	5.5	6.6	6.5	6.9	4.9	6.1
Hallucinogens	1.0	2.1	1.7	2.7	0.5	0.9
LSD	0.5	3.4	1.0	4.6	*	1.9
Hallucinogens other than LSD	0.5	2.0	0.5	2.5	0.5	0.9
MDMA (ecstasy, molly)	*	*	*	*	*	0.1
Heroin	0.2	0.5	0.6	*	*	0.3
Narcotics other than Heroin	0.4	0.6	1.0	0.4	*	0.2
Sedatives (Barbiturates)	0.3	1.6	0.6	0.7	0.2	2.7
Tranquilizers	0.6	1.7	0.6	0.4	0.6	2.5
Amphetamines, Adjusted	2.4	2.6	2.6	2.2	2.3	2.7
Cocaine	1.4	0.8	1.8	0.1	1.2	0.7
Large Cigars	8.2	3.1	14.0	4.9	3.3	2.0
Flavored Little Cigars	7.9	5.5	13.4	8.1	3.3	3.9
Regular Little Cigars	4.8	3.1	10.5	4.9	*	1.9
Approximate Weighted N =						

Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

UPDATED TABLE 29

Thirty-Day Prevalence of Daily Use for Various Types of Drugs, 2021: Full-Time College Students vs. Noncollege Youth among Respondents 1 to 4 Years beyond High School by Gender

(Entries are percentages.)

	Total		Men		Women	
	Full-Time College	Non-College	Full-Time College	Non-College	Full-Time College	Non-College
Marijuana	4.7	15.4	6.0	16.8	3.5	14.3
Alcohol						
Daily	2.8	3.4	3.7	4.5	2.2	1.6
5+ Drinks in a Row in Last 2 Weeks	31.2	27.0	31.6	23.0	31.1	29.6
10+ Drinks in a Row in Last 2 Weeks	9.9	10.5	14.3	14.2	6.1	6.9
Cigarettes						
Daily	0.9	5.6	1.8	5.7	0.1	5.5
1/2 Pack+/Day	0.5	4.8	1.0	4.6	0.1	4.9
Approximate Weighted N =						

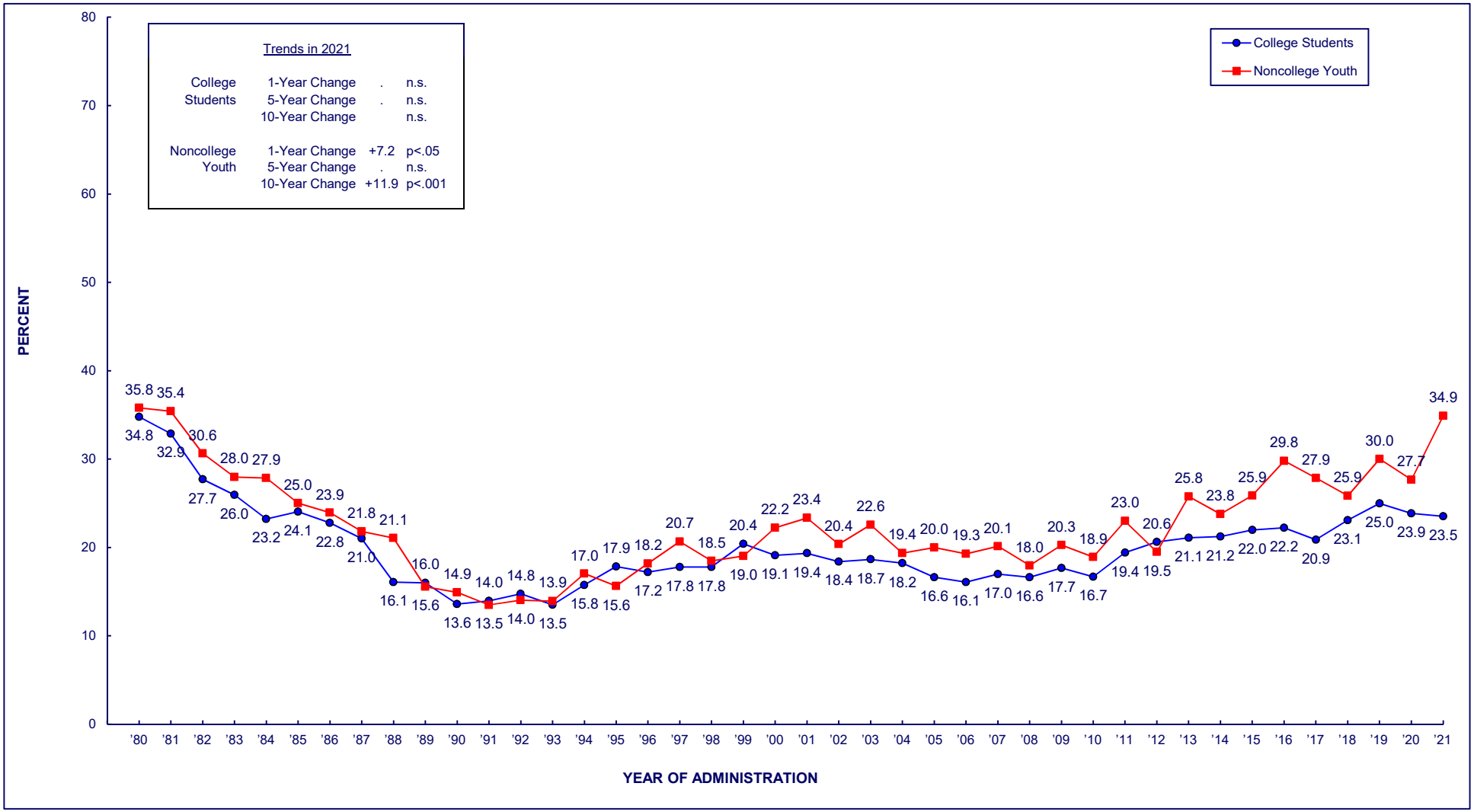
Source. The Monitoring the Future study, the University of Michigan.

Notes. ' * ' indicates a prevalence rate of less than 0.05%.

UPDATED FIGURE 48

MARIJUANA

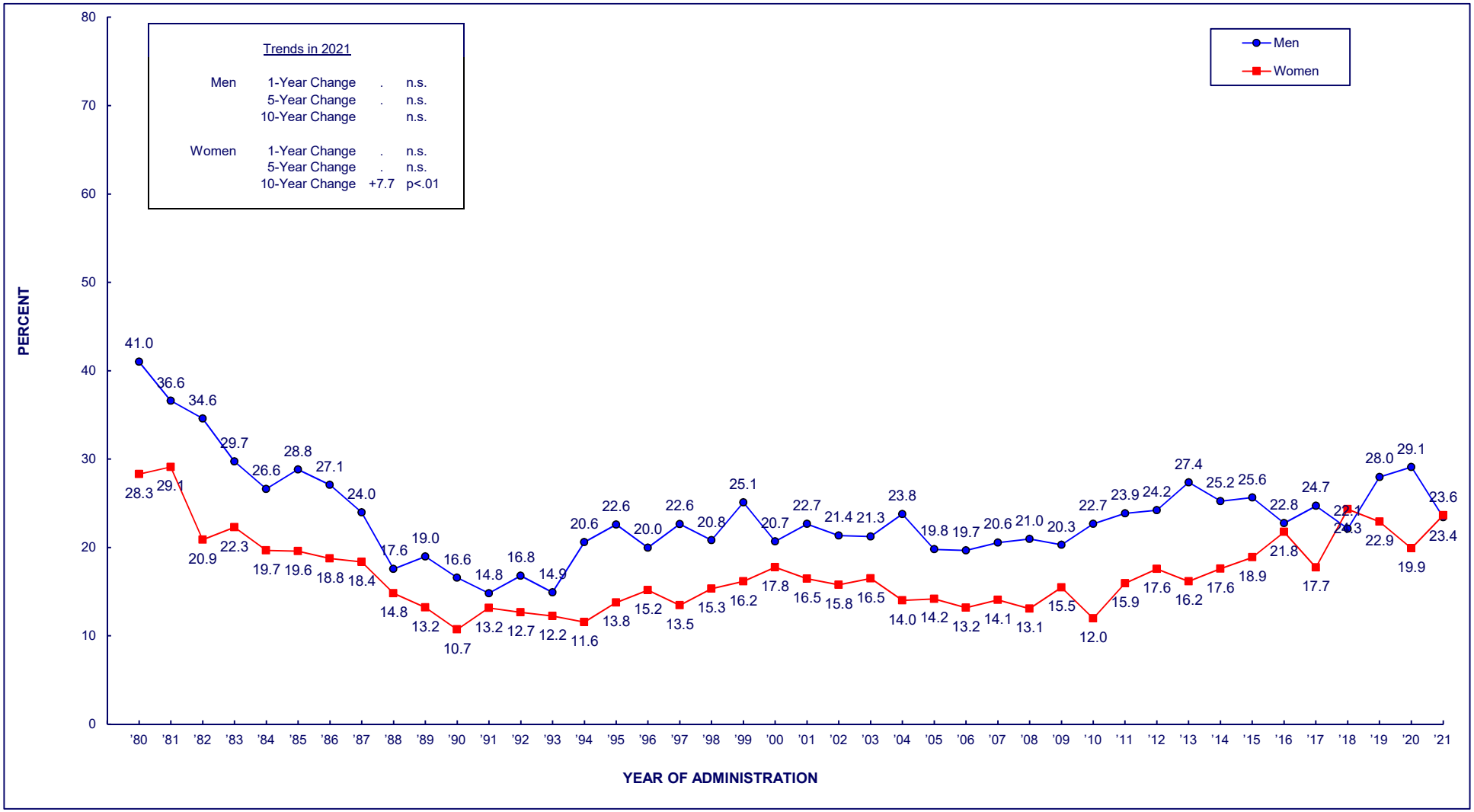
Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



UPDATED FIGURE 49

MARIJUANA

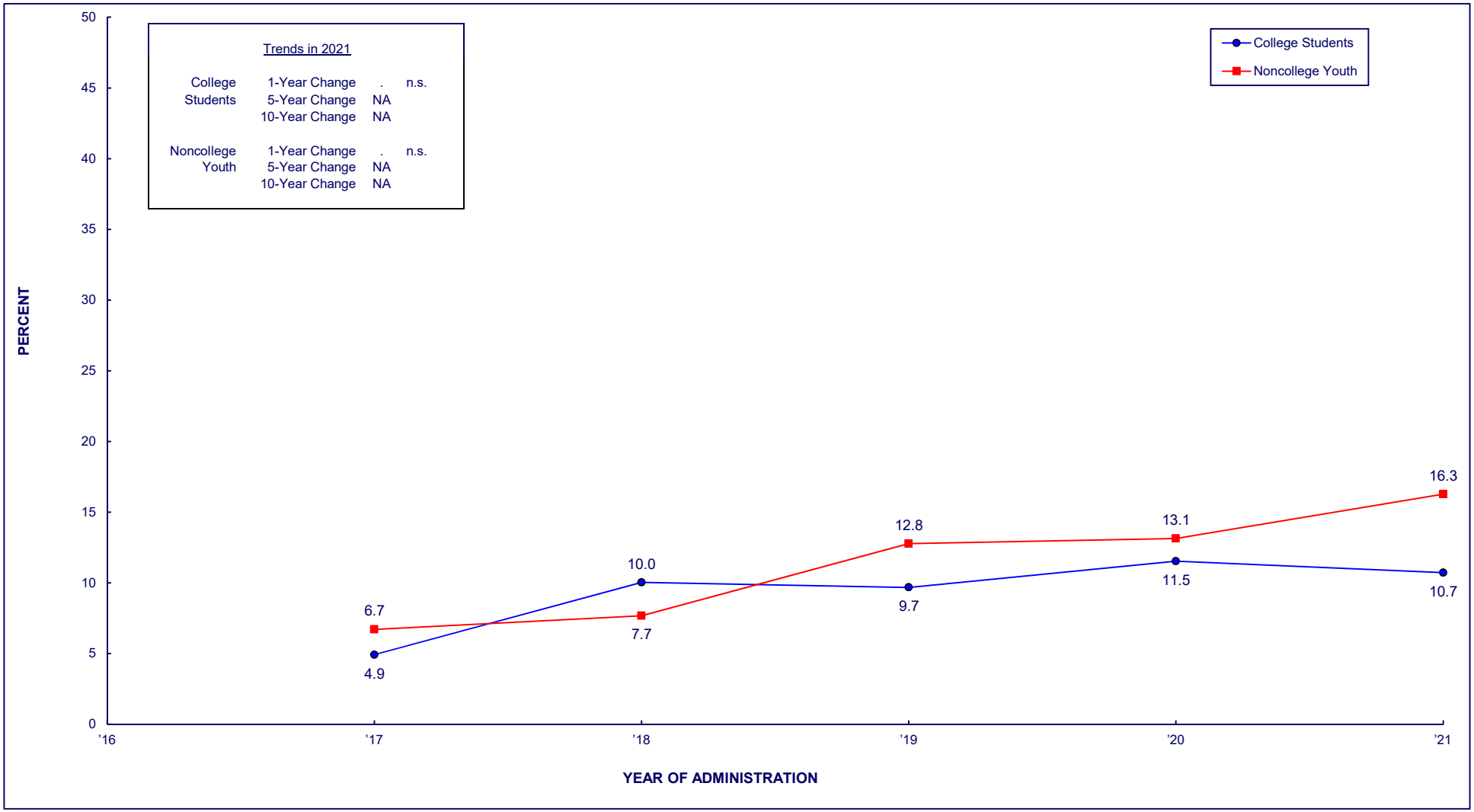
Trends in 30-Day Prevalence among College Students 1 to 4 Years beyond High School, by Sex



UPDATED FIGURE 50

VAPING MARIJUANA

Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School

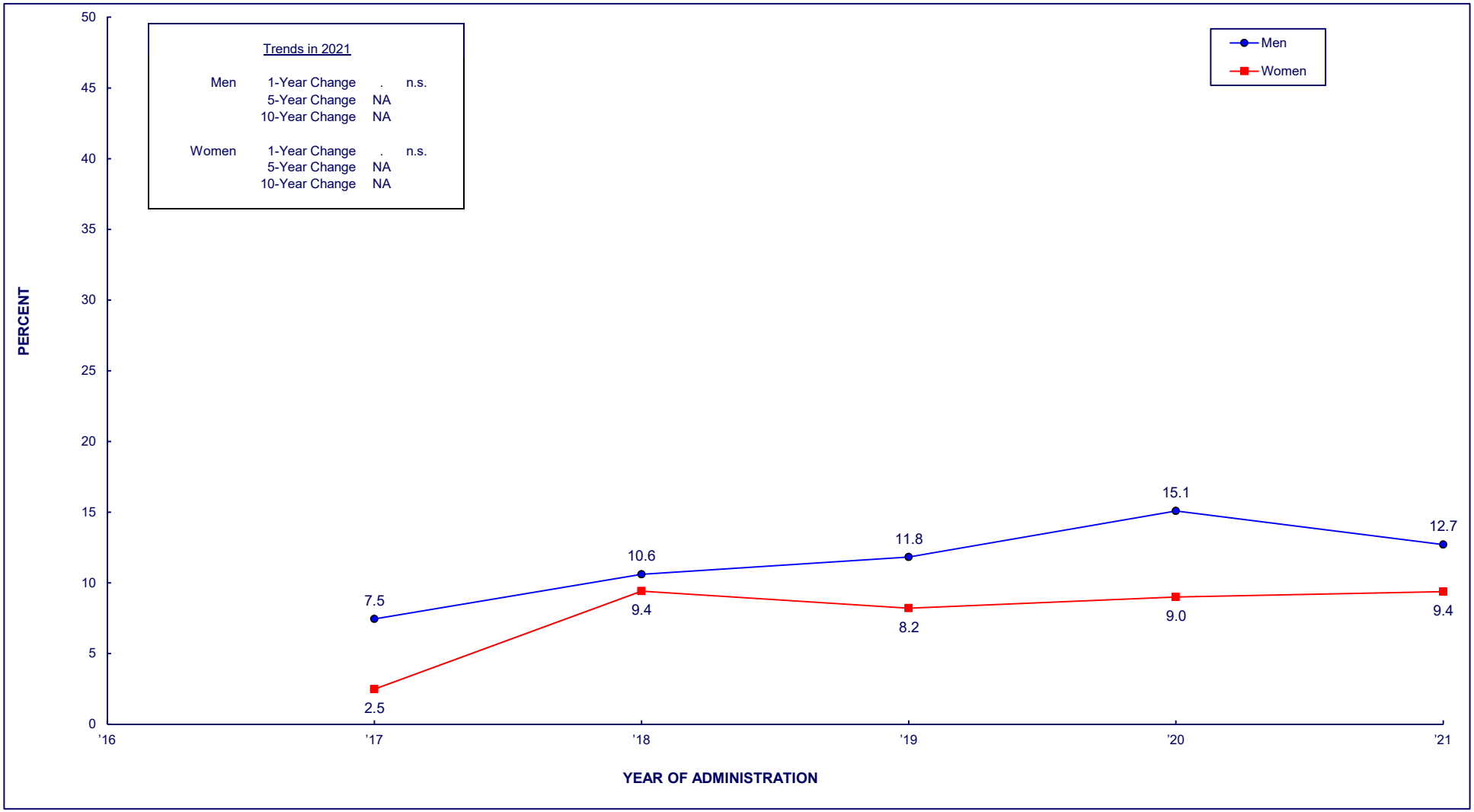


UPDATED FIGURE 51

VAPING MARIJUANA

Trends in 30-Day Prevalence

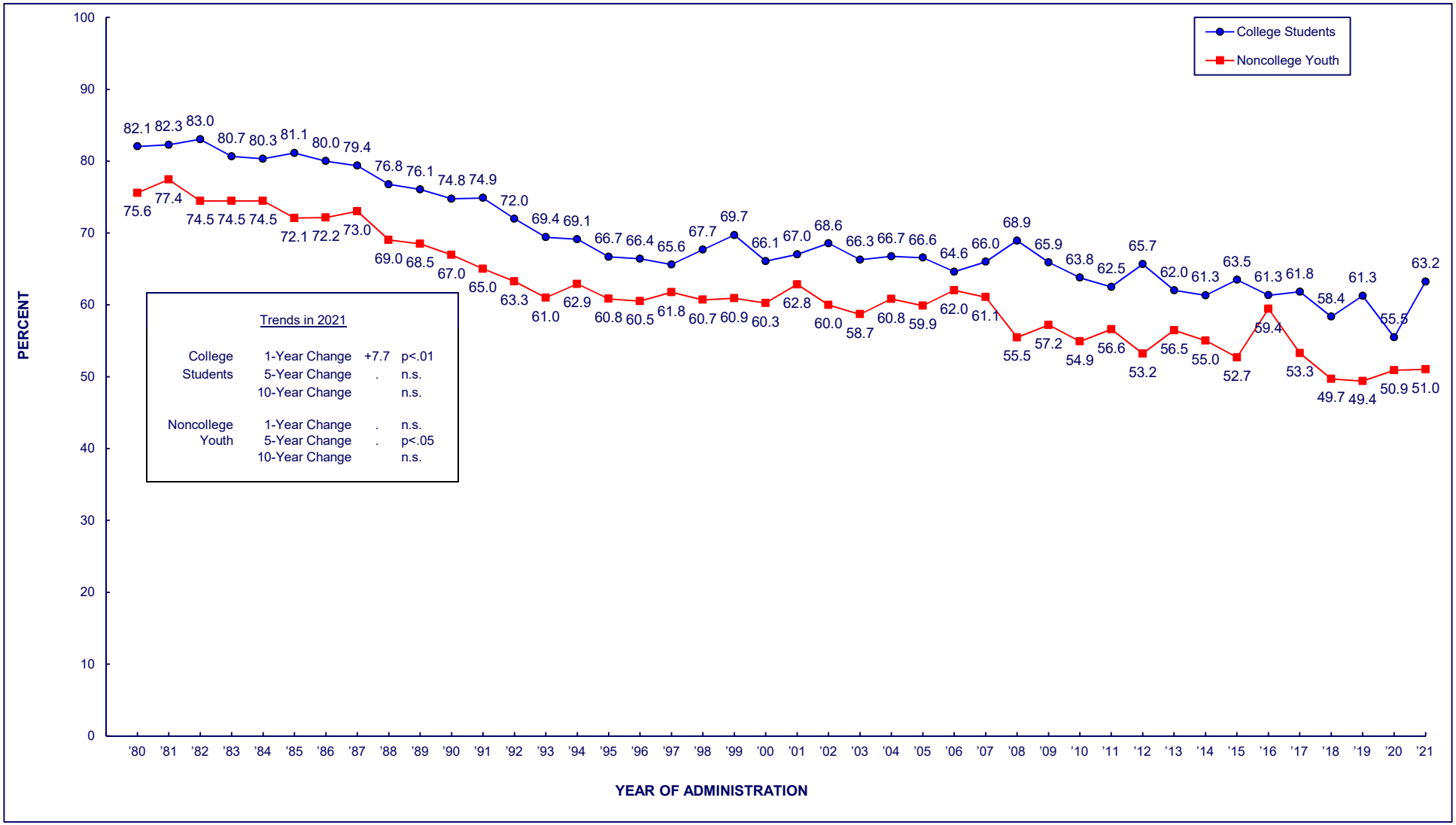
among College Students 1 to 4 Years beyond High School, by Sex



UPDATED FIGURE 52

ALCOHOL

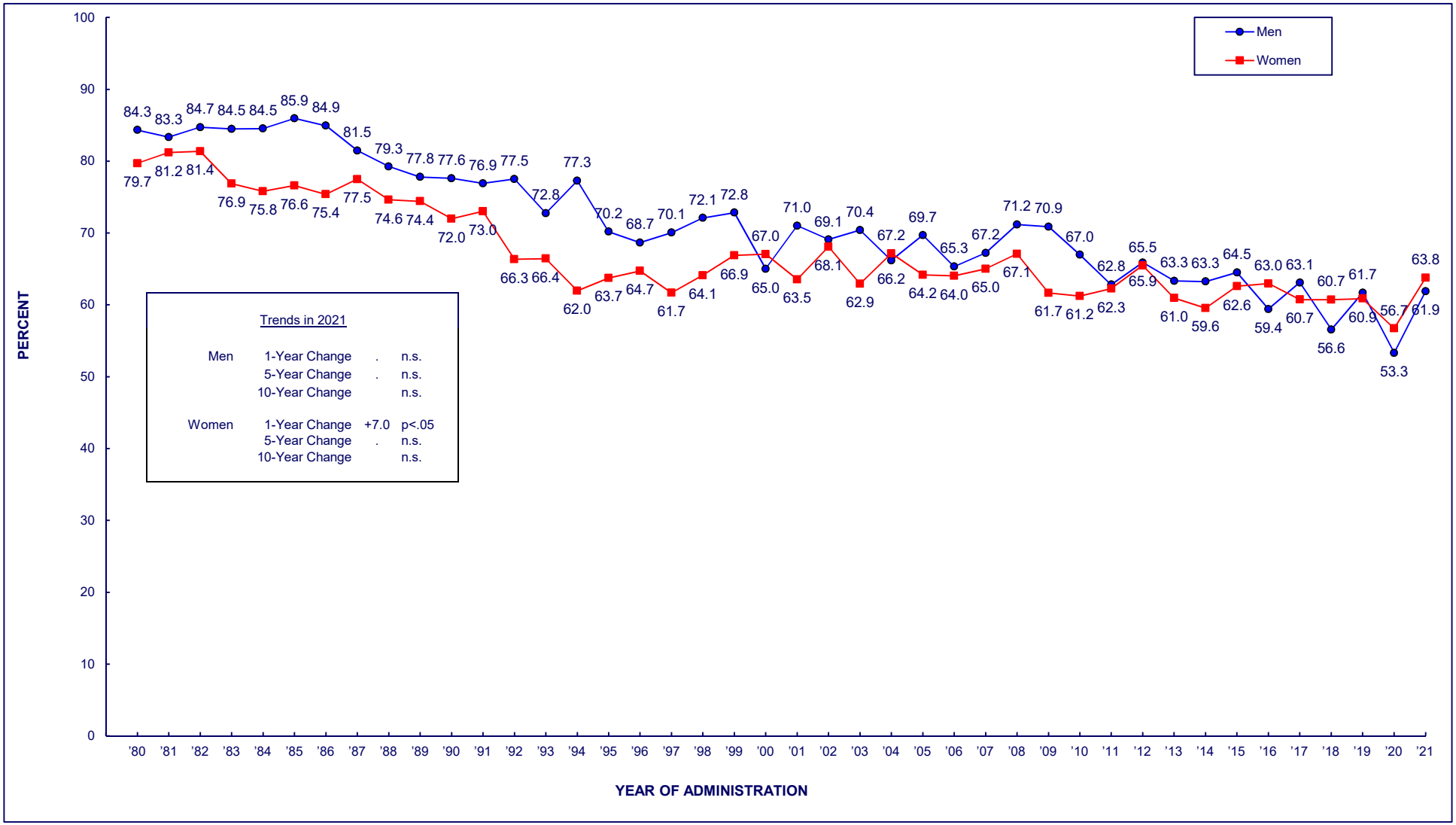
Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



UPDATED FIGURE 53

ALCOHOL

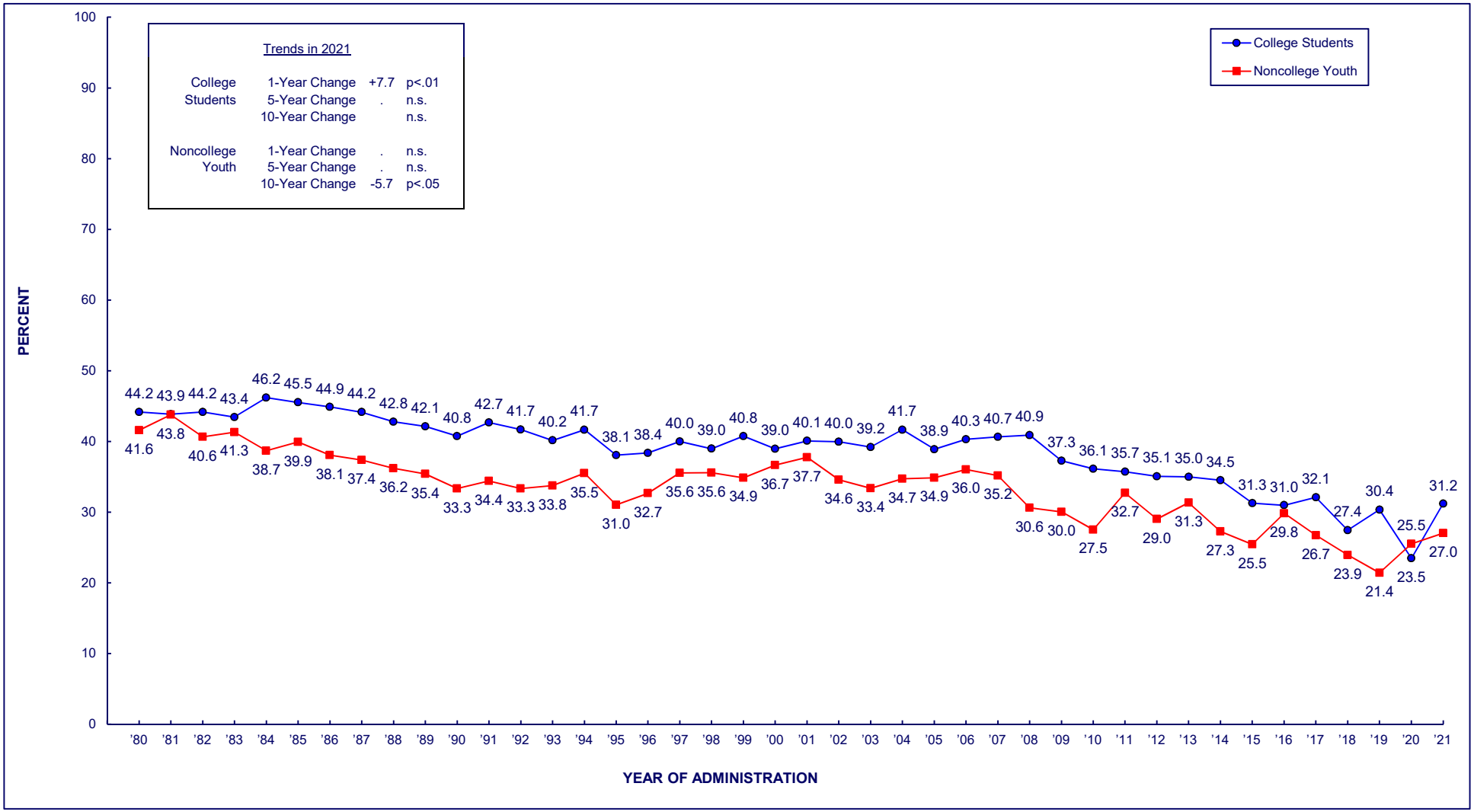
Trends in 30-Day Prevalence among College Students 1 to 4 Years beyond High School, by Sex



UPDATED FIGURE 54

ALCOHOL

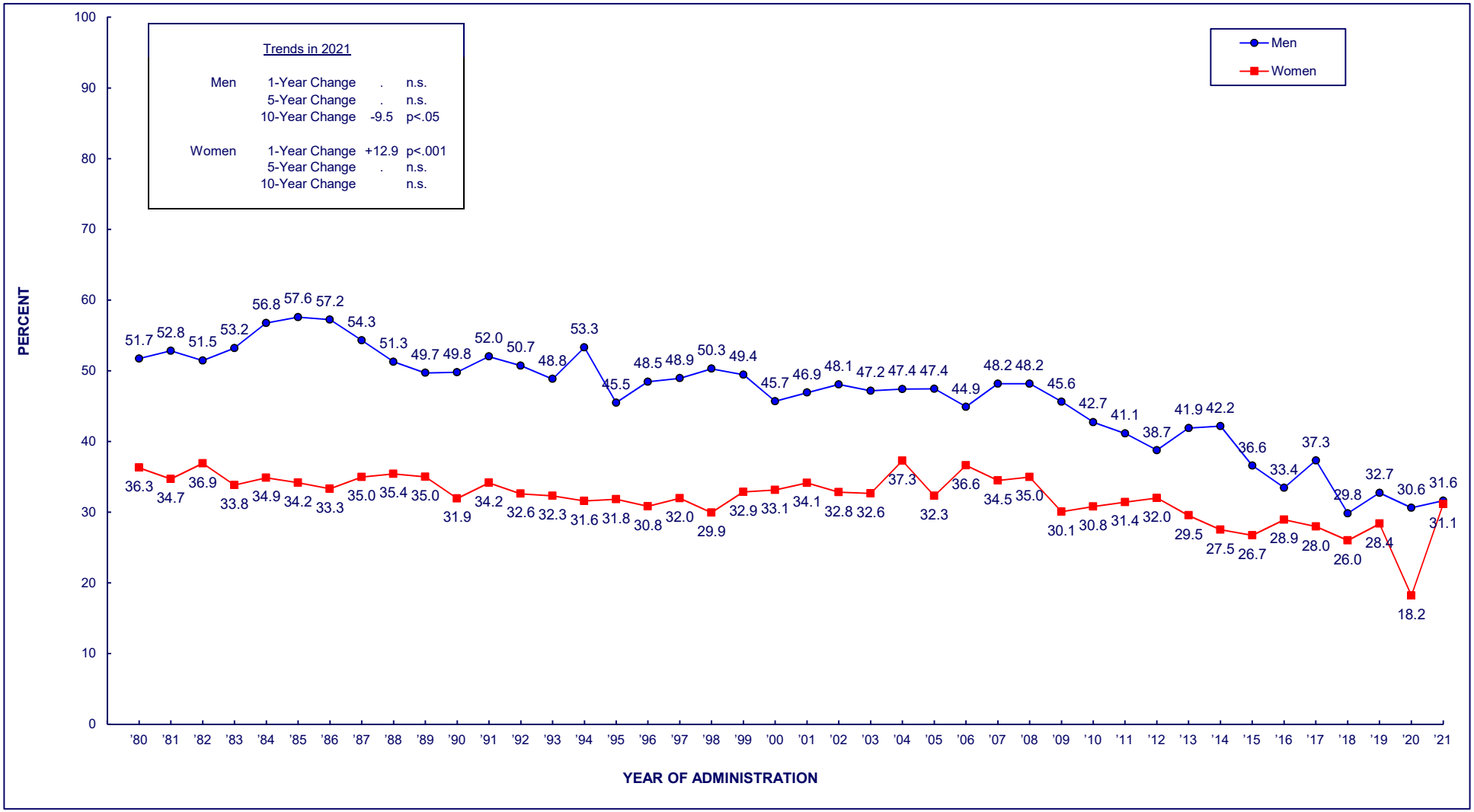
Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



UPDATED FIGURE 55

ALCOHOL

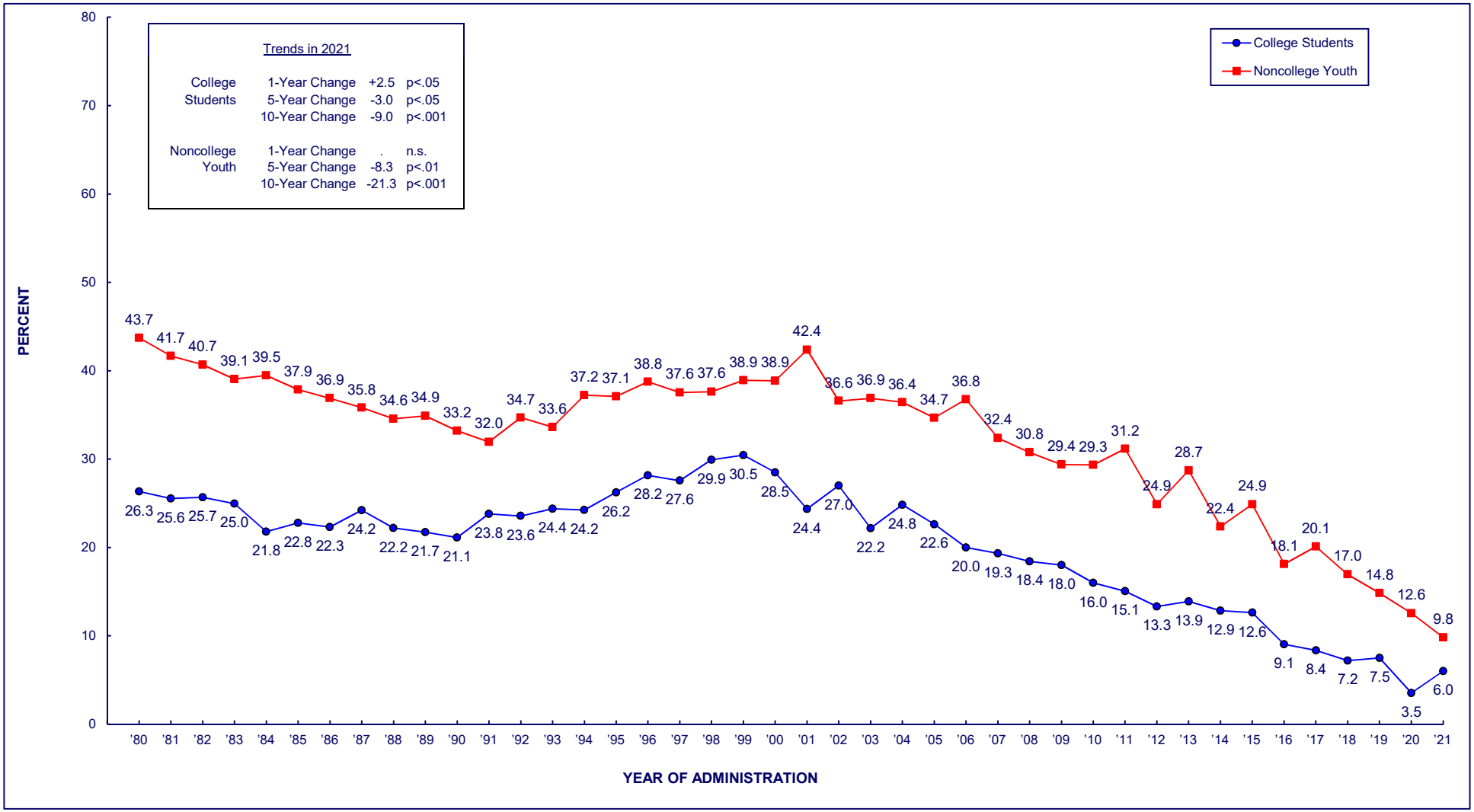
Trends in 2-Week Prevalence of Having 5 or More Drinks in a Row among College Students 1 to 4 Years beyond High School, by Sex



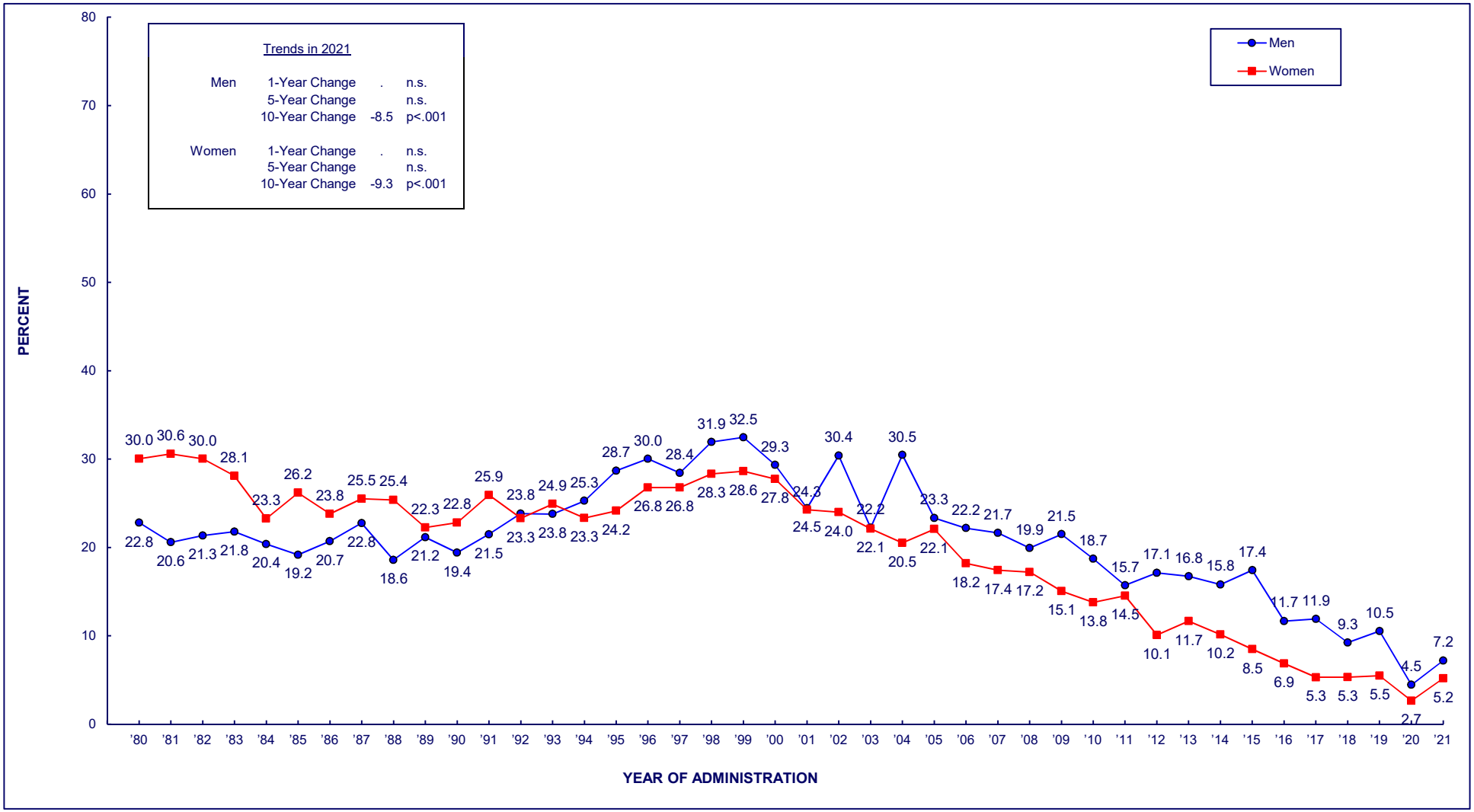
UPDATED FIGURE 56

CIGARETTES

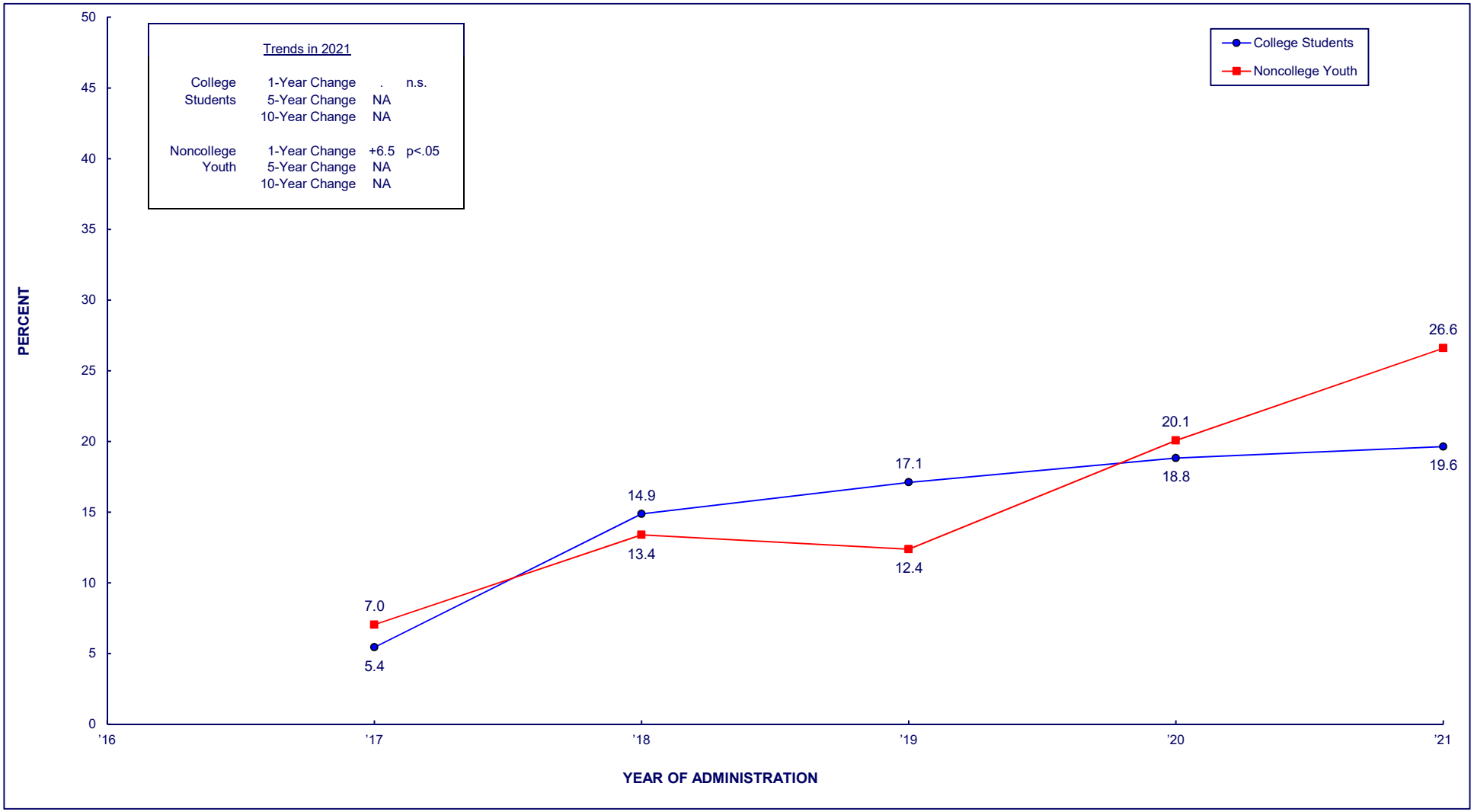
Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



UPDATED FIGURE 57
CIGARETTES
Trends in 30-Day Prevalence
among College Students 1 to 4 Years beyond High School, by Sex



UPDATED FIGURE 58
VAPING NICOTINE
Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School

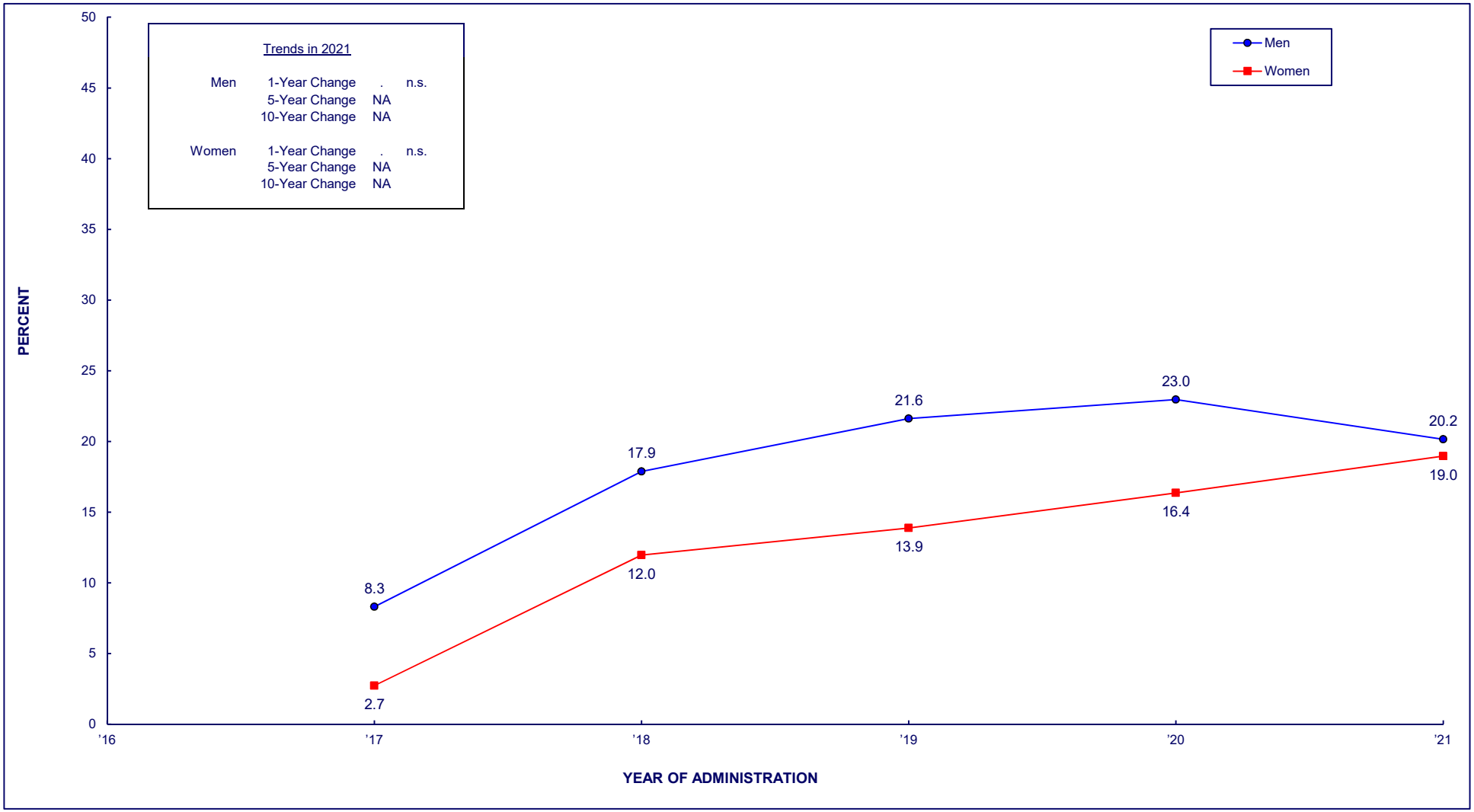


UPDATED FIGURE 59

VAPING NICOTINE

Trends in 30-Day Prevalence

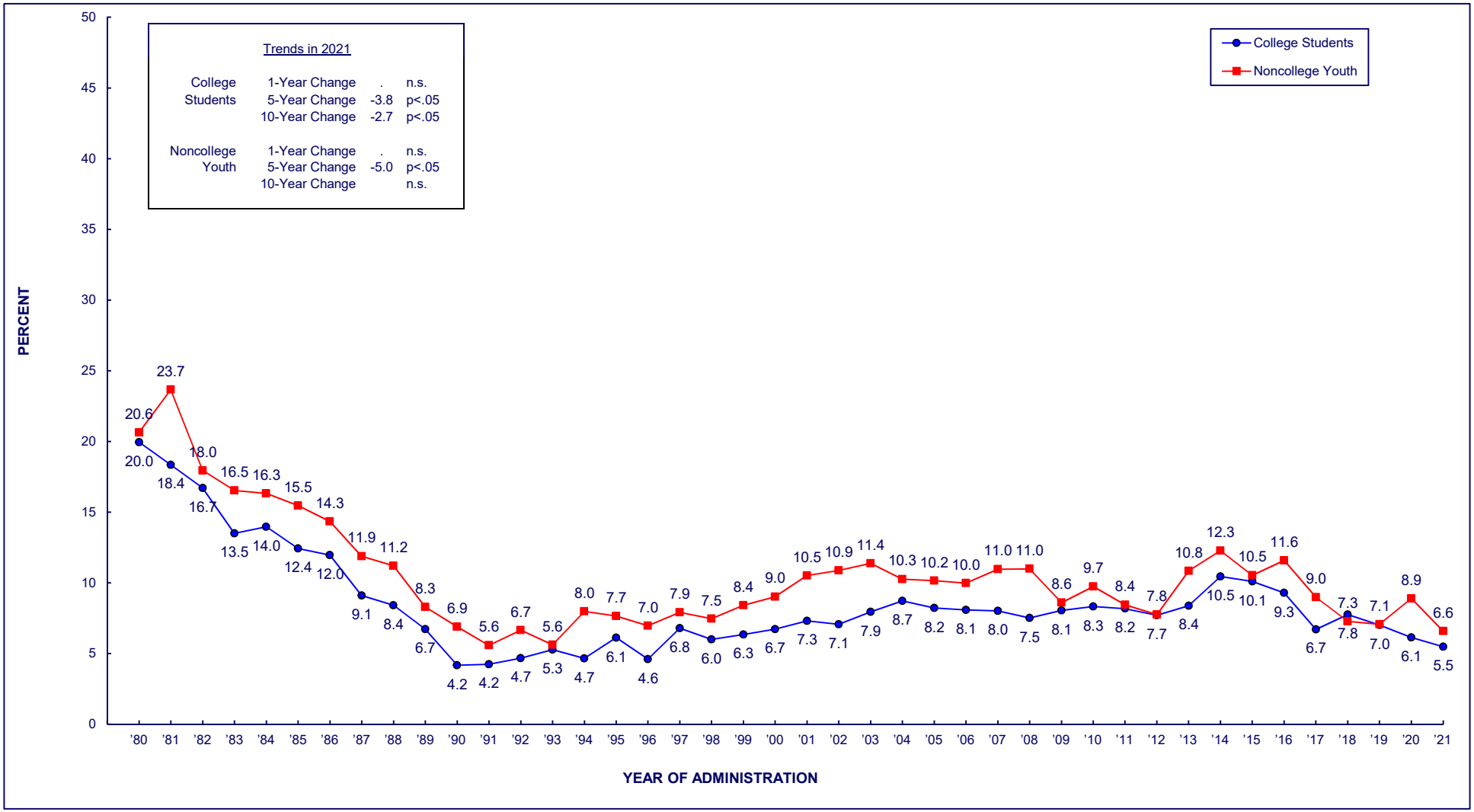
among College Students 1 to 4 Years beyond High School, by Sex



UPDATED FIGURE 60

ANY DRUG OTHER THAN MARIJUANA

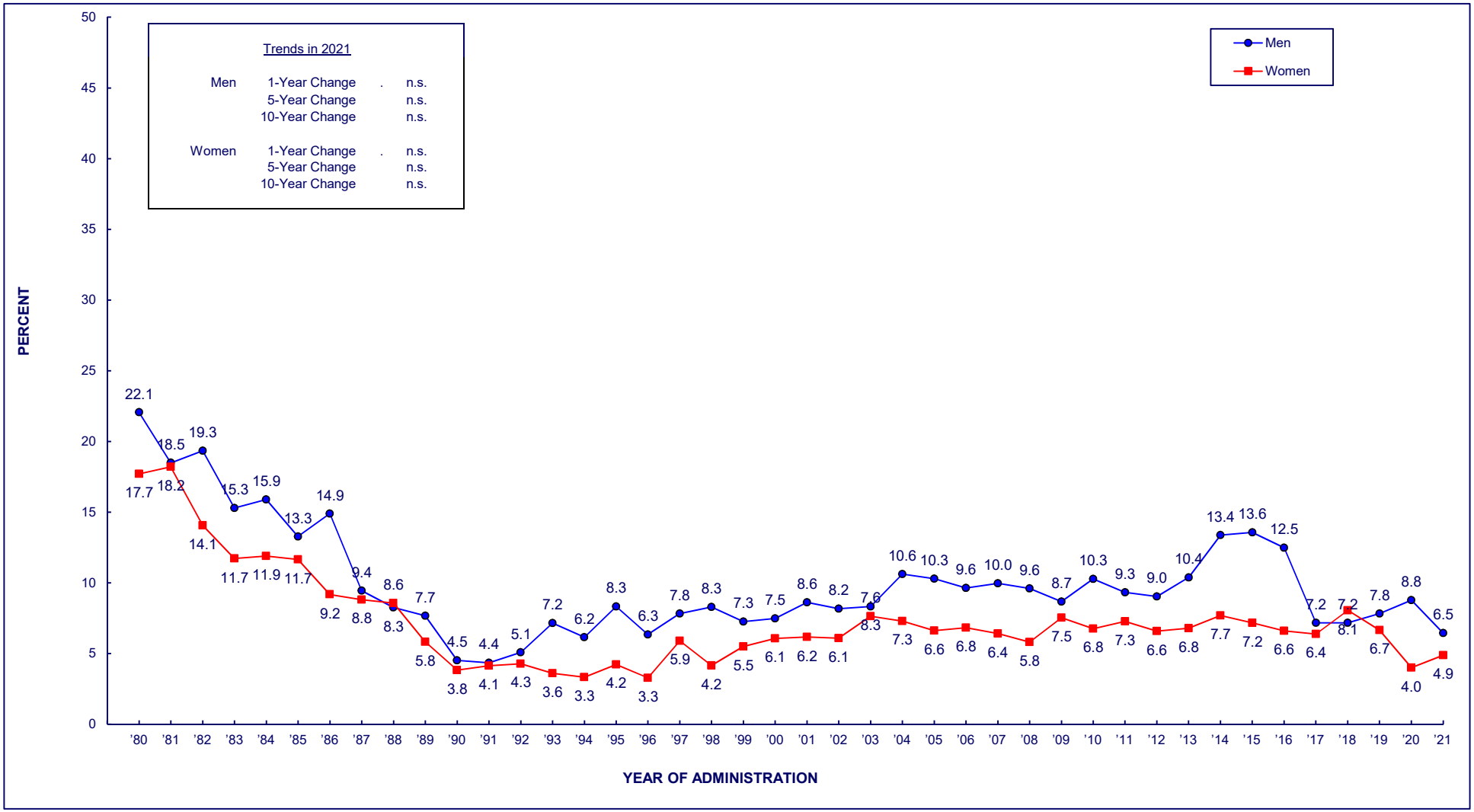
Trends in 30-Day Prevalence among College Students vs. Noncollege Youth 1 to 4 Years beyond High School



UPDATED FIGURE 61

ANY DRUG OTHER THAN MARIJUANA

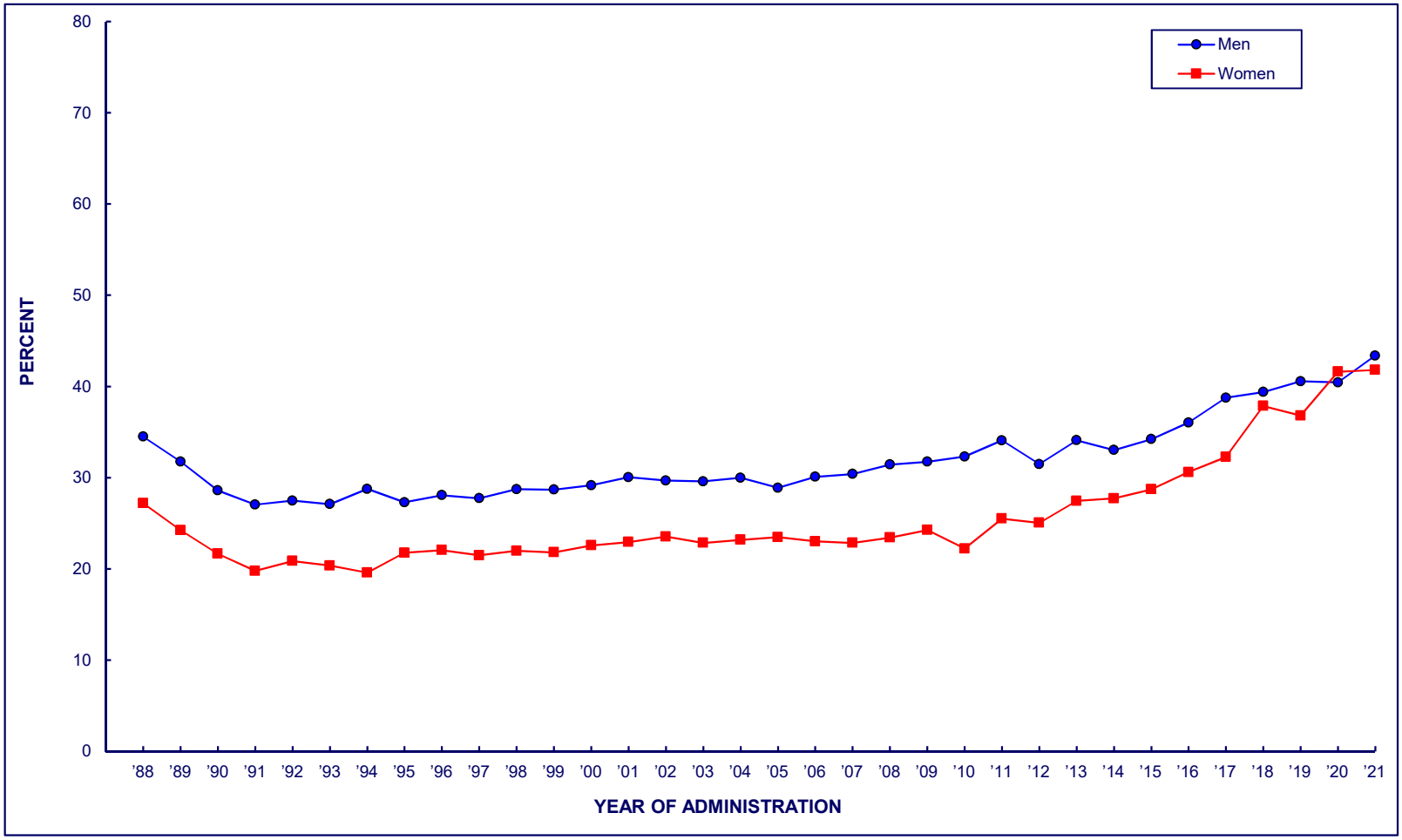
Trends in 30-Day Prevalence among College Students 1 to 4 Years beyond High School, by Sex



Demographic Subgroup Trend Differences

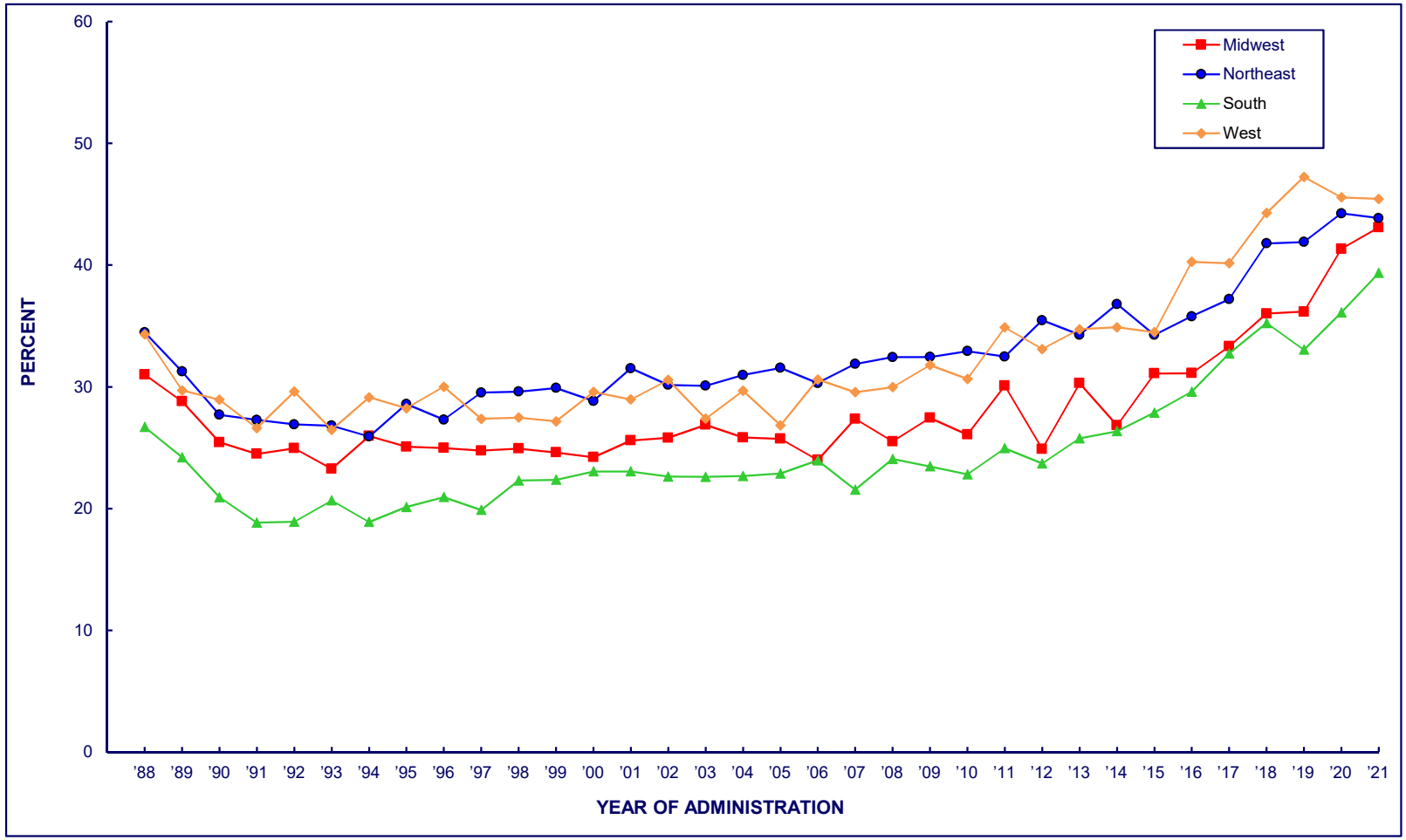
Updated Figures 62–109

UPDATED FIGURE 62
MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30, by Sex



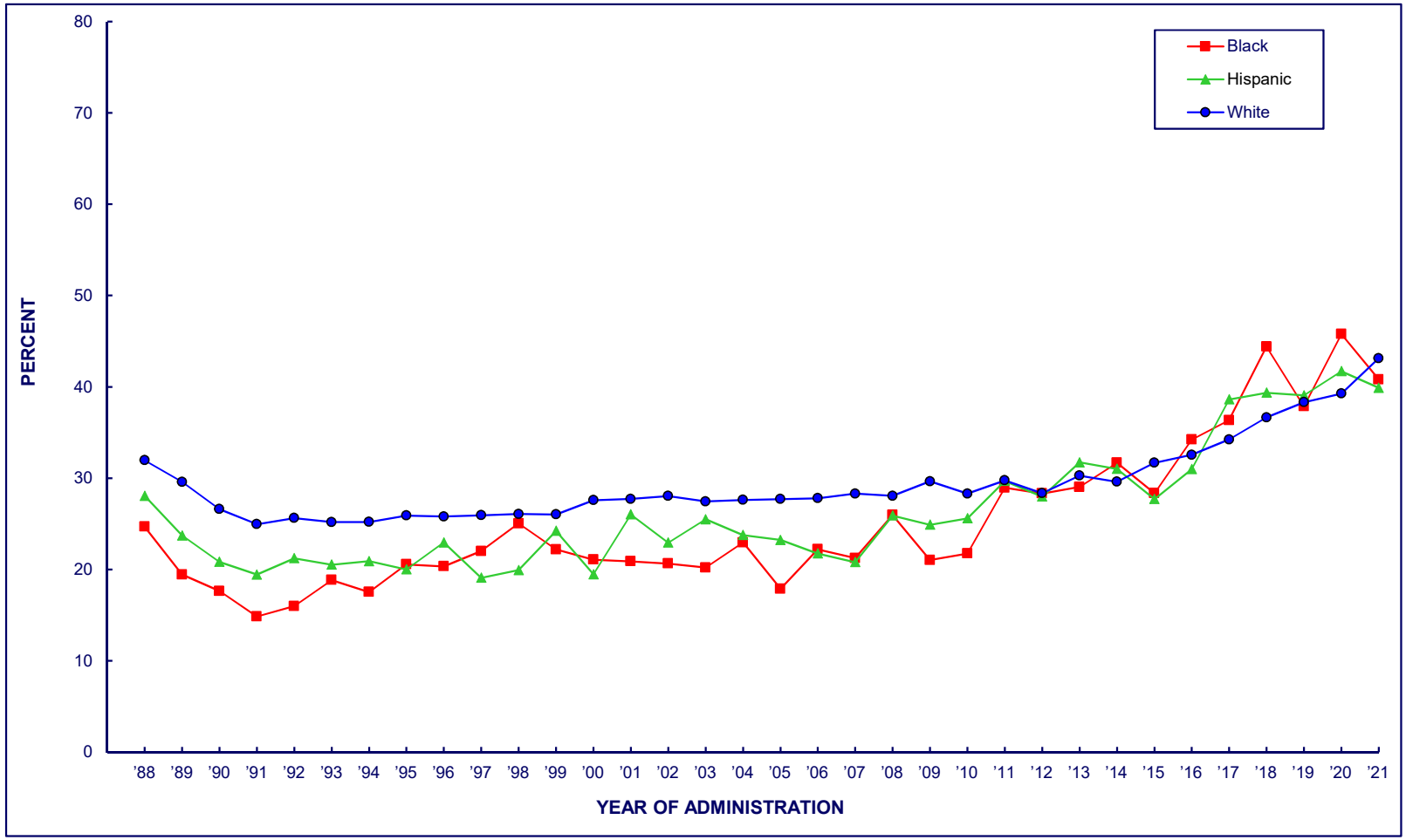
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	34.5	31.8	28.6	27.0	27.5	27.1	28.8	27.3	28.1	27.7	28.7	28.7	29.2	30.1	29.7	29.6	30.0	28.9	30.1	30.4	31.4	31.7	32.3	34.1	31.5	34.1	33.0	34.2	36.0	38.8	39.4	40.6	40.4	43.4	n.s.
Women	27.2	24.2	21.7	19.8	20.9	20.4	19.6	21.8	22.1	21.5	22.0	21.8	22.6	22.9	23.5	22.8	23.2	23.5	23.0	22.8	23.4	24.3	22.2	25.5	25.0	27.5	27.7	28.7	30.6	32.3	37.9	36.8	41.6	41.8	n.s.

UPDATED FIGURE 63
MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30, by Geographic Region



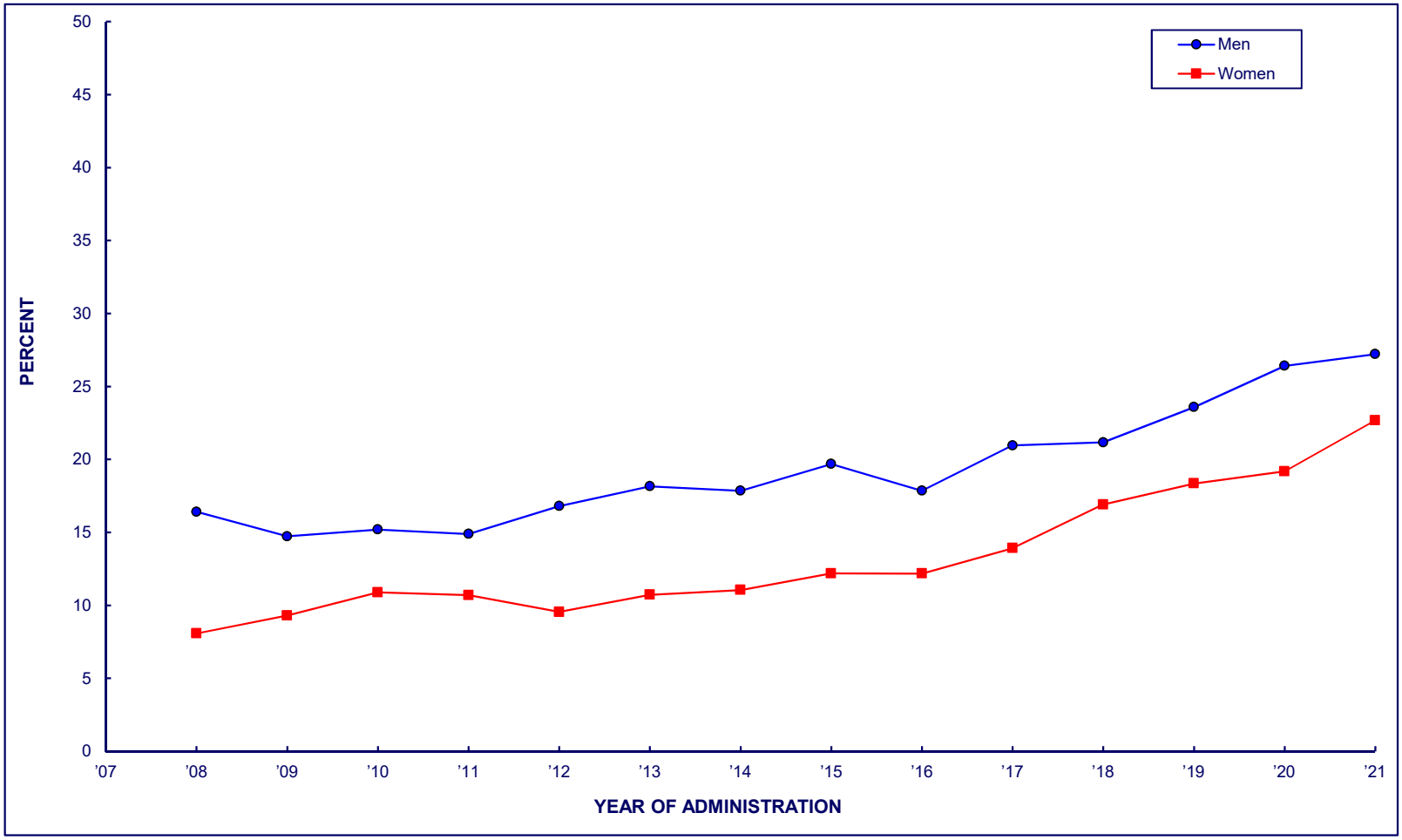
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	34.5	31.3	27.7	27.3	26.9	26.8	25.9	28.6	27.3	29.5	29.6	29.9	28.8	31.5	30.2	30.1	31.0	31.6	30.3	31.9	32.4	32.5	32.9	32.5	35.5	34.3	36.8	34.3	35.8	37.2	41.8	41.9	44.3	43.9	n.s.
Midwest	31.0	28.8	25.4	24.5	25.0	23.3	26.0	25.1	25.0	24.8	24.9	24.6	24.2	25.6	25.8	26.9	25.8	25.7	24.0	27.4	25.5	27.5	26.1	30.1	24.9	30.3	26.8	31.1	31.1	33.3	36.0	36.2	41.3	43.1	n.s.
South	26.7	24.2	20.9	18.8	18.9	20.7	18.9	20.1	20.9	19.9	22.3	22.4	23.1	23.1	22.6	22.6	22.7	22.9	24.0	21.6	24.1	23.5	22.8	25.0	23.7	25.8	26.4	27.9	29.6	32.7	35.2	33.1	36.1	39.4	n.s.
West	34.3	29.7	28.9	26.6	29.6	26.5	29.1	28.2	30.0	27.4	27.5	27.2	29.6	29.0	30.6	27.4	29.7	26.8	30.6	29.6	30.0	31.8	30.7	34.9	33.1	34.7	34.9	34.5	40.3	40.2	44.3	47.3	45.6	45.4	n.s.

UPDATED FIGURE 64
MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



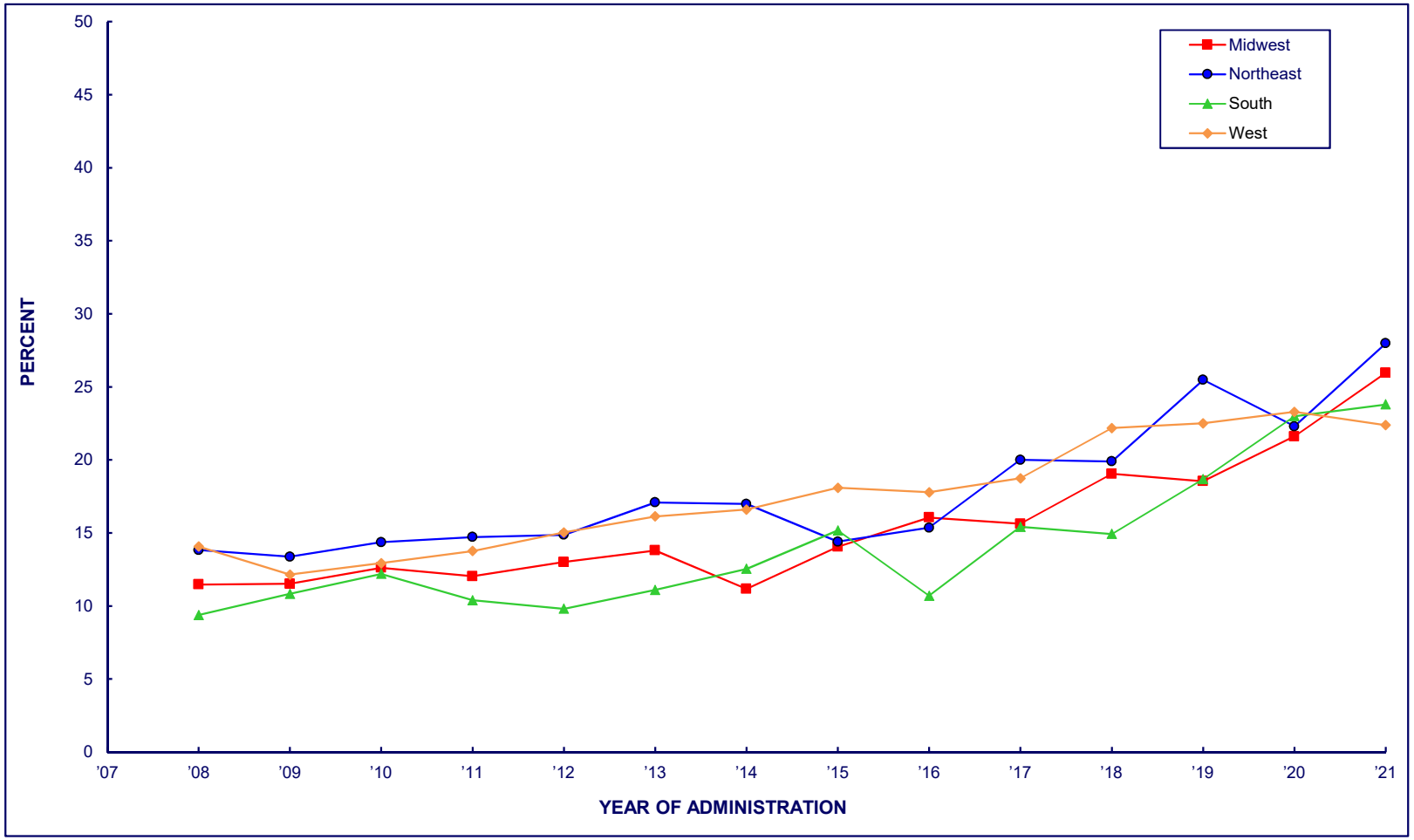
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change	
White	32.0	29.6	26.6	25.0	25.6	25.2	25.2	25.9	25.8	25.9	26.1	26.0	27.6	27.7	28.0	27.5	27.6	27.7	27.8	28.3	28.1	29.7	28.3	29.8	28.4	30.3	29.6	31.7	32.6	34.2	36.7	38.3	39.3	43.1	+3.9	p<.05
Black	24.7	19.4	17.6	14.8	16.0	18.8	17.5	20.6	20.3	22.0	25.0	22.2	21.1	20.9	20.6	20.2	23.0	17.9	22.2	21.2	26.0	21.0	21.7	29.0	28.3	29.0	31.7	28.4	34.2	36.3	44.4	37.9	45.8	40.8		n.s.
Hispanic	28.1	23.7	20.8	19.4	21.2	20.5	20.9	20.0	23.0	19.1	19.9	24.2	19.5	26.0	22.9	25.5	23.8	23.2	21.8	20.8	25.9	24.9	25.6	29.7	28.0	31.7	31.0	27.7	31.0	38.6	39.4	39.1	41.7	39.9		n.s.

UPDATED FIGURE 65
MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 35 through 50, by Sex



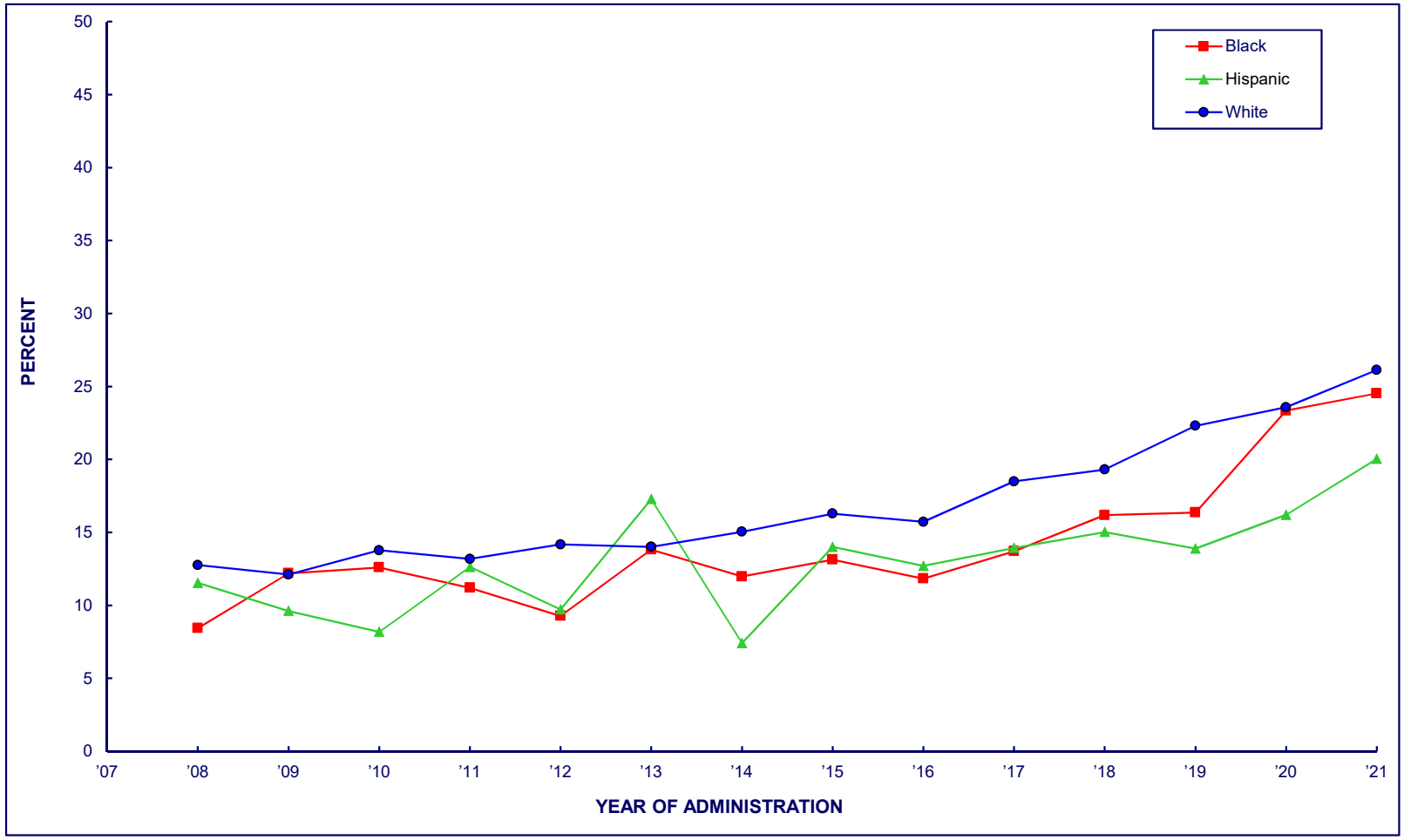
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	16.4	14.7	15.2	14.9	16.8	18.2	17.9	19.7	17.9	21.0	21.2	23.6	26.4	27.2	n.s.
Women	8.1	9.3	10.9	10.7	9.6	10.7	11.1	12.2	12.2	13.9	16.9	18.4	19.2	22.7	+3.5 p<.05

UPDATED FIGURE 66
MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 35 through 50, by Geographic Region



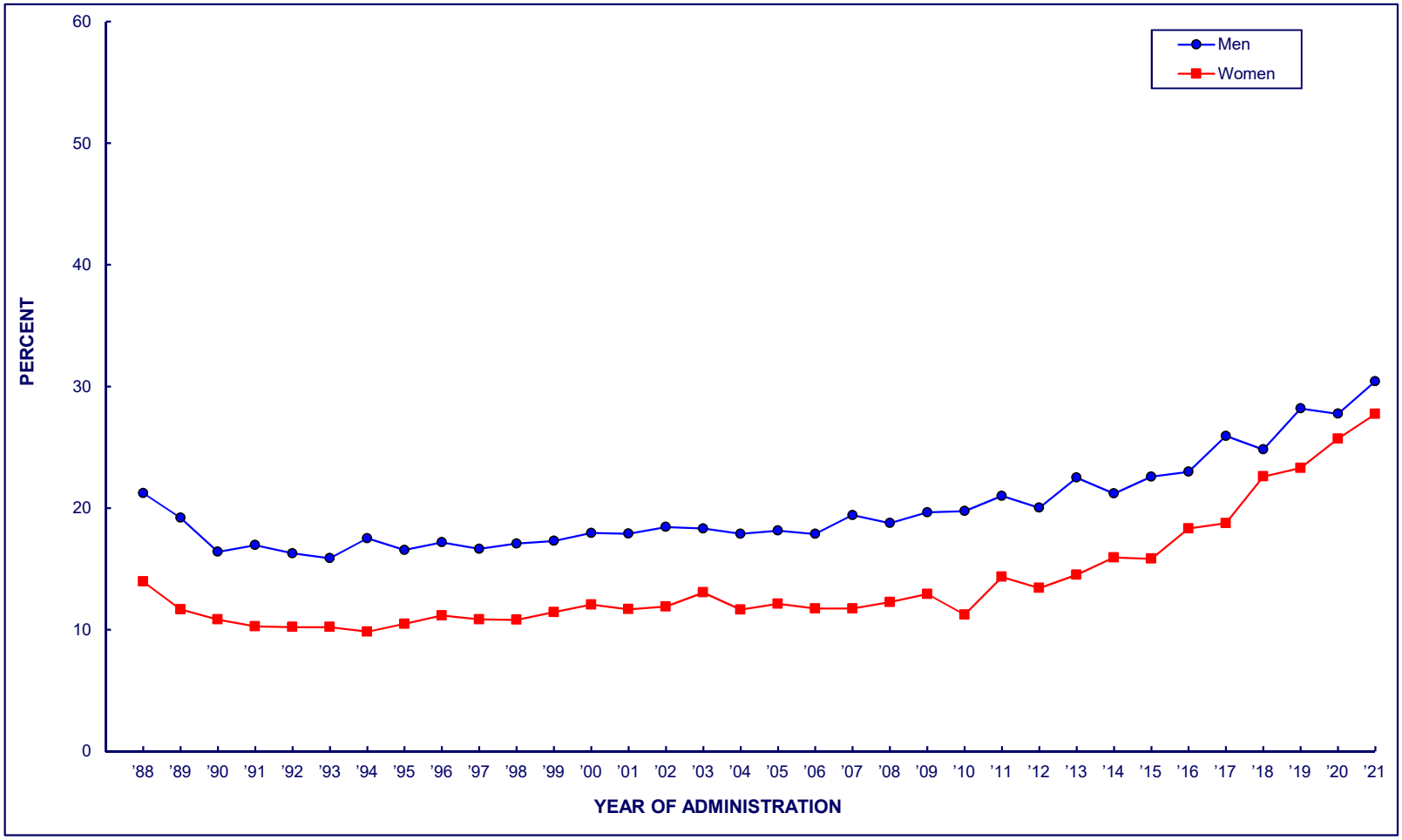
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	13.8	13.4	14.4	14.7	14.9	17.1	17.0	14.4	15.4	20.0	19.9	25.5	22.3	28.0	n.s.
Midwest	11.5	11.5	12.6	12.0	13.0	13.8	11.2	14.1	16.1	15.6	19.1	18.5	21.6	26.0	n.s.
South	9.4	10.8	12.2	10.4	9.8	11.1	12.5	15.2	10.7	15.4	14.9	18.7	23.0	23.8	n.s.
West	14.1	12.2	12.9	13.8	15.0	16.1	16.6	18.1	17.8	18.7	22.2	22.5	23.3	22.4	n.s.

UPDATED FIGURE 67
MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity



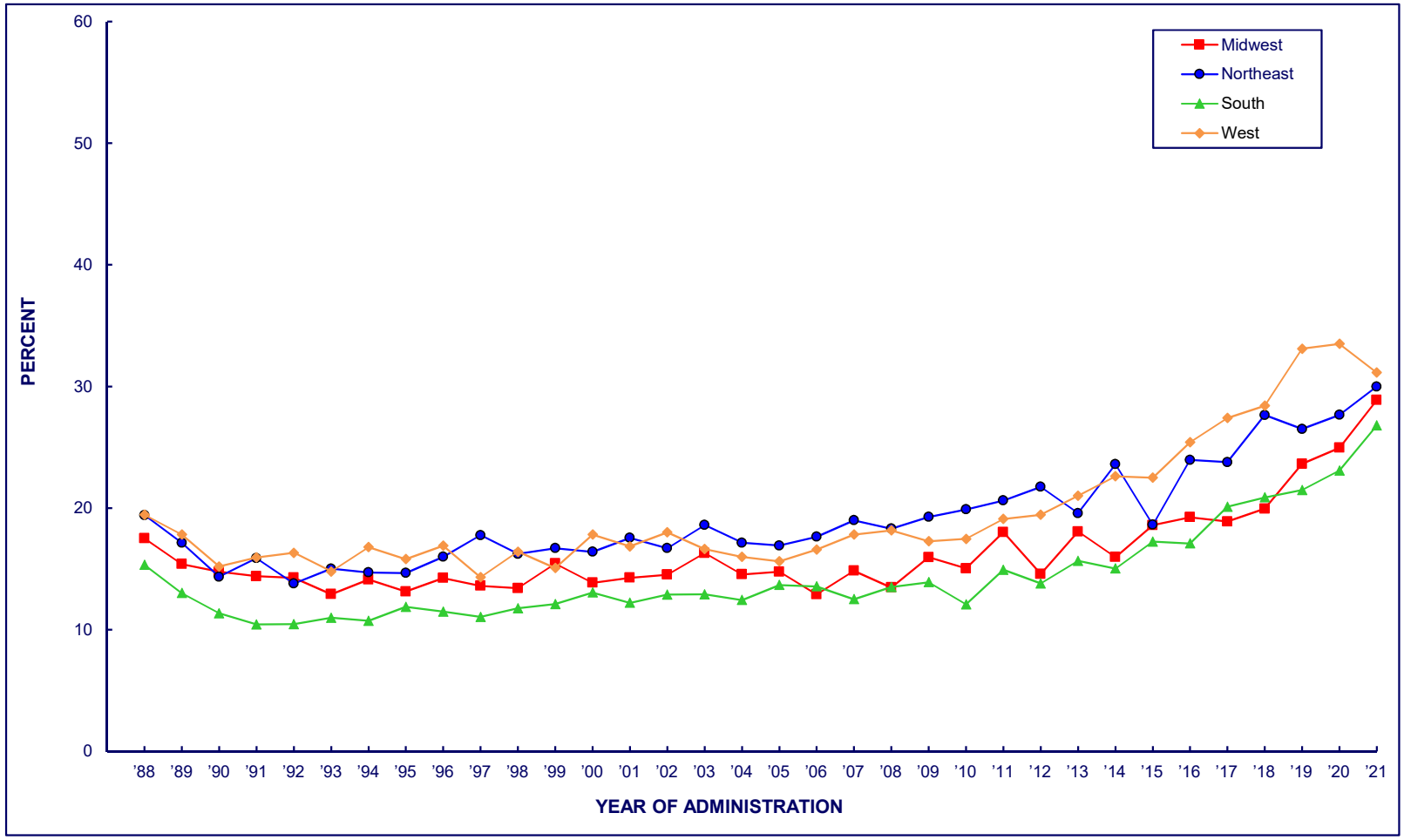
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	12.8	12.1	13.8	13.2	14.2	14.0	15.0	16.3	15.7	18.5	19.3	22.3	23.6	26.1	n.s.
Black	8.4	12.2	12.6	11.2	9.3	13.8	12.0	13.1	11.8	13.7	16.2	16.4	23.3	24.5	n.s.
Hispanic	11.5	9.6	8.2	12.6	9.7	17.3	7.4	14.0	12.7	13.9	15.0	13.9	16.2	20.0	n.s.

UPDATED FIGURE 68
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Sex



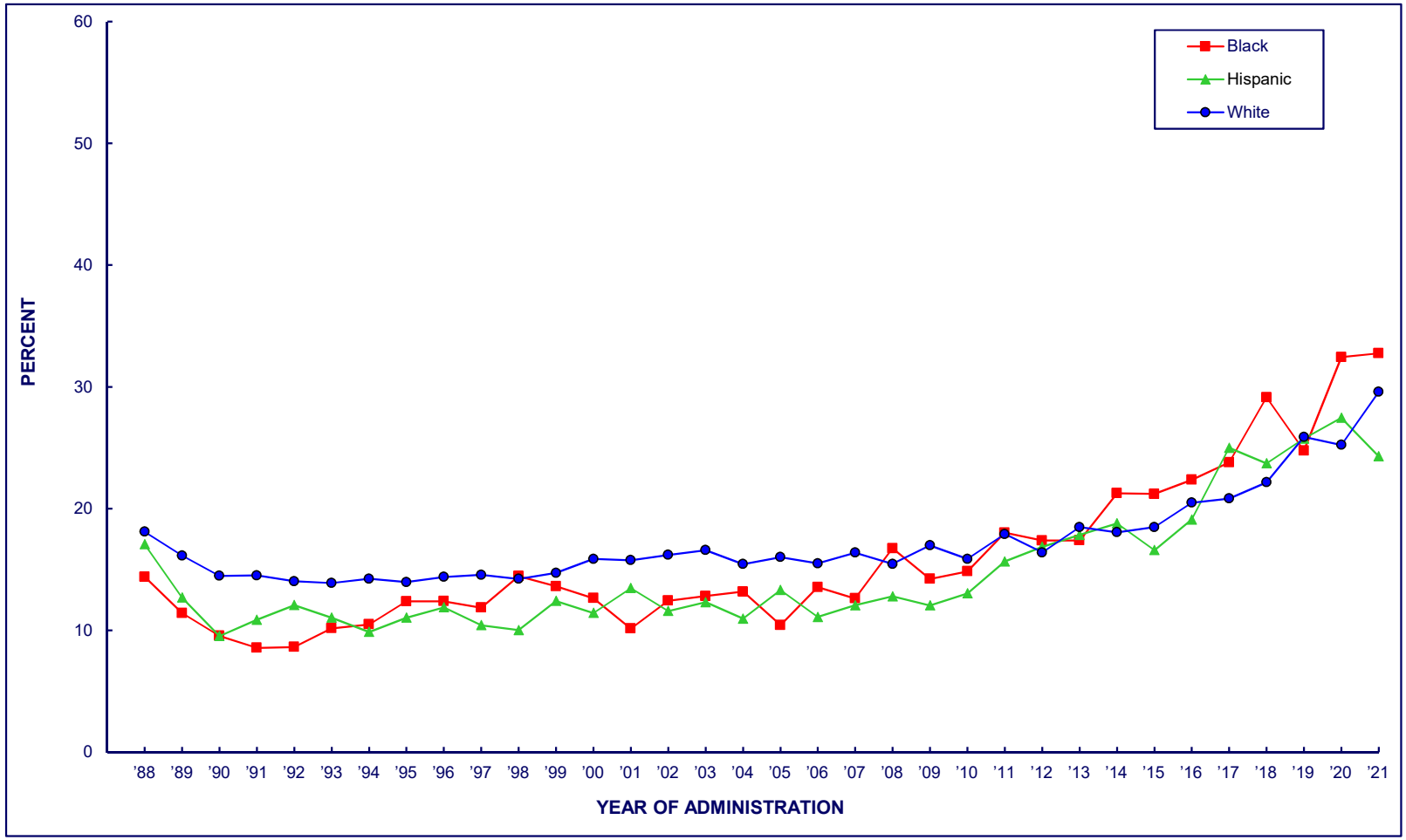
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	21.2	19.2	16.4	17.0	16.3	15.9	17.5	16.6	17.2	16.6	17.1	17.3	18.0	17.9	18.4	18.3	17.9	18.1	17.9	19.4	18.8	19.6	19.8	21.0	20.0	22.5	21.2	22.6	23.0	25.9	24.8	28.2	27.8	30.4	n.s.
Women	14.0	11.7	10.8	10.3	10.2	10.2	9.8	10.5	11.2	10.8	10.8	11.4	12.1	11.7	11.9	13.1	11.6	12.1	11.7	11.7	12.3	12.9	11.2	14.3	13.4	14.5	15.9	15.8	18.3	18.8	22.6	23.3	25.7	27.7	n.s.

UPDATED FIGURE 69
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Geographic Region



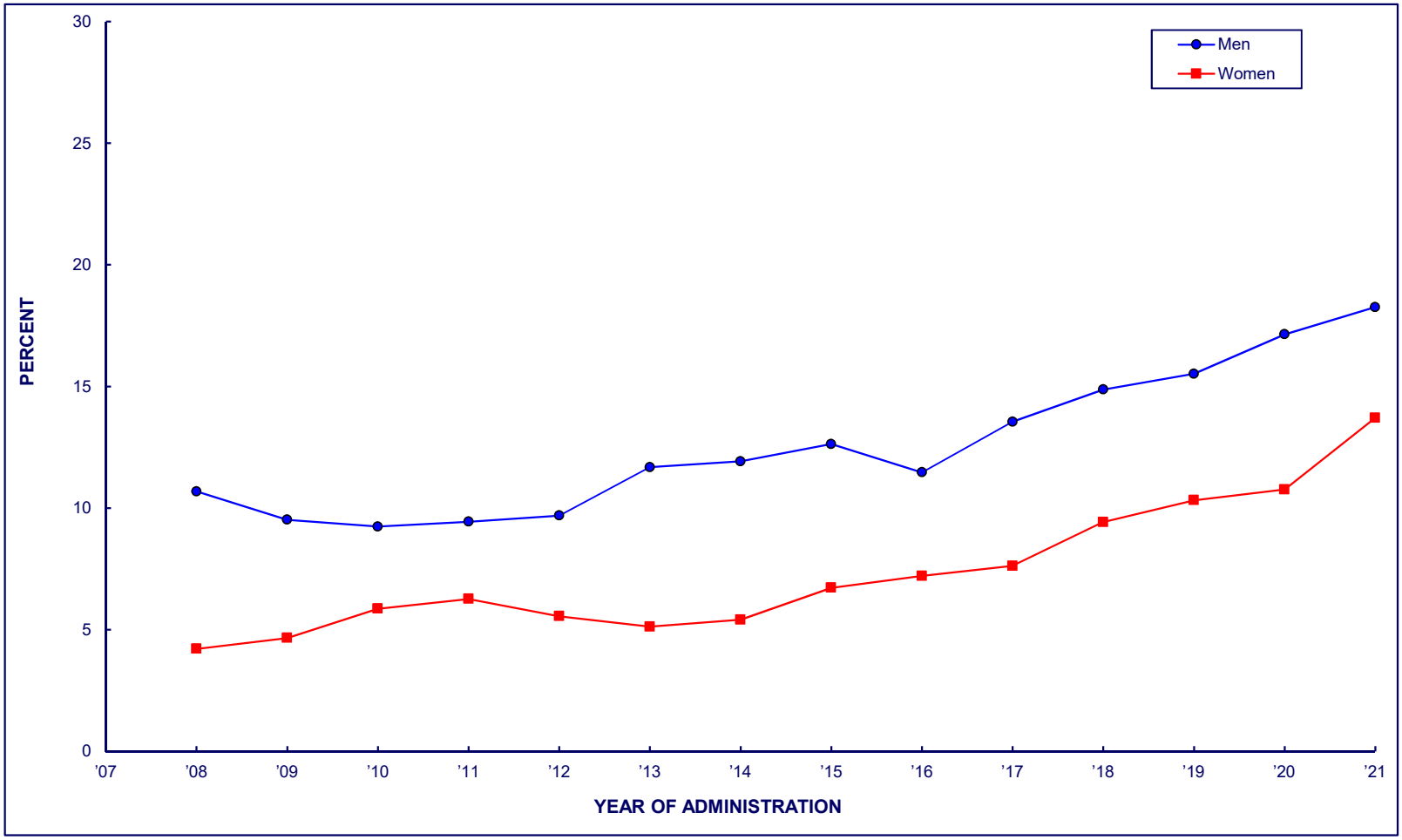
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	19.4	17.1	14.4	15.9	13.8	15.0	14.7	14.7	16.0	17.8	16.2	16.7	16.4	17.6	16.7	18.6	17.1	16.9	17.6	19.0	18.3	19.3	19.9	20.6	21.7	19.6	23.6	18.6	24.0	23.8	27.7	26.5	27.7	30.0	n.s.
Midwest	17.5	15.4	14.8	14.4	14.3	12.9	14.1	13.1	14.3	13.6	13.4	15.4	13.9	14.3	14.5	16.3	14.5	14.8	12.9	14.8	13.5	16.0	15.0	18.0	14.6	18.1	16.0	18.6	19.2	18.9	19.9	23.6	25.0	28.9	n.s.
South	15.3	13.0	11.3	10.4	10.5	11.0	10.7	11.9	11.5	11.1	11.8	12.1	13.1	12.2	12.9	12.9	12.4	13.7	13.6	12.5	13.5	13.9	12.1	14.9	13.8	15.7	15.0	17.2	17.1	20.1	20.9	21.5	23.1	26.8	n.s.
West	19.5	17.8	15.2	15.9	16.3	14.8	16.8	15.8	16.9	14.3	16.4	15.1	17.8	16.9	18.0	16.6	16.0	15.6	16.6	17.8	18.2	17.3	17.5	19.1	19.5	21.0	22.6	22.5	25.4	27.4	28.4	33.1	33.5	31.1	n.s.

UPDATED FIGURE 70
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



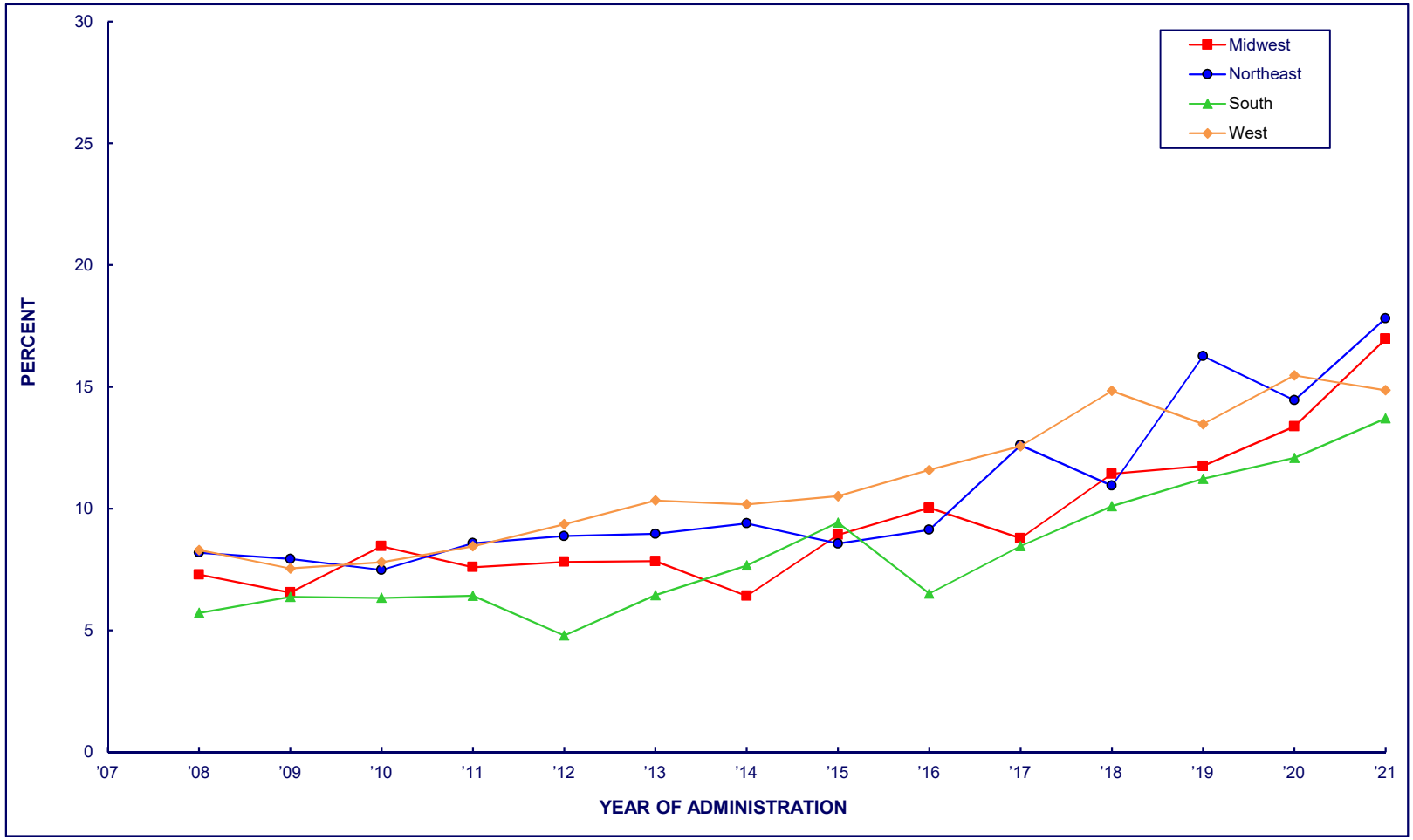
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change	
White	18.1	16.1	14.5	14.5	14.0	13.9	14.2	14.0	14.4	14.6	14.2	14.7	15.9	15.8	16.2	16.6	15.4	16.0	15.5	16.4	15.5	17.0	15.9	17.9	16.4	18.5	18.1	18.5	20.5	20.8	22.2	25.9	25.2	29.6	+4.3	p<.01
Black	14.4	11.4	9.5	8.6	8.6	10.2	10.5	12.4	12.4	11.9	14.5	13.6	12.6	10.1	12.4	12.8	13.2	10.4	13.6	12.6	16.7	14.2	14.8	18.0	17.4	17.4	21.3	21.2	22.4	23.8	29.1	24.8	32.4	32.8		n.s.
Hispanic	17.1	12.7	9.5	10.9	12.1	11.0	9.9	11.0	11.9	10.4	10.0	12.4	11.4	13.5	11.6	12.3	11.0	13.3	11.1	12.1	12.8	12.0	13.0	15.7	16.9	17.8	18.8	16.6	19.1	25.0	23.7	25.7	27.5	24.3		n.s.

UPDATED FIGURE 71
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Sex



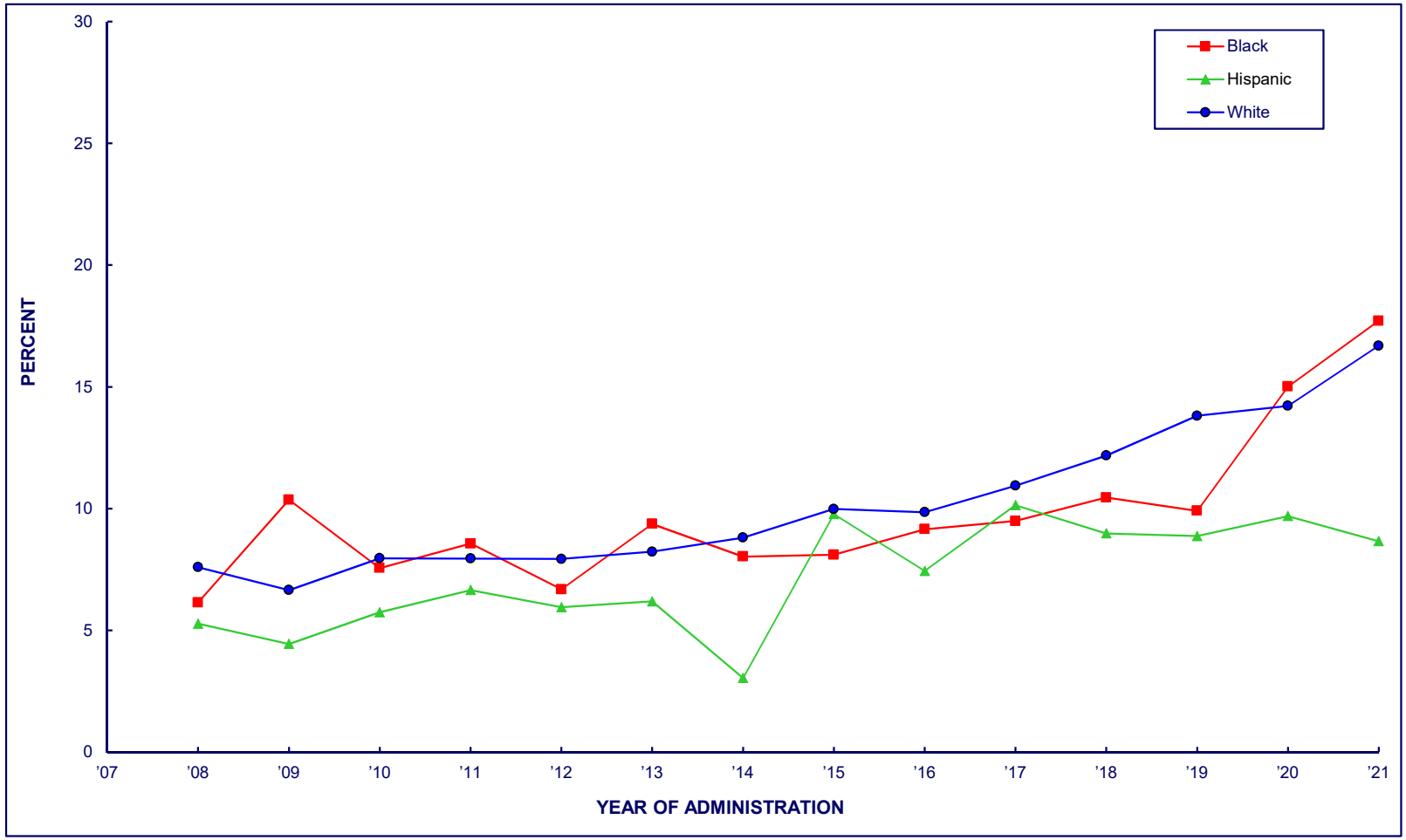
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	10.7	9.5	9.2	9.4	9.7	11.7	11.9	12.6	11.5	13.6	14.9	15.5	17.1	18.3	n.s.
Women	4.2	4.7	5.9	6.3	5.6	5.1	5.4	6.7	7.2	7.6	9.4	10.3	10.8	13.7	+3.0 p<.05

UPDATED FIGURE 72
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Geographic Region



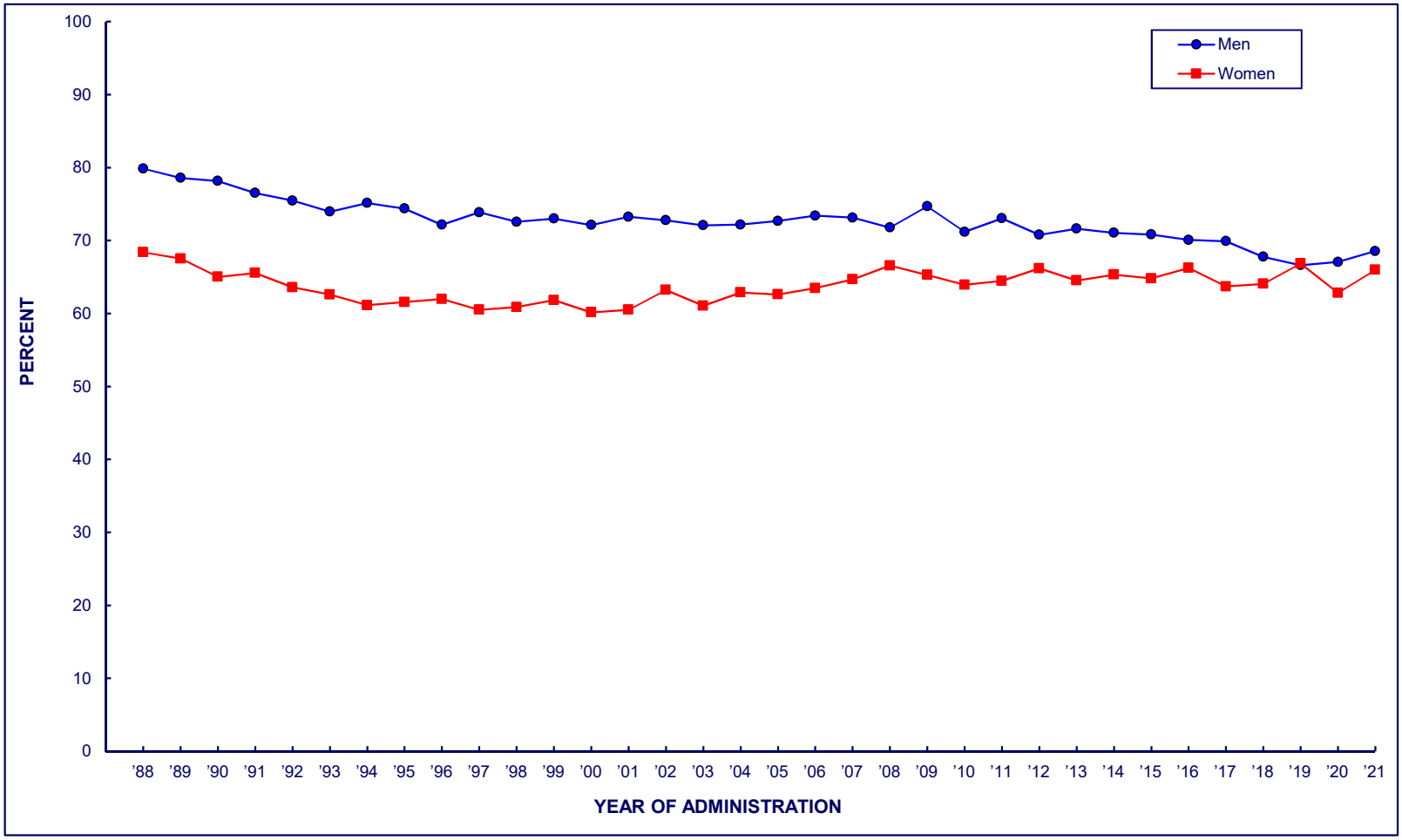
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	8.2	7.9	7.5	8.6	8.9	9.0	9.4	8.6	9.1	12.6	10.9	16.3	14.5	17.8	n.s.
Midwest	7.3	6.6	8.5	7.6	7.8	7.8	6.4	8.9	10.0	8.8	11.4	11.8	13.4	17.0	n.s.
South	5.7	6.4	6.3	6.4	4.8	6.4	7.7	9.4	6.5	8.5	10.1	11.2	12.1	13.7	n.s.
West	8.3	7.5	7.8	8.5	9.4	10.3	10.2	10.5	11.6	12.6	14.8	13.5	15.5	14.9	n.s.

UPDATED FIGURE 73
MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity



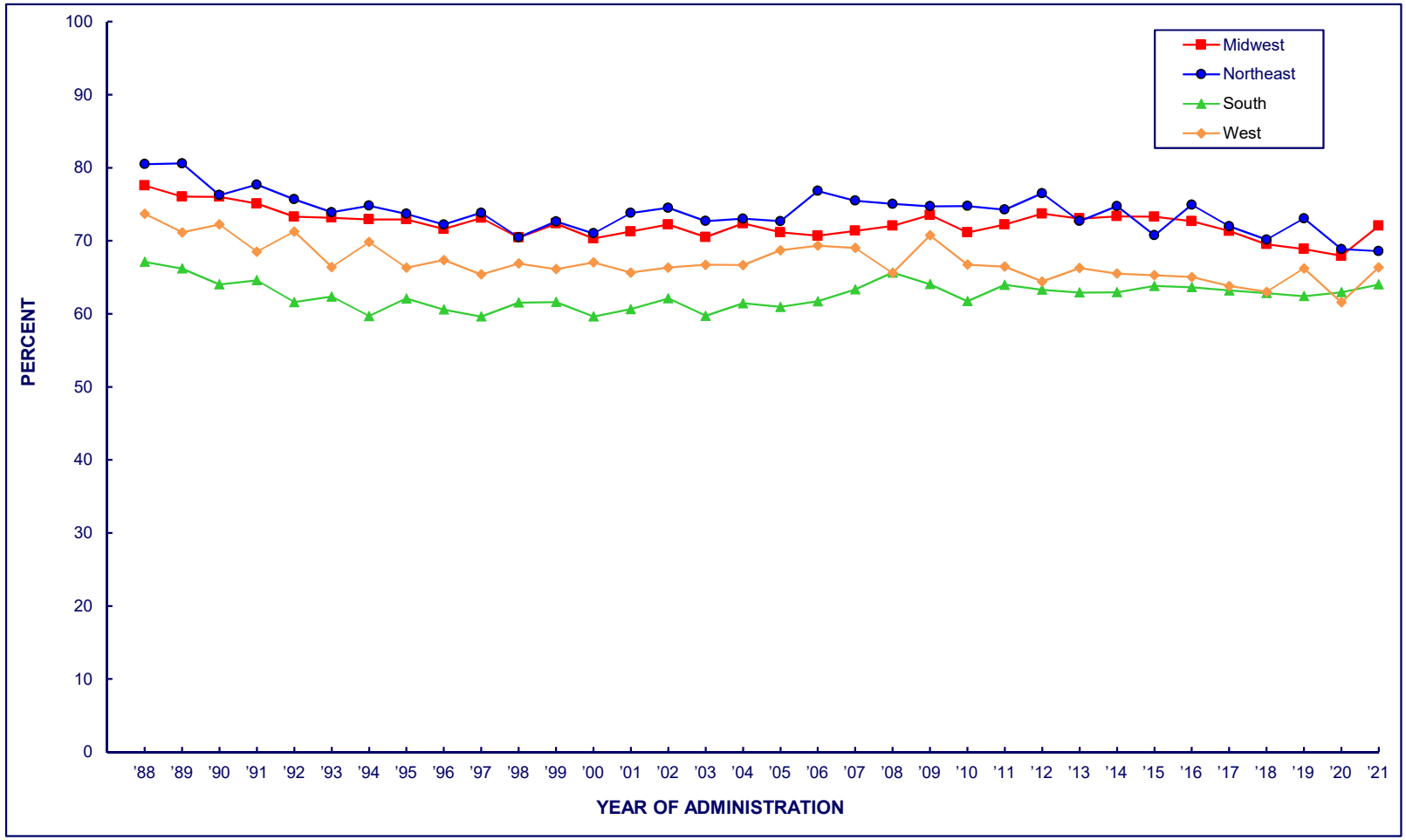
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	7.6	6.7	8.0	8.0	7.9	8.2	8.8	10.0	9.9	10.9	12.2	13.8	14.2	16.7	+2.5 p<.05
Black	6.1	10.4	7.6	8.6	6.7	9.4	8.0	8.1	9.2	9.5	10.5	9.9	15.0	17.7	n.s.
Hispanic	5.3	4.4	5.7	6.7	6.0	6.2	3.0	9.8	7.4	10.1	9.0	8.9	9.7	8.7	n.s.

UPDATED FIGURE 74
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Sex



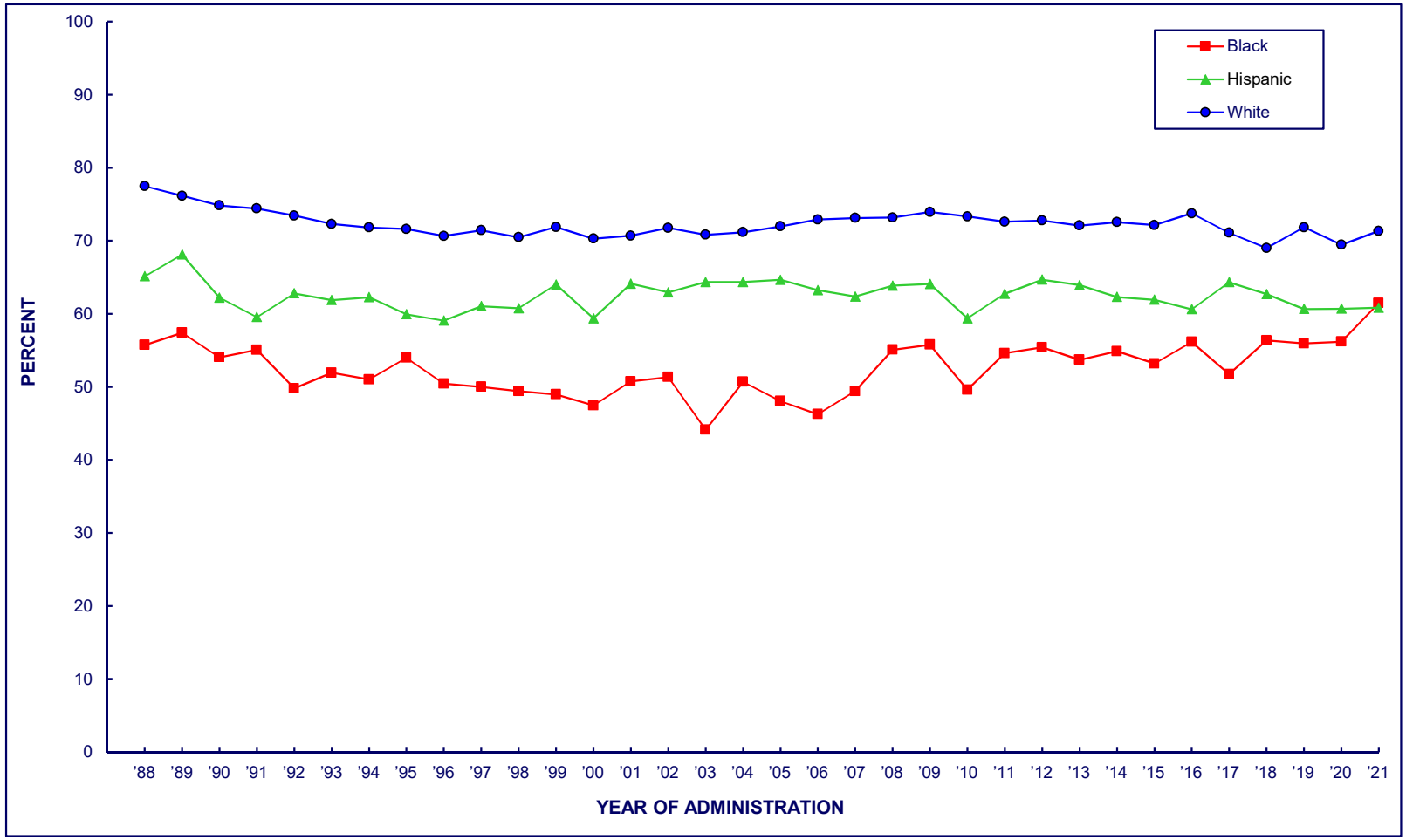
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change	
Men	79.8	78.6	78.2	76.5	75.5	74.0	75.1	74.4	72.2	73.9	72.6	73.0	72.1	73.2	72.8	72.1	72.2	72.7	73.4	73.1	71.8	74.7	71.2	73.0	70.8	71.6	71.0	70.8	70.1	69.9	67.8	66.6	67.1	68.6		n.s.
Women	68.4	67.5	65.0	65.6	63.6	62.6	61.1	61.6	62.0	60.5	60.9	61.8	60.2	60.5	63.2	61.1	62.9	62.6	63.5	64.7	66.6	65.3	63.9	64.5	66.2	64.5	65.3	64.8	66.2	63.7	64.1	66.9	62.8	66.0	+3.1	p<.05

UPDATED FIGURE 75
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Geographic Region



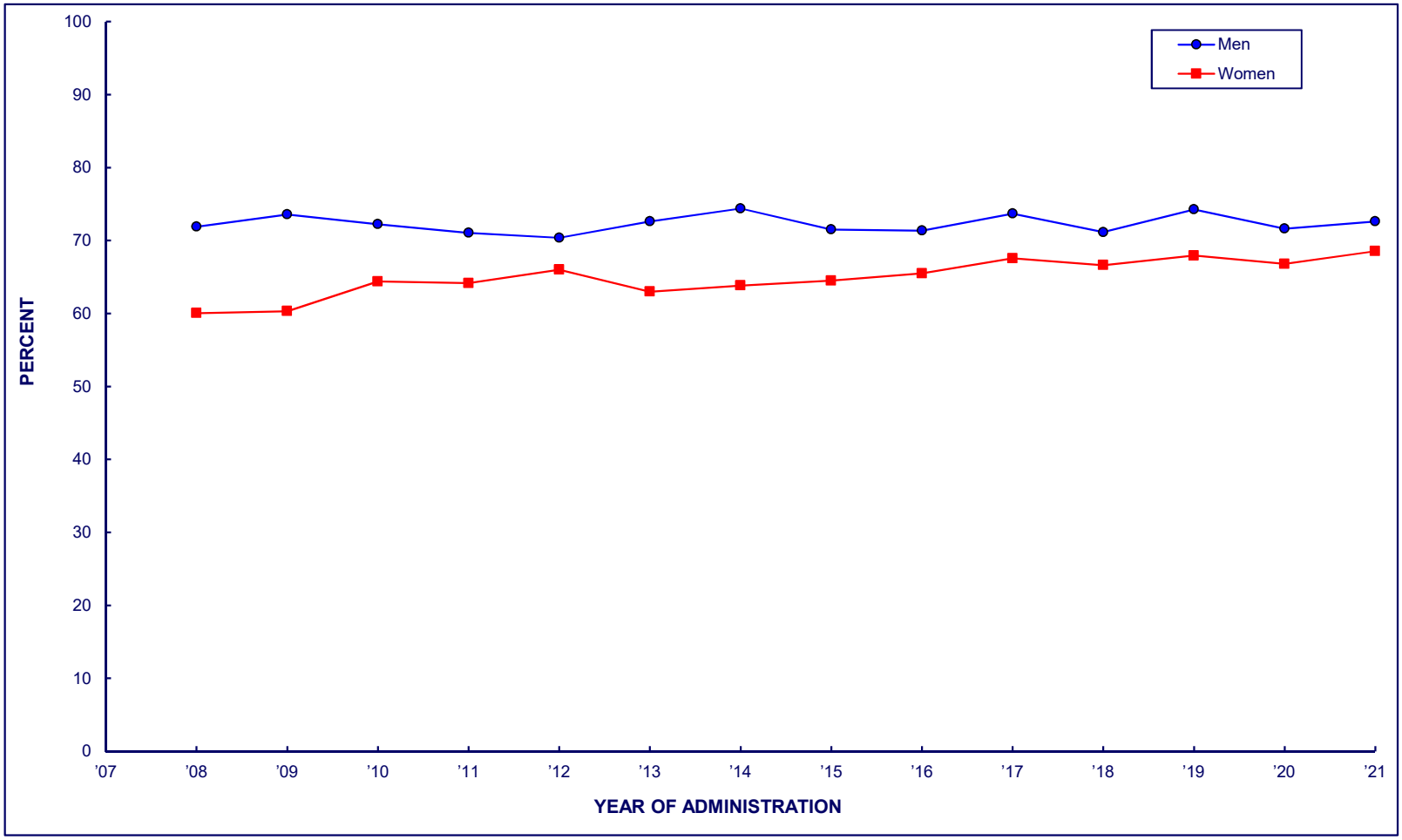
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	80.5	80.6	76.3	77.7	75.7	73.9	74.8	73.7	72.2	73.8	70.5	72.6	71.0	73.8	74.5	72.7	73.0	72.7	76.8	75.5	75.0	74.7	74.8	74.3	76.5	72.7	74.7	70.7	74.9	72.0	70.2	73.1	68.9	68.6	n.s.
Midwest	77.6	76.0	76.0	75.1	73.3	73.2	72.9	72.9	71.6	73.1	70.4	72.3	70.3	71.3	72.2	70.5	72.4	71.1	70.7	71.4	72.1	73.5	71.1	72.2	73.7	73.0	73.3	73.3	72.7	71.3	69.5	68.9	67.9	72.1	n.s.
South	67.1	66.2	64.0	64.6	61.6	62.4	59.7	62.1	60.6	59.6	61.5	61.6	59.6	60.6	62.1	59.7	61.4	61.0	61.7	63.3	65.7	64.1	61.7	64.0	63.3	62.9	62.9	63.8	63.6	63.2	62.8	62.4	62.9	64.0	n.s.
West	73.7	71.1	72.2	68.5	71.3	66.4	69.8	66.3	67.4	65.4	66.9	66.1	67.0	65.6	66.3	66.7	66.7	68.7	69.3	69.0	65.6	70.8	66.7	66.5	64.4	66.3	65.5	65.3	65.0	63.8	63.0	66.2	61.6	66.4	n.s.

UPDATED FIGURE 76
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



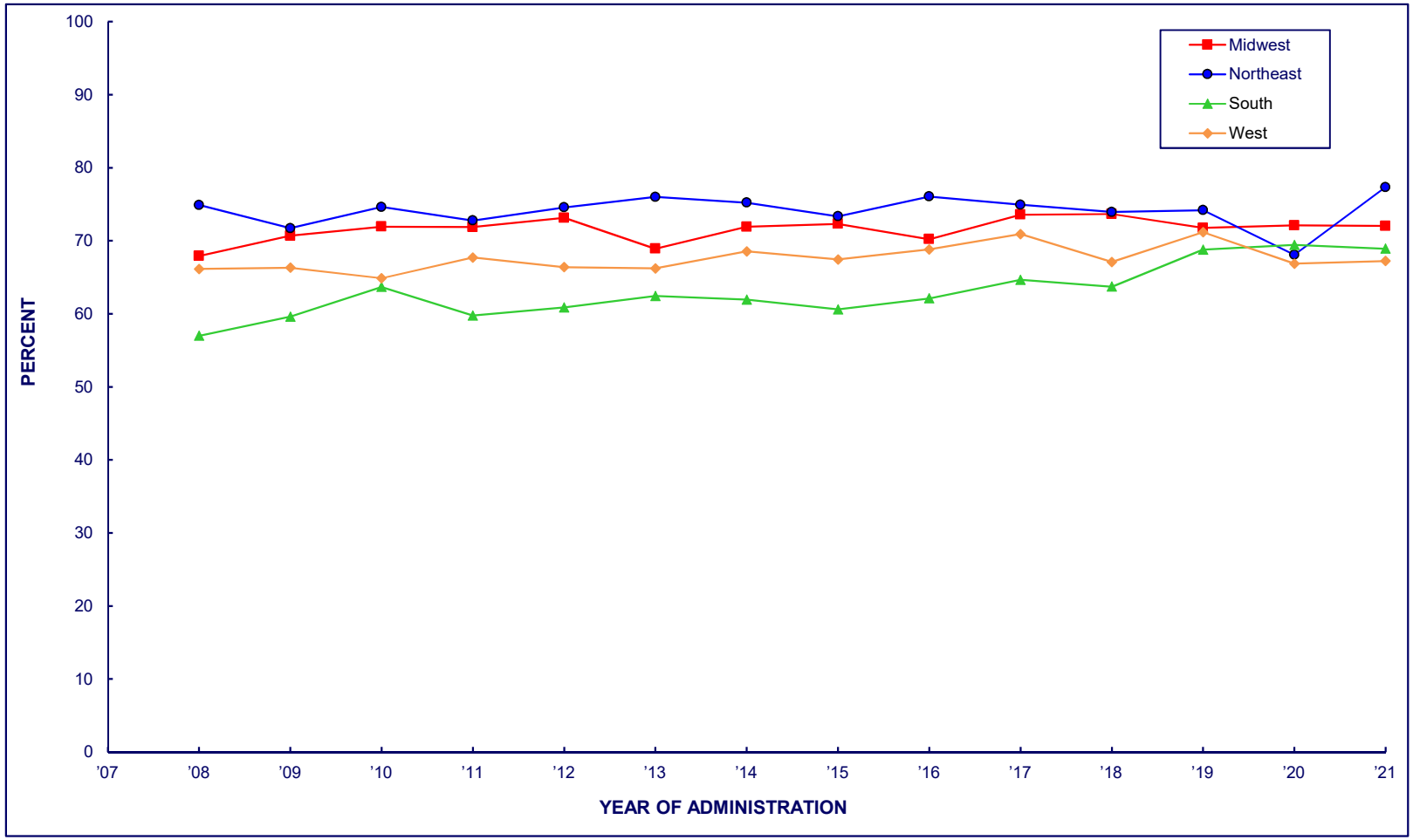
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	77.5	76.2	74.8	74.4	73.4	72.3	71.8	71.6	70.7	71.4	70.5	71.9	70.3	70.7	71.8	70.8	71.2	72.0	72.9	73.1	73.2	73.9	73.3	72.6	72.8	72.1	72.5	72.1	73.7	71.1	69.0	71.8	69.4	71.3	n.s.
Black	55.7	57.4	54.0	55.1	49.8	51.9	51.0	54.0	50.4	50.0	49.4	49.0	47.5	50.7	51.3	44.1	50.7	48.0	46.3	49.4	55.1	55.8	49.6	54.6	55.4	53.7	54.9	53.2	56.1	51.7	56.4	55.9	56.2	61.5	n.s.
Hispanic	65.1	68.1	62.2	59.5	62.8	61.9	62.3	59.9	59.1	61.0	60.8	64.0	59.4	64.1	62.9	64.3	64.3	64.6	63.2	62.4	63.9	64.1	59.4	62.7	64.7	63.9	62.3	61.9	60.6	64.3	62.7	60.7	60.7	60.8	n.s.

UPDATED FIGURE 77
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Sex



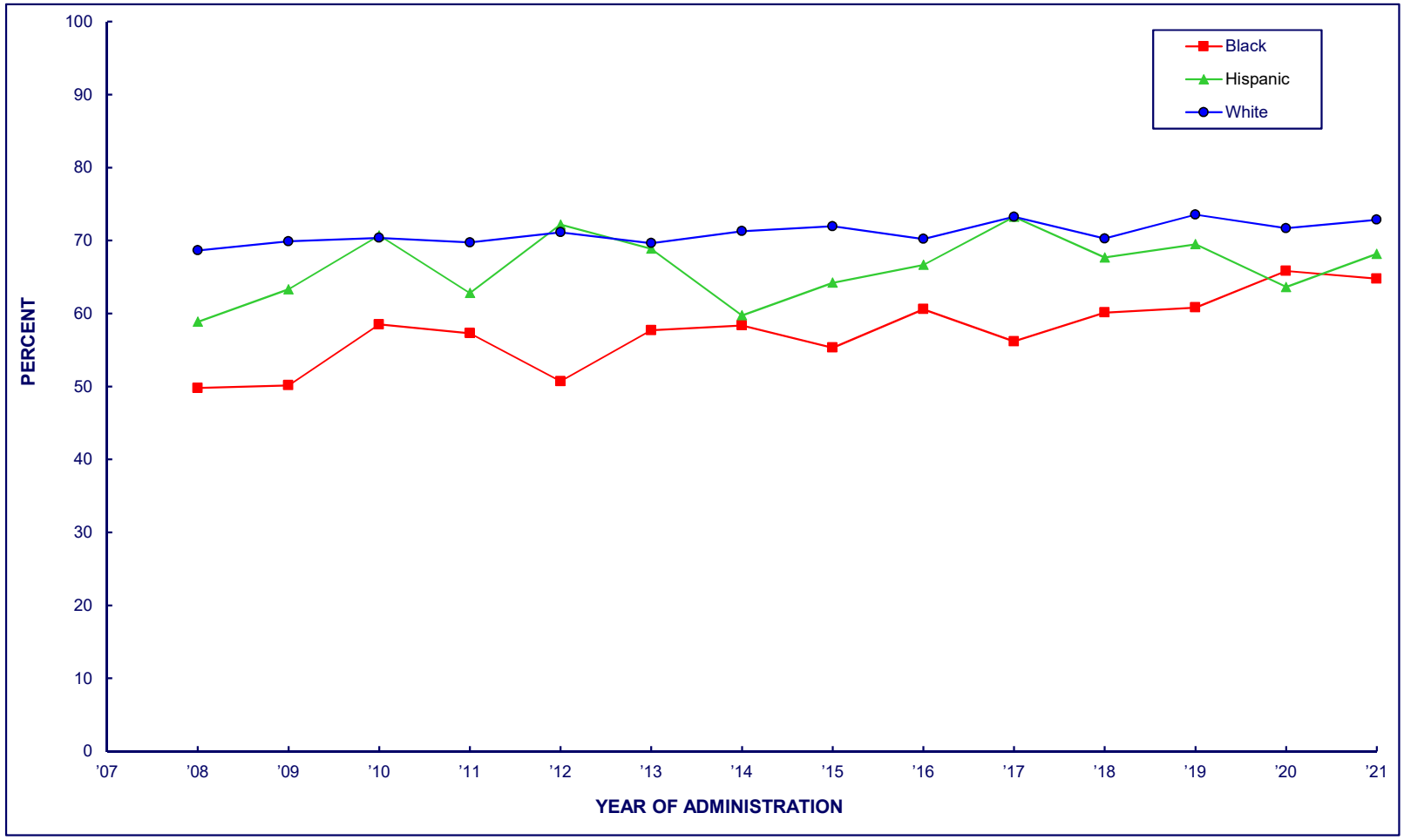
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	71.9	73.6	72.2	71.1	70.4	72.6	74.4	71.5	71.4	73.7	71.2	74.3	71.6	72.6	n.s.
Women	60.0	60.3	64.4	64.2	66.0	63.0	63.8	64.5	65.5	67.6	66.6	67.9	66.8	68.5	n.s.

UPDATED FIGURE 78
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Geographic Region



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	74.9	71.7	74.6	72.8	74.6	76.0	75.2	73.3	76.1	74.9	73.9	74.2	68.1	77.3	+9.3 p<.01
Midwest	67.9	70.7	71.9	71.9	73.1	68.9	71.9	72.3	70.2	73.6	73.7	71.8	72.1	72.0	n.s.
South	57.0	59.6	63.7	59.8	60.9	62.4	61.9	60.6	62.1	64.7	63.7	68.8	69.4	68.9	n.s.
West	66.1	66.3	64.9	67.7	66.4	66.2	68.6	67.4	68.8	70.9	67.1	71.2	66.9	67.2	n.s.

UPDATED FIGURE 79
ALCOHOL
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity

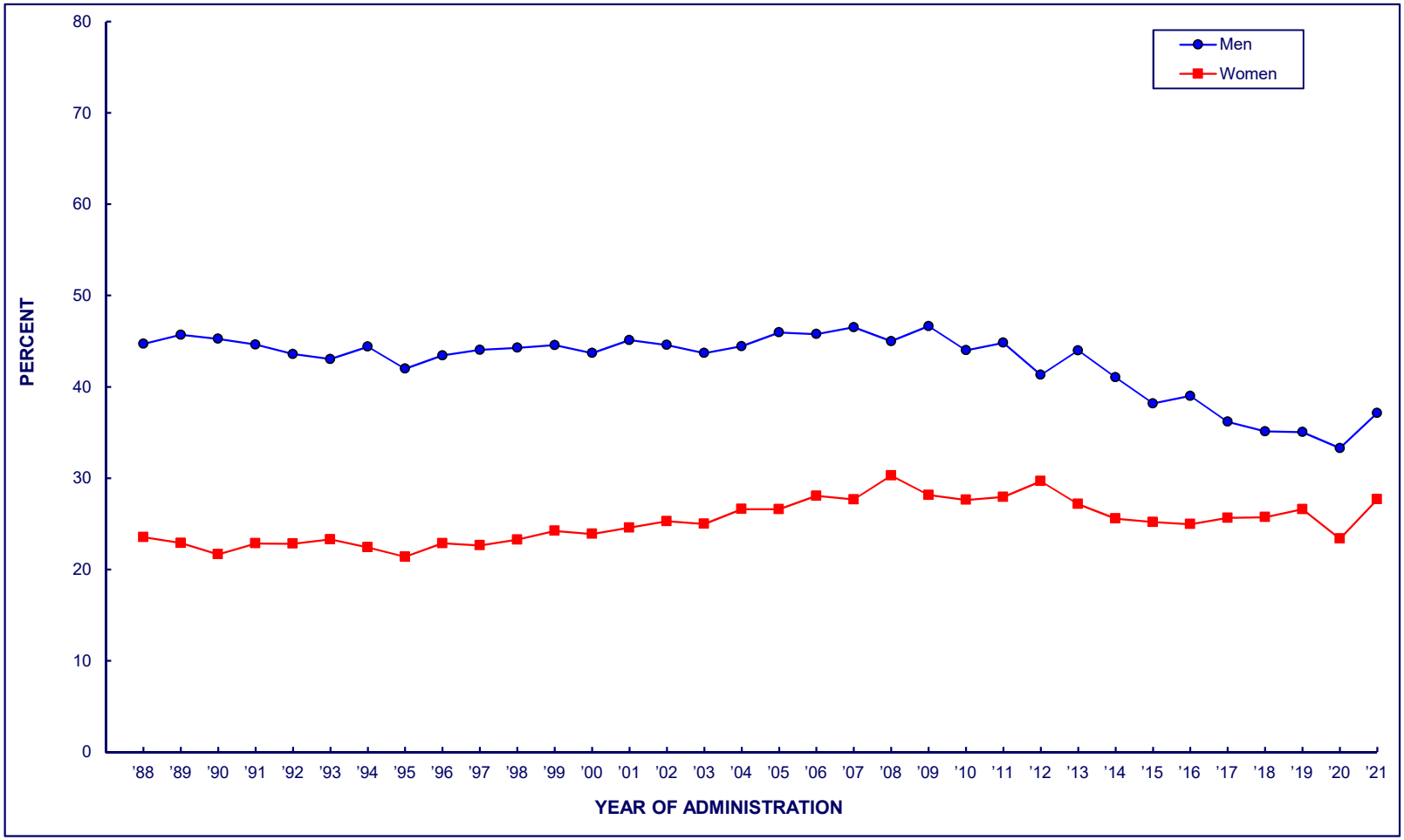


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	68.6	69.9	70.4	69.7	71.1	69.6	71.3	71.9	70.2	73.3	70.3	73.5	71.7	72.8	n.s.
Black	49.8	50.2	58.5	57.3	50.7	57.7	58.4	55.3	60.6	56.2	60.1	60.8	65.8	64.8	n.s.
Hispanic	58.9	63.3	70.7	62.8	72.2	68.9	59.7	64.2	66.7	73.2	67.7	69.5	63.6	68.2	n.s.

UPDATED FIGURE 80

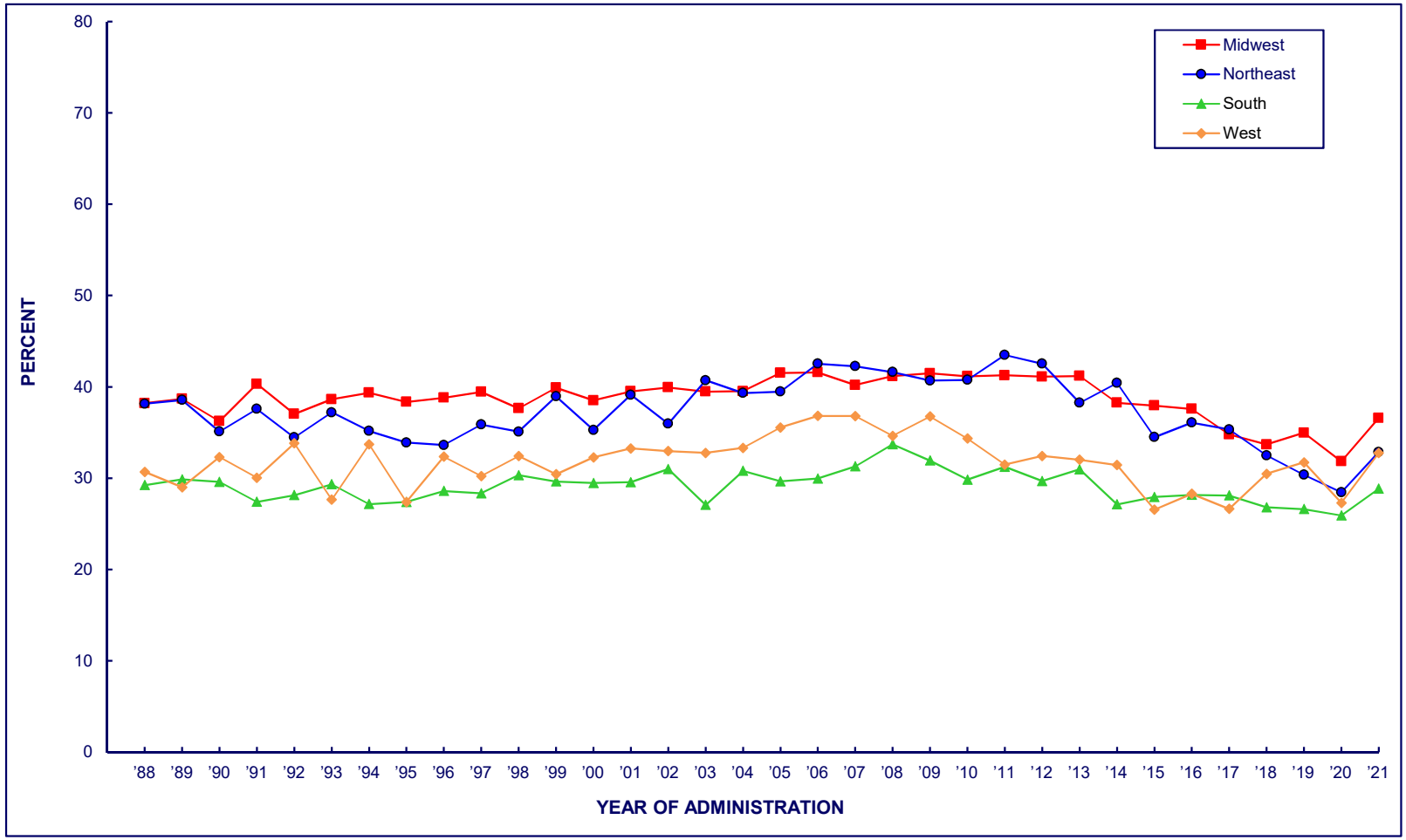
ALCOHOL

Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 19 through 30, by Sex



	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change	
Men	44.7	45.7	45.3	44.6	43.6	43.0	44.4	42.0	43.4	44.0	44.3	44.6	43.7	45.1	44.6	43.7	44.5	46.0	45.8	46.5	45.0	46.7	44.0	44.8	41.3	44.0	41.0	38.2	39.0	36.2	35.1	35.1	33.3	37.1	+3.9	p<.05
Women	23.5	22.9	21.7	22.9	22.8	23.3	22.4	21.4	22.9	22.6	23.3	24.2	23.9	24.6	25.3	25.0	26.6	26.6	28.1	27.7	30.3	28.2	27.6	27.9	29.7	27.2	25.6	25.2	25.0	25.6	25.7	26.6	23.4	27.7	+4.3	p<.01

UPDATED FIGURE 81
ALCOHOL
Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 19 through 30, by Geographic Region

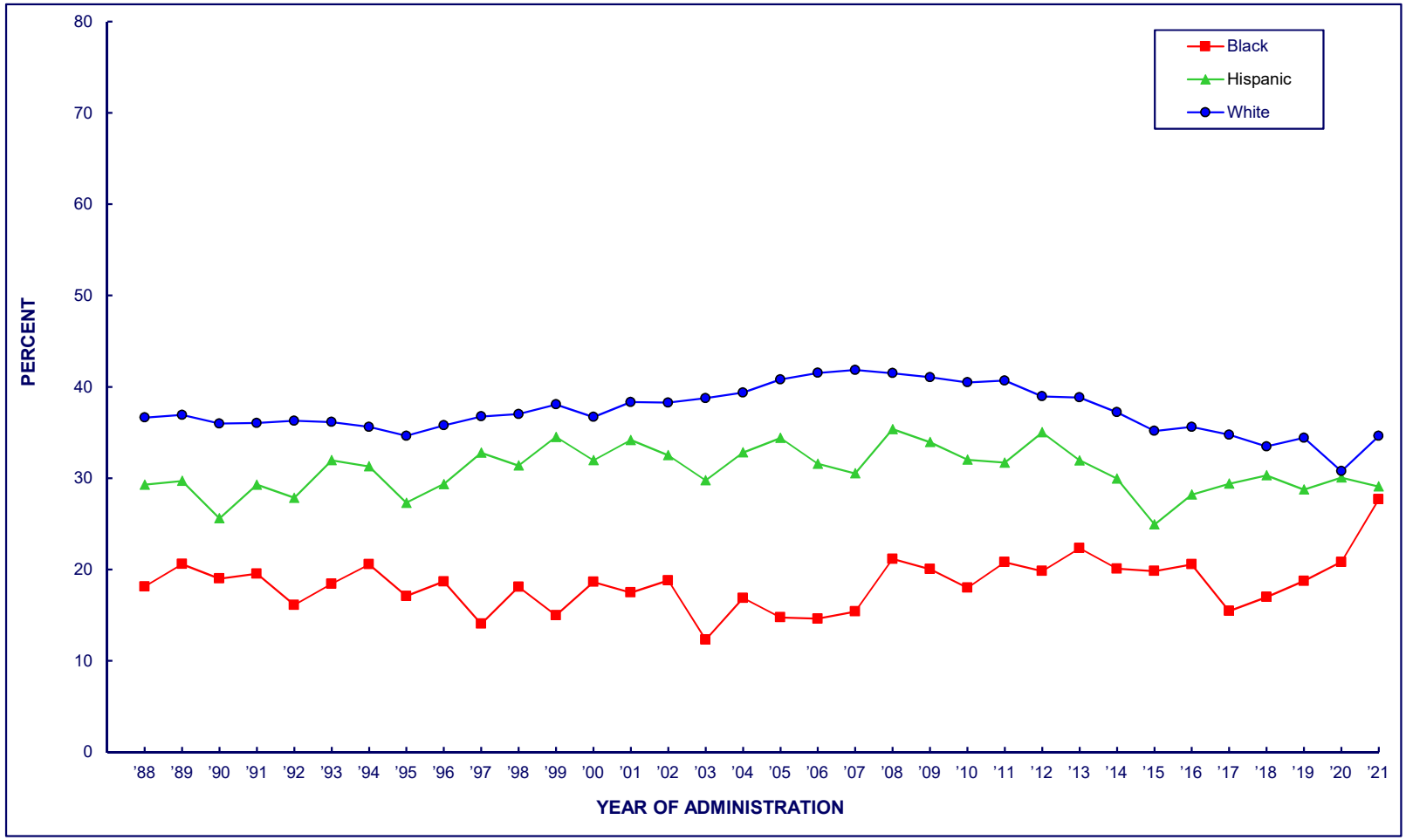


	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change	
Northeast	38.2	38.6	35.1	37.6	34.5	37.2	35.2	33.9	33.6	35.9	35.1	39.0	35.3	39.1	36.0	40.7	39.3	39.5	42.5	42.3	41.6	40.7	40.8	43.5	42.5	38.3	40.4	34.5	36.1	35.3	32.5	30.4	28.5	32.9		n.s.
Midwest	38.2	38.7	36.2	40.3	37.0	38.6	39.4	38.3	38.8	39.4	37.6	39.9	38.5	39.5	39.9	39.5	39.5	41.5	41.6	40.2	41.2	41.5	41.2	41.3	41.1	41.2	38.3	37.9	37.6	34.8	33.7	35.0	31.8	36.6	+4.7	p<.05
South	29.2	29.9	29.6	27.4	28.1	29.3	27.2	27.4	28.6	28.3	30.3	29.6	29.5	29.6	31.0	27.1	30.8	29.6	30.0	31.3	33.7	31.9	29.8	31.2	29.7	31.0	27.1	27.9	28.2	28.1	26.8	26.6	25.9	28.8		n.s.
West	30.7	29.0	32.3	30.0	33.8	27.7	33.7	27.4	32.4	30.2	32.4	30.4	32.3	33.3	33.0	32.8	33.3	35.6	36.8	36.8	34.6	36.8	34.3	31.5	32.4	32.0	31.4	26.6	28.3	26.6	30.5	31.7	27.3	32.8	+5.5	p<.05

UPDATED FIGURE 82

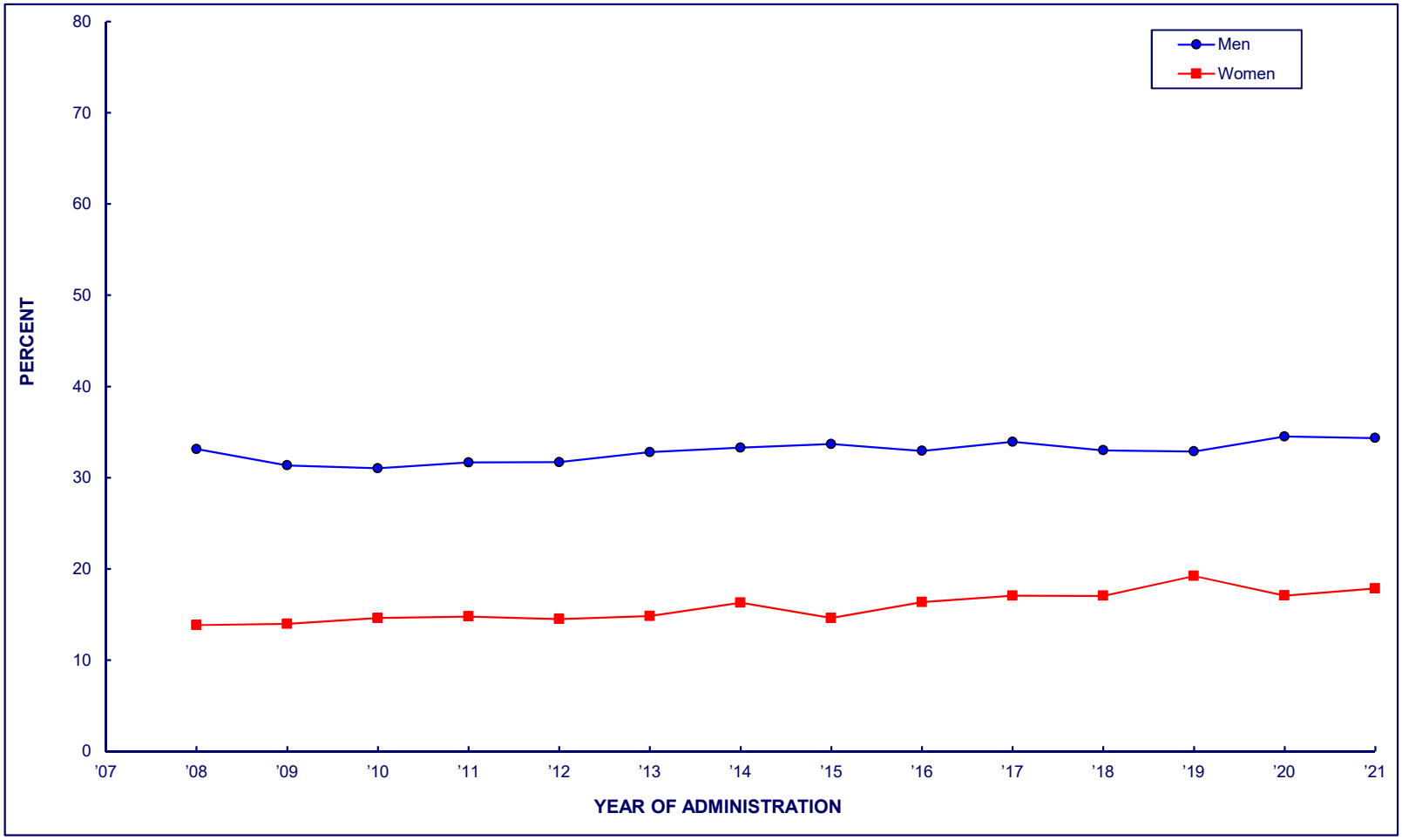
ALCOHOL

Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



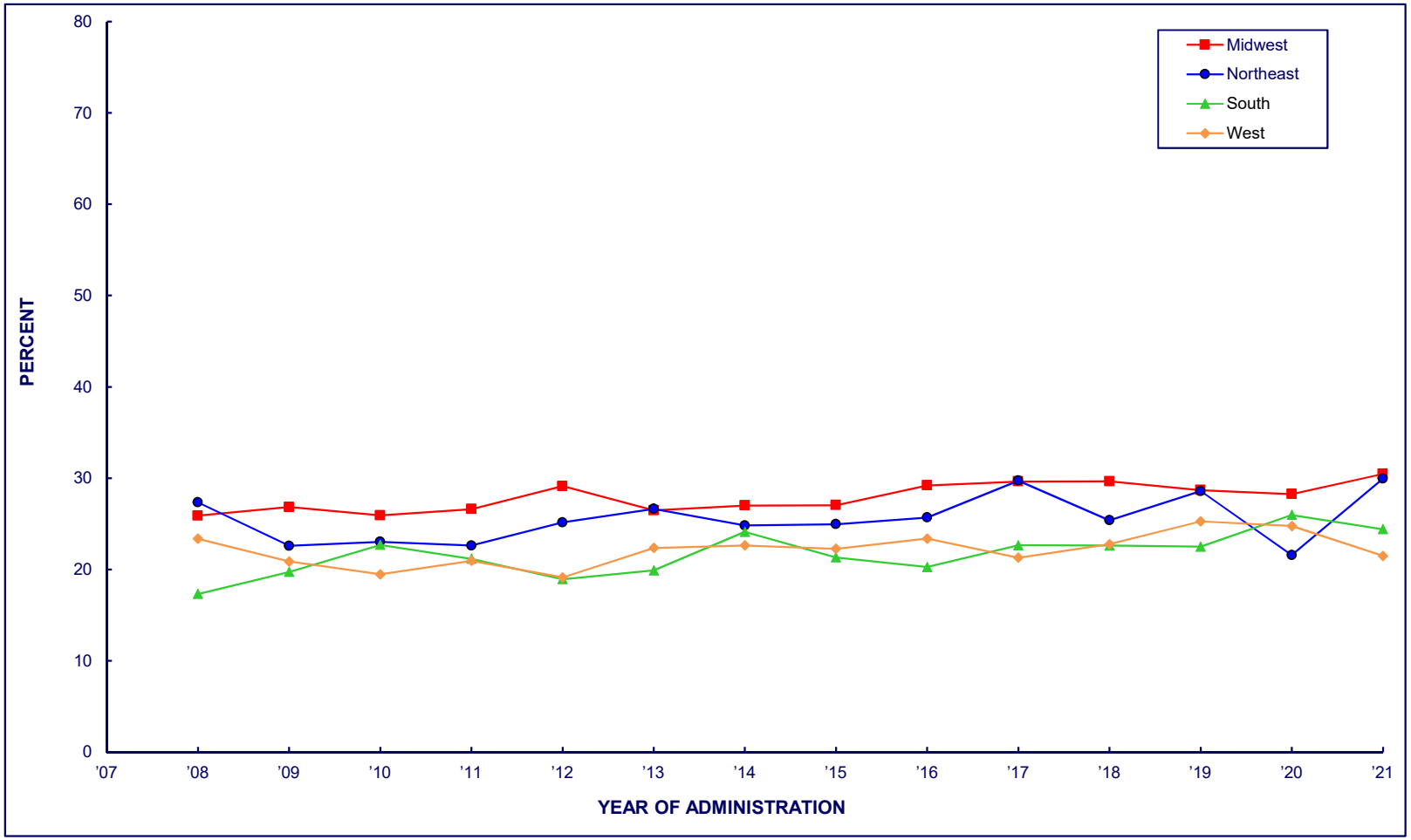
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change	
White	36.6	36.9	36.0	36.0	36.3	36.2	35.6	34.6	35.8	36.8	37.0	38.1	36.7	38.3	38.3	38.8	39.4	40.8	41.5	41.9	41.5	41.1	40.5	40.7	39.0	38.8	37.2	35.2	35.6	34.8	33.5	34.4	30.8	34.6	+3.9	p<.01
Black	18.1	20.6	19.0	19.5	16.1	18.4	20.6	17.1	18.7	14.0	18.1	15.0	18.6	17.5	18.8	12.3	16.9	14.7	14.6	15.4	21.2	20.0	18.0	20.8	19.8	22.3	20.1	19.8	20.6	15.5	17.0	18.7	20.8	27.7		n.s.
Hispanic	29.3	29.7	25.6	29.3	27.9	32.0	31.3	27.3	29.3	32.8	31.4	34.5	32.0	34.2	32.5	29.8	32.8	34.4	31.6	30.5	35.4	33.9	32.0	31.7	35.0	31.9	29.9	24.9	28.2	29.4	30.3	28.8	30.1	29.1		n.s.

UPDATED FIGURE 83
ALCOHOL
Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 35 through 50, by Sex



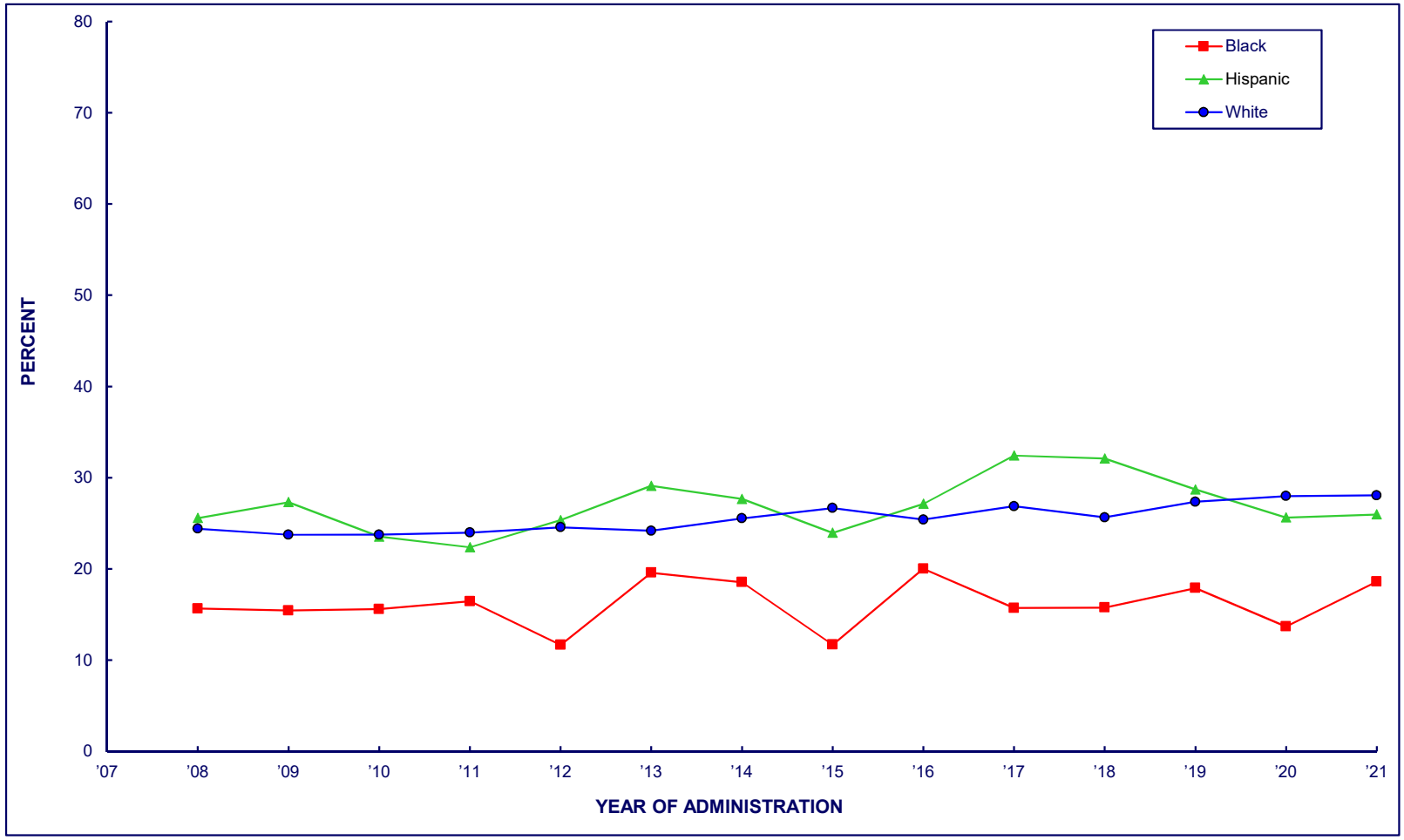
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	33.1	31.3	31.0	31.7	31.7	32.8	33.3	33.7	32.9	33.9	33.0	32.9	34.5	34.3	n.s.
Women	13.8	14.0	14.6	14.8	14.5	14.8	16.3	14.6	16.4	17.1	17.0	19.2	17.1	17.8	n.s.

UPDATED FIGURE 84
ALCOHOL
Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 35 through 50, by Geographic Region



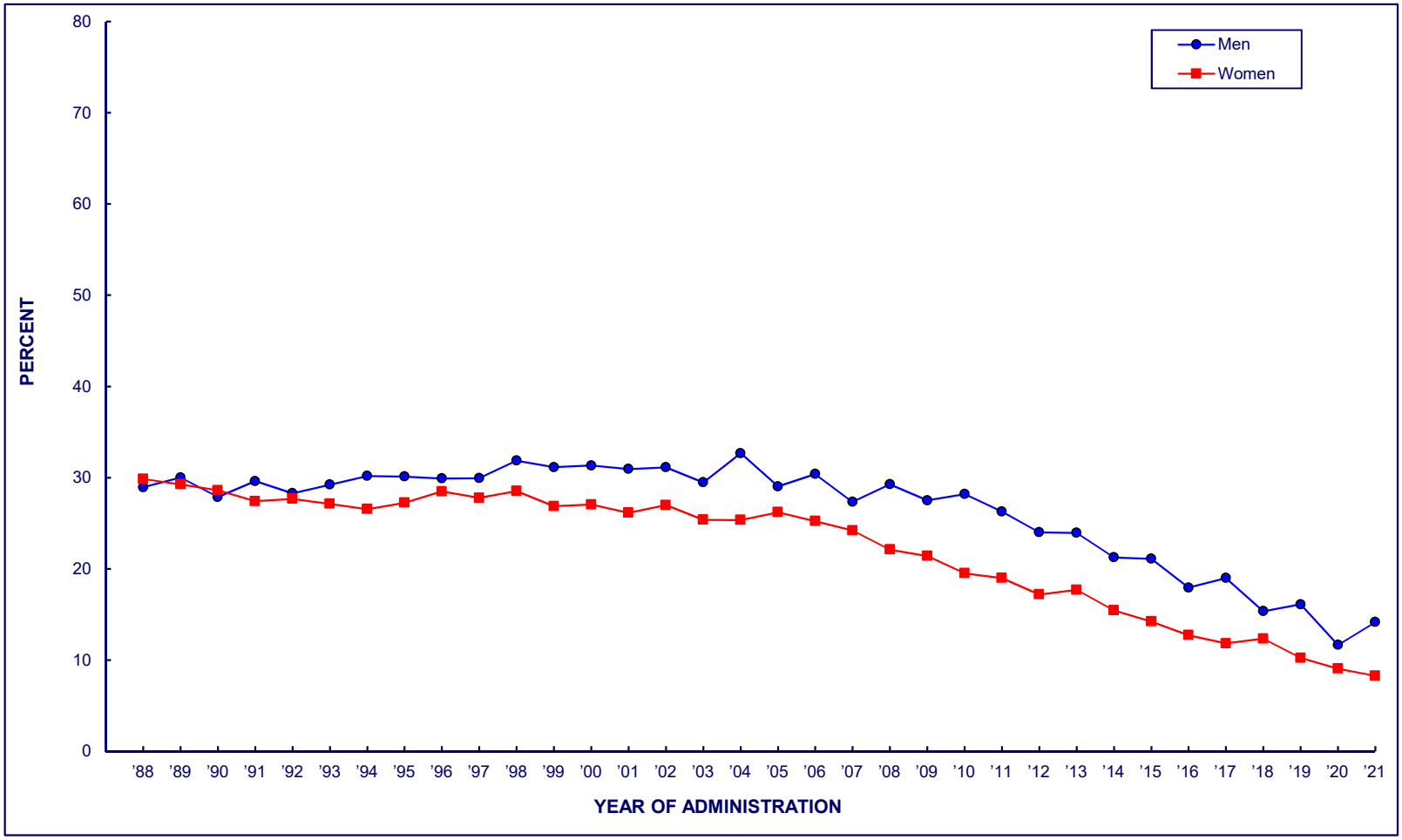
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	27.3	22.6	23.0	22.6	25.2	26.6	24.8	25.0	25.7	29.7	25.4	28.6	21.6	30.0	+8.4 p<.05
Midwest	25.9	26.8	25.9	26.6	29.1	26.5	27.0	27.0	29.2	29.6	29.6	28.7	28.3	30.5	n.s.
South	17.3	19.7	22.7	21.2	18.9	19.9	24.1	21.3	20.3	22.6	22.6	22.5	26.0	24.4	n.s.
West	23.4	20.9	19.5	21.0	19.1	22.4	22.6	22.3	23.4	21.3	22.8	25.3	24.8	21.5	n.s.

UPDATED FIGURE 85
ALCOHOL
Trends in 2-Week Prevalence of Binge Drinking (5+ Drinks in a Row) among Respondents of Modal Ages 35 through 50, by Race/Ethnicity



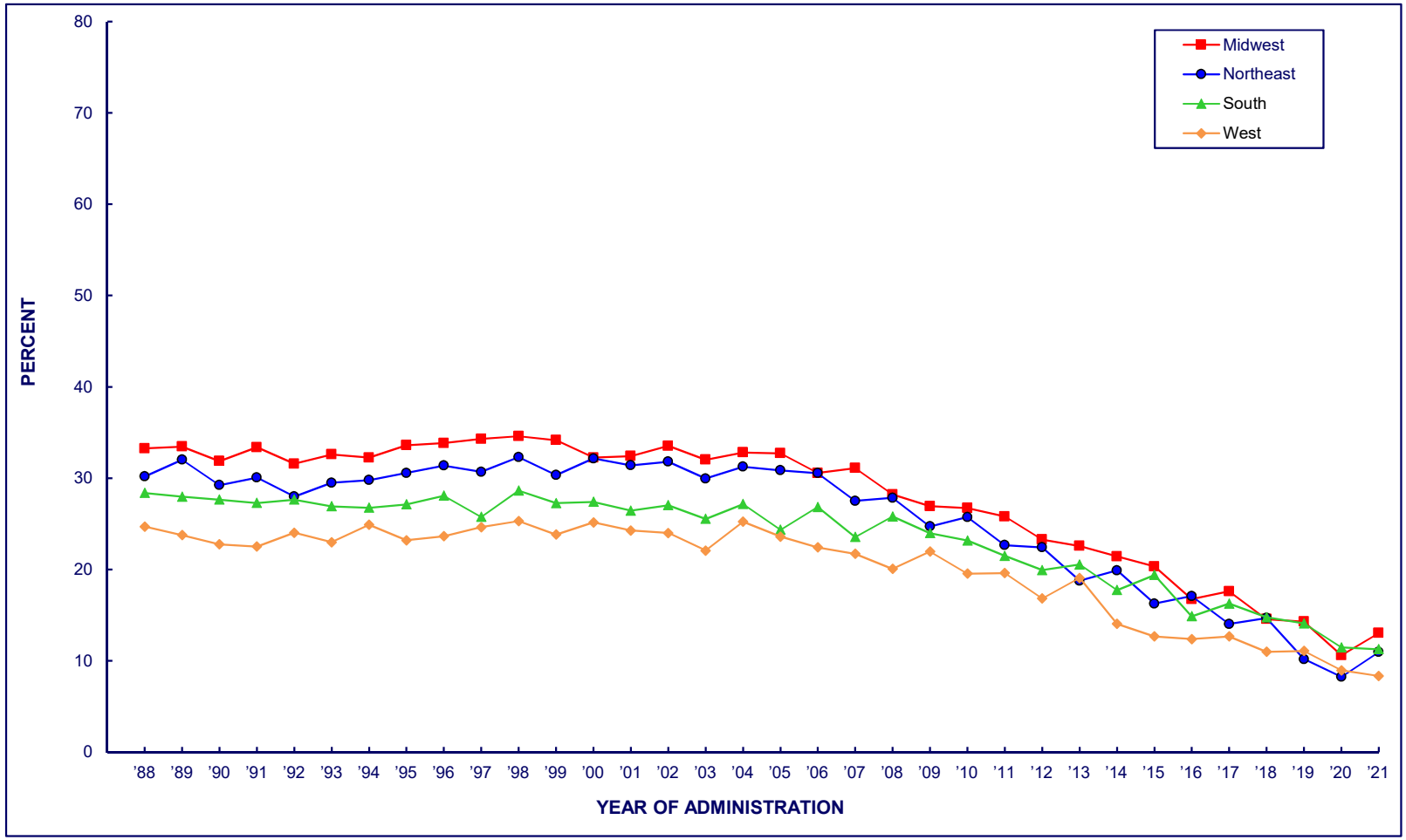
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	24.4	23.7	23.8	24.0	24.6	24.2	25.5	26.7	25.4	26.9	25.6	27.4	28.0	28.1	n.s.
Black	15.6	15.4	15.6	16.4	11.7	19.6	18.5	11.7	20.0	15.7	15.8	17.9	13.7	18.6	n.s.
Hispanic	25.6	27.3	23.5	22.4	25.3	29.1	27.7	24.0	27.1	32.4	32.1	28.7	25.6	26.0	n.s.

UPDATED FIGURE 86
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Sex



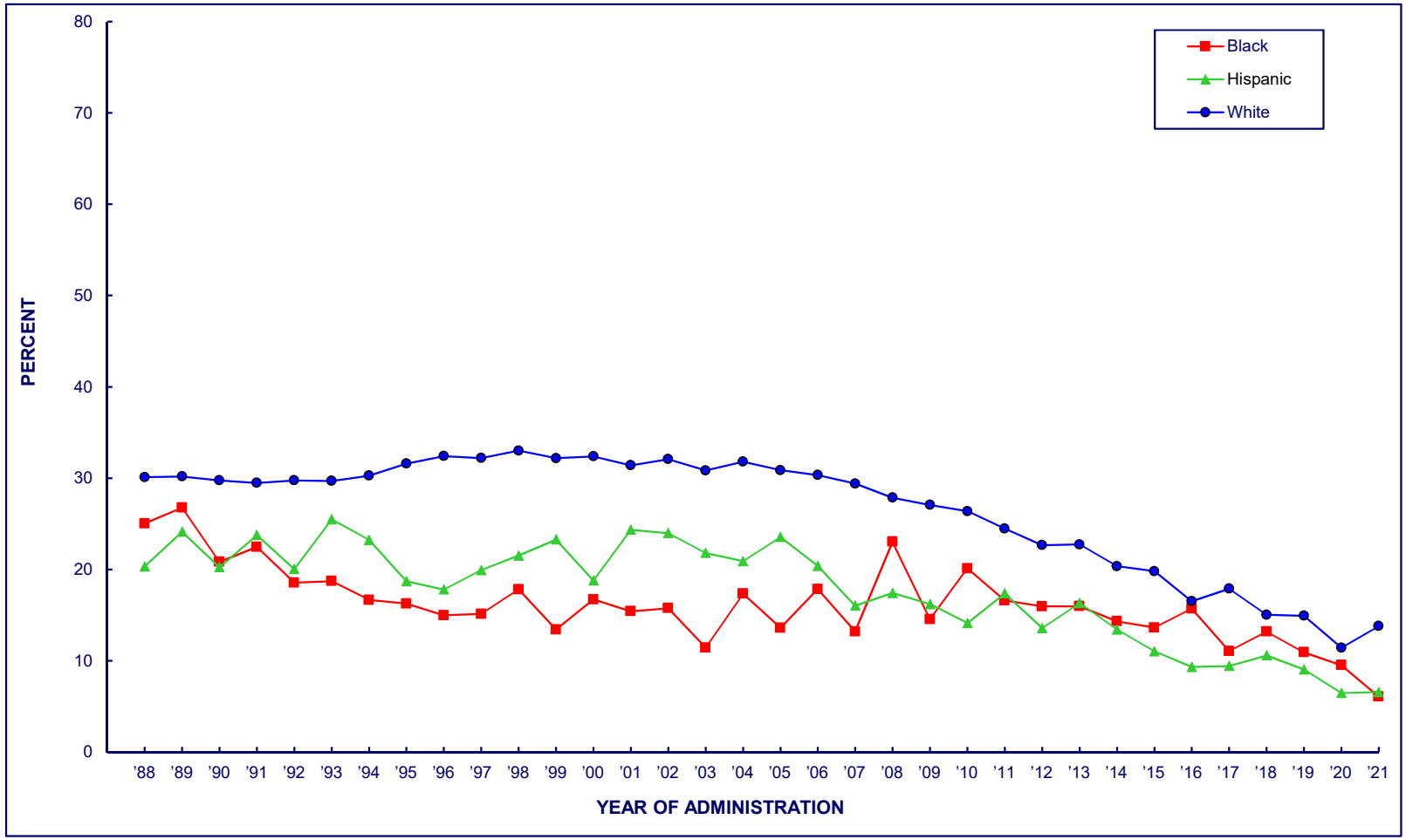
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	28.9	30.0	27.9	29.6	28.3	29.2	30.2	30.1	29.9	29.9	31.9	31.1	31.3	31.0	31.1	29.5	32.7	29.0	30.4	27.3	29.3	27.5	28.2	26.3	24.0	23.9	21.3	21.1	17.9	19.0	15.4	16.1	11.7	14.2	n.s.
Women	29.9	29.3	28.6	27.4	27.7	27.1	26.6	27.2	28.5	27.8	28.5	26.9	27.1	26.1	27.0	25.4	25.4	26.2	25.2	24.2	22.1	21.4	19.5	19.0	17.2	17.7	15.5	14.2	12.7	11.8	12.3	10.2	9.1	8.3	n.s.

UPDATED FIGURE 87
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Geographic Region



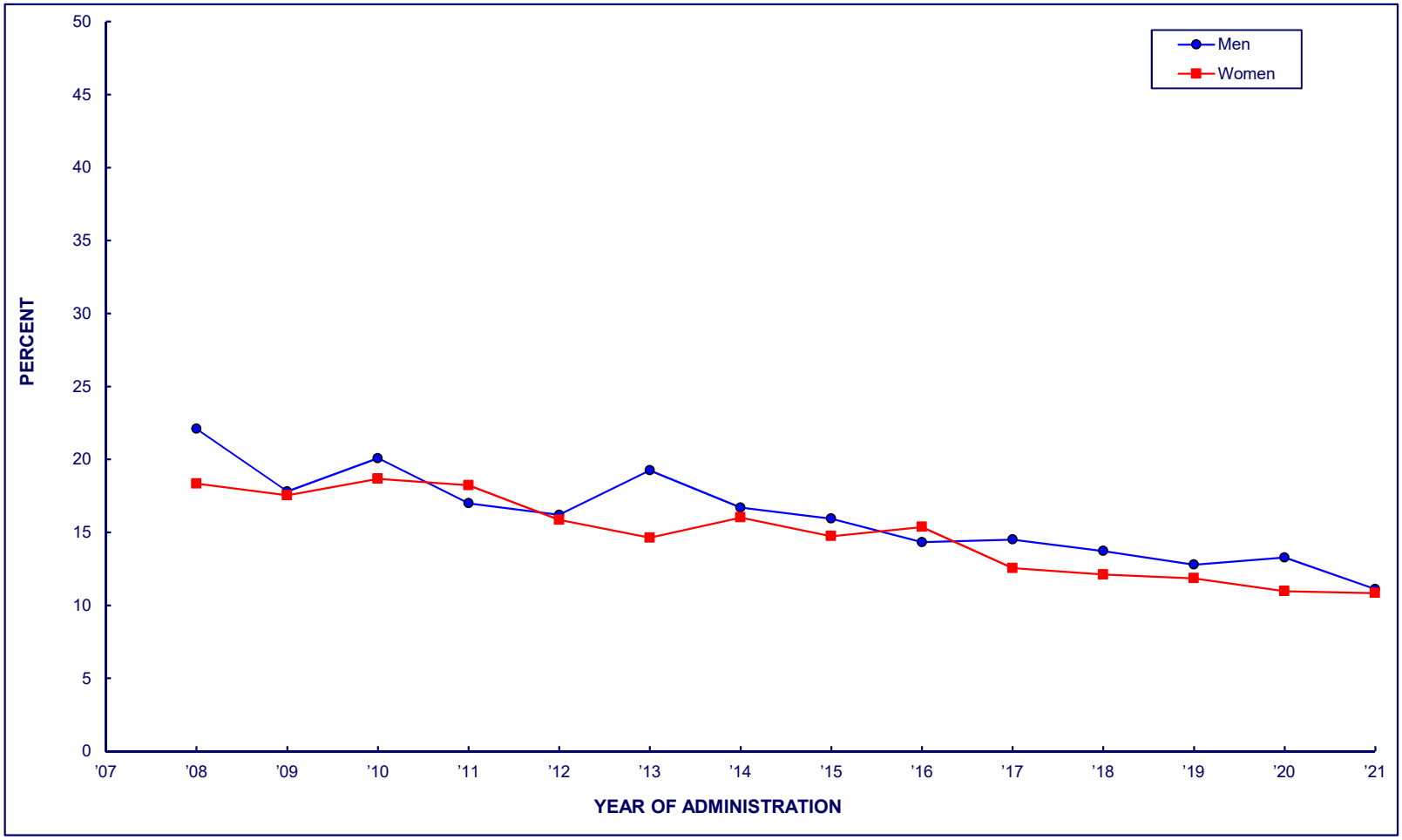
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	30.2	32.0	29.2	30.1	28.0	29.5	29.8	30.6	31.4	30.7	32.3	30.3	32.2	31.4	31.8	30.0	31.3	30.9	30.6	27.5	27.8	24.7	25.7	22.7	22.4	18.8	19.9	16.3	17.1	14.0	14.7	10.2	8.2	11.0	n.s.
Midwest	33.3	33.5	31.9	33.4	31.6	32.6	32.2	33.6	33.8	34.3	34.6	34.2	32.3	32.4	33.5	32.0	32.8	32.7	30.6	31.1	28.2	26.9	26.7	25.8	23.3	22.6	21.4	20.3	16.8	17.6	14.6	14.3	10.6	13.0	n.s.
South	28.4	28.0	27.7	27.3	27.6	26.9	26.8	27.1	28.1	25.8	28.6	27.3	27.4	26.4	27.0	25.5	27.2	24.4	26.8	23.6	25.8	24.0	23.2	21.5	19.9	20.5	17.7	19.4	14.9	16.3	14.8	14.1	11.5	11.3	n.s.
West	24.7	23.8	22.8	22.5	24.0	23.0	24.9	23.2	23.6	24.6	25.3	23.8	25.2	24.3	24.0	22.1	25.2	23.6	22.4	21.7	20.1	22.0	19.5	19.6	16.8	19.1	14.0	12.7	12.4	12.7	11.0	11.1	9.0	8.3	n.s.

UPDATED FIGURE 88
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



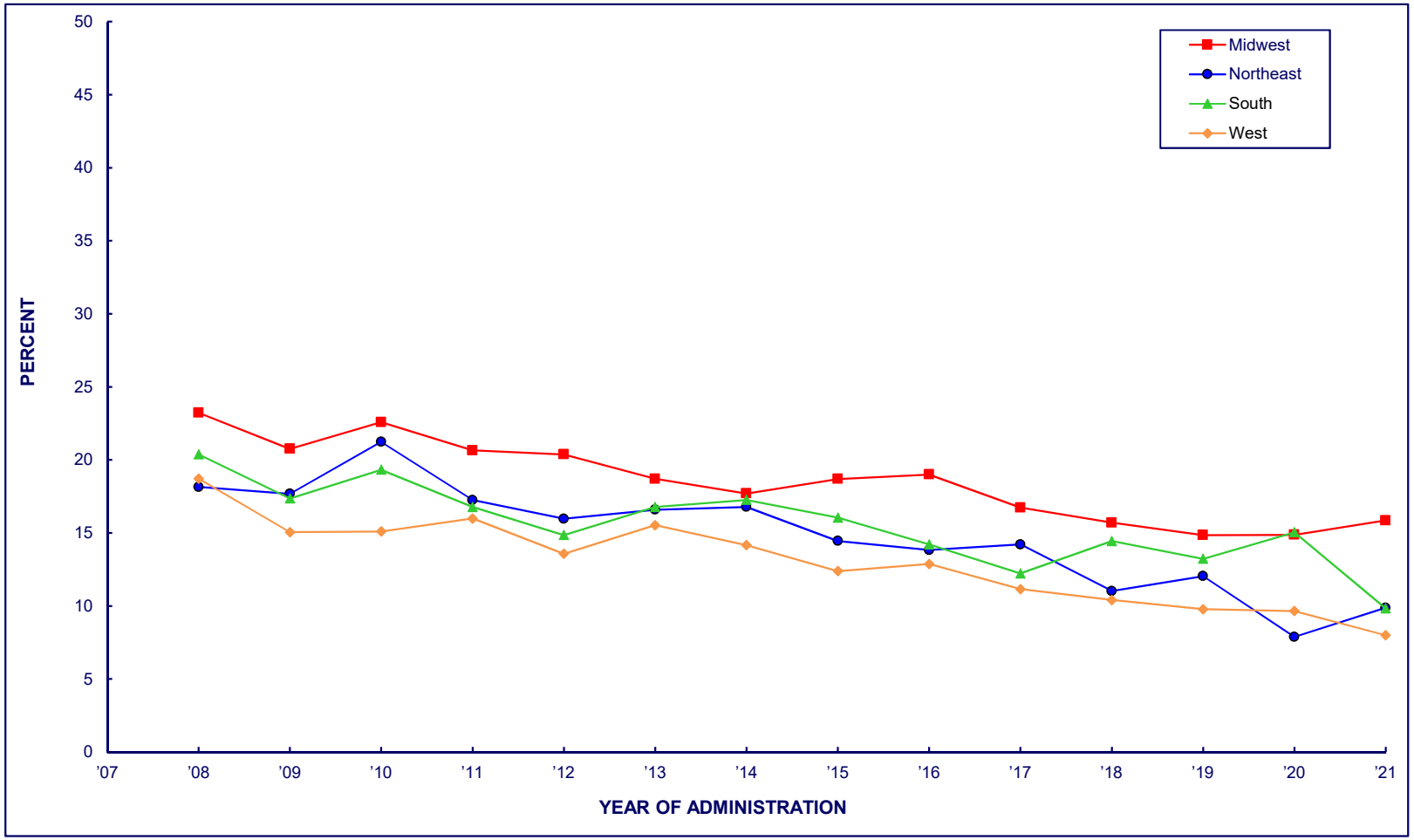
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change	
White	30.1	30.2	29.8	29.5	29.8	29.7	30.3	31.6	32.4	32.2	33.0	32.2	32.4	31.4	32.1	30.8	31.8	30.9	30.3	29.4	27.9	27.1	26.4	24.5	22.7	22.7	20.4	19.8	16.5	17.9	15.0	14.9	11.4	13.8	+2.4	p<.05
Black	25.0	26.8	20.8	22.5	18.6	18.7	16.7	16.3	15.0	15.1	17.8	13.4	16.7	15.4	15.8	11.4	17.3	13.6	17.9	13.2	23.0	14.5	20.1	16.6	16.0	16.0	14.3	13.6	15.7	11.1	13.2	10.9	9.5	6.1		n.s.
Hispanic	20.3	24.1	20.3	23.8	20.0	25.5	23.2	18.7	17.8	19.9	21.5	23.3	18.8	24.4	24.0	21.8	20.9	23.6	20.4	16.0	17.4	16.2	14.1	17.4	13.6	16.3	13.4	11.0	9.3	9.4	10.6	9.1	6.5	6.6		n.s.

UPDATED FIGURE 89
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Sex



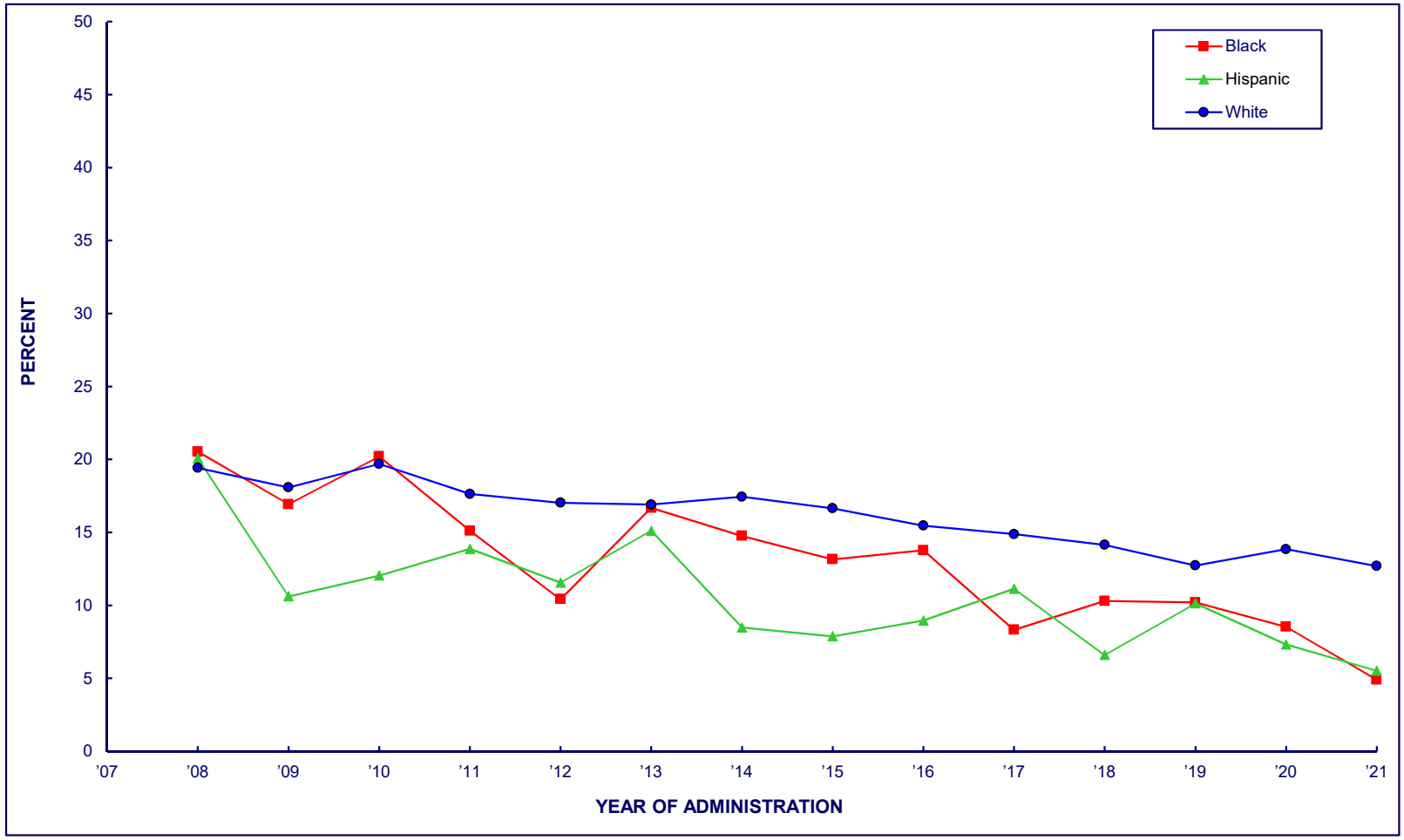
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	22.1	17.8	20.1	17.0	16.2	19.3	16.7	15.9	14.3	14.5	13.7	12.8	13.3	11.1	n.s.
Women	18.3	17.5	18.7	18.2	15.9	14.6	16.0	14.7	15.4	12.6	12.1	11.9	11.0	10.8	n.s.

UPDATED FIGURE 90
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Geographic Region



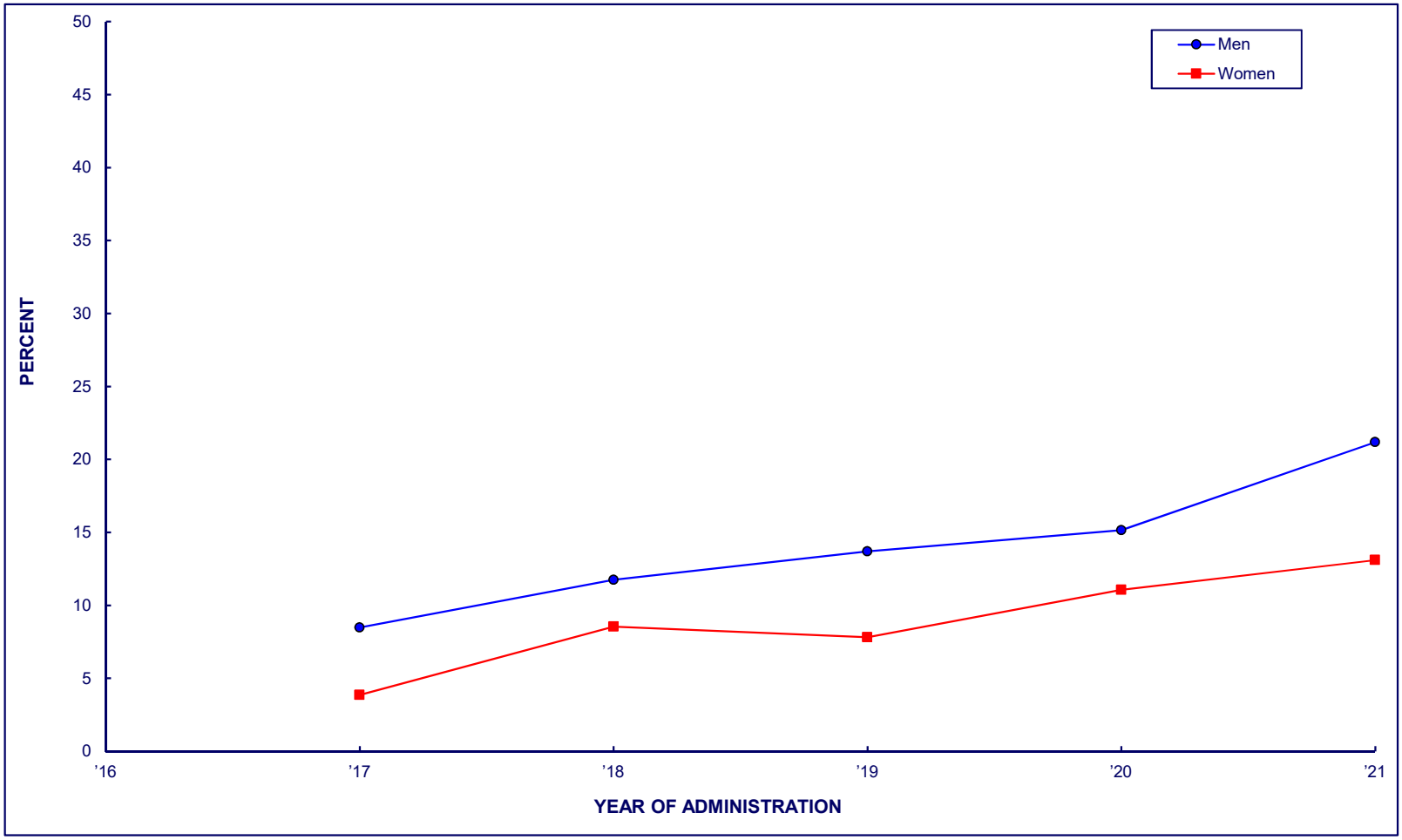
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	18.2	17.7	21.2	17.3	16.0	16.6	16.8	14.5	13.8	14.2	11.0	12.0	7.9	9.9	n.s.
Midwest	23.2	20.8	22.6	20.7	20.4	18.7	17.7	18.7	19.0	16.7	15.7	14.9	14.9	15.9	n.s.
South	20.4	17.4	19.3	16.8	14.9	16.8	17.3	16.1	14.2	12.2	14.4	13.2	15.0	9.8	-5.2 p<.01
West	18.7	15.1	15.1	16.0	13.6	15.5	14.2	12.4	12.9	11.2	10.4	9.8	9.7	8.0	n.s.

UPDATED FIGURE 91
CIGARETTES
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity



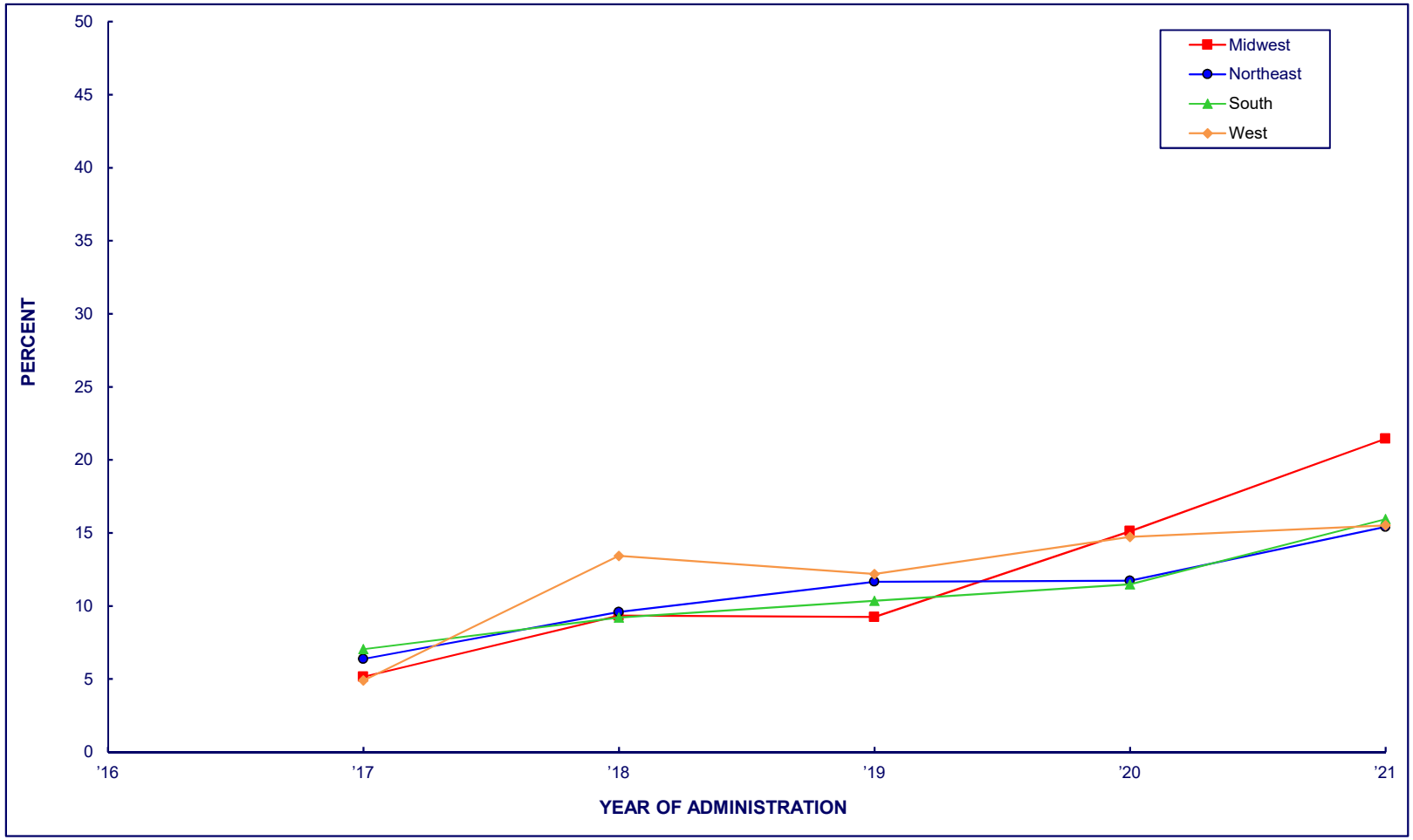
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	19.4	18.1	19.7	17.6	17.0	16.9	17.4	16.7	15.5	14.9	14.1	12.7	13.9	12.7	n.s.
Black	20.5	16.9	20.2	15.1	10.4	16.7	14.8	13.2	13.8	8.3	10.3	10.2	8.5	4.9	n.s.
Hispanic	20.1	10.6	12.0	13.9	11.6	15.1	8.5	7.9	9.0	11.1	6.6	10.1	7.3	5.5	n.s.

UPDATED FIGURE 92
VAPING NICOTINE
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Sex



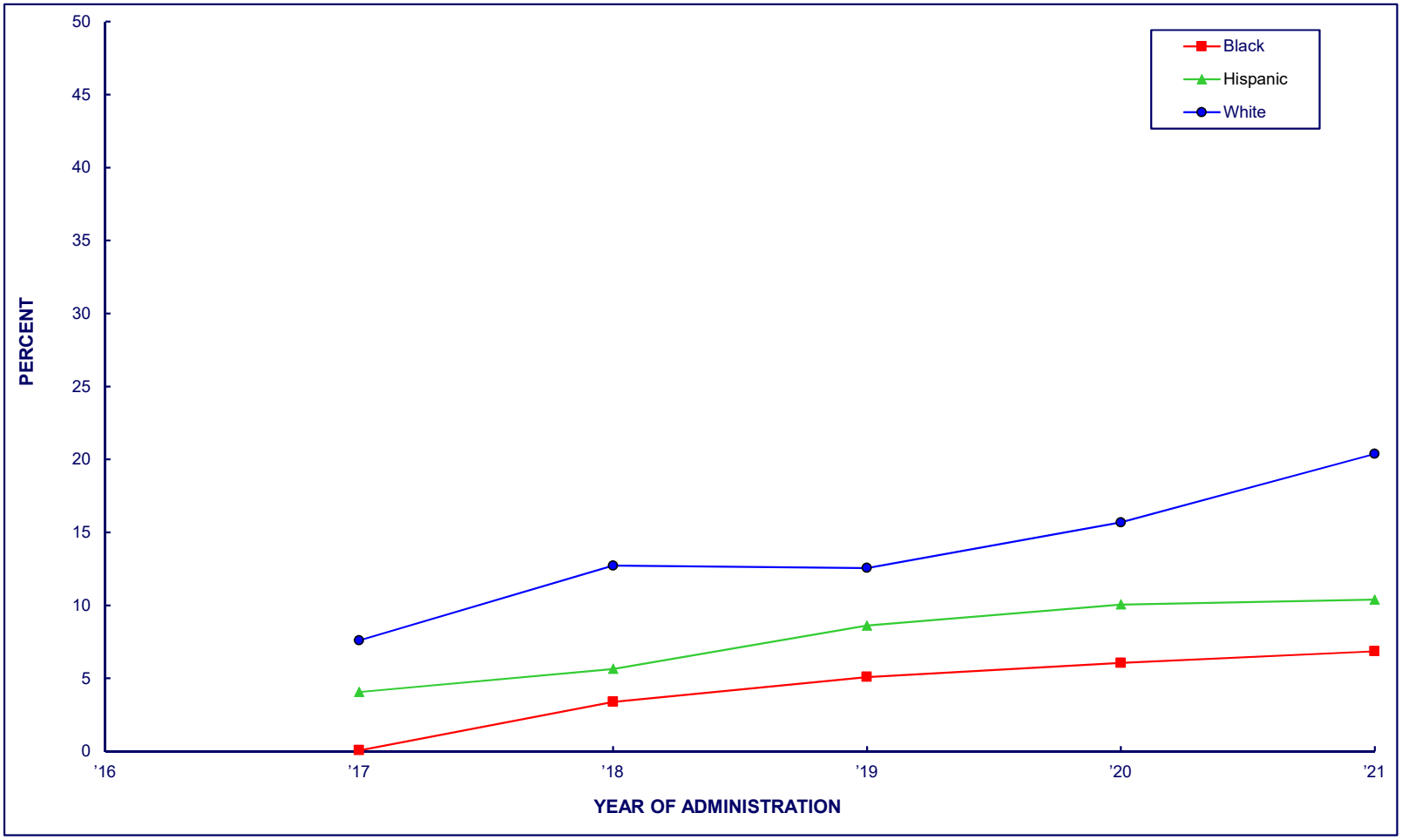
	2017	2018	2019	2020	2021	1-Year Change
Men	8.5	11.8	13.7	15.2	21.2	+6.0 p<.001
Women	3.9	8.5	7.8	11.1	13.1	n.s.

UPDATED FIGURE 93
VAPING NICOTINE
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Geographic Region



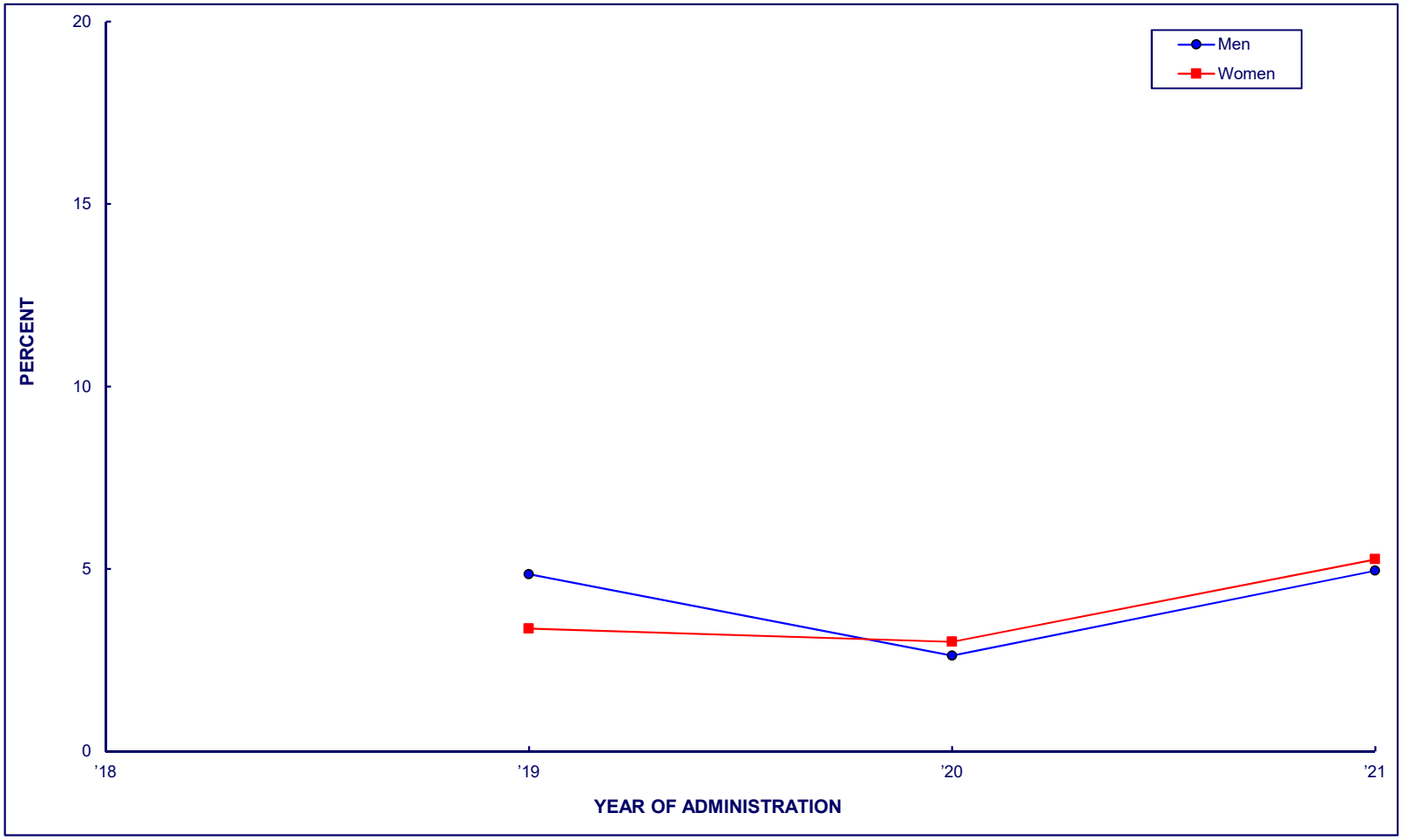
	2017	2018	2019	2020	2021	1-Year Change
Northeast	6.4	9.6	11.7	11.7	15.4	n.s.
Midwest	5.2	9.3	9.2	15.1	21.5	+6.3 p<.01
South	7.0	9.2	10.4	11.5	15.9	+4.5 p<.01
West	4.9	13.4	12.2	14.7	15.5	n.s.

UPDATED FIGURE 94
VAPING NICOTINE
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



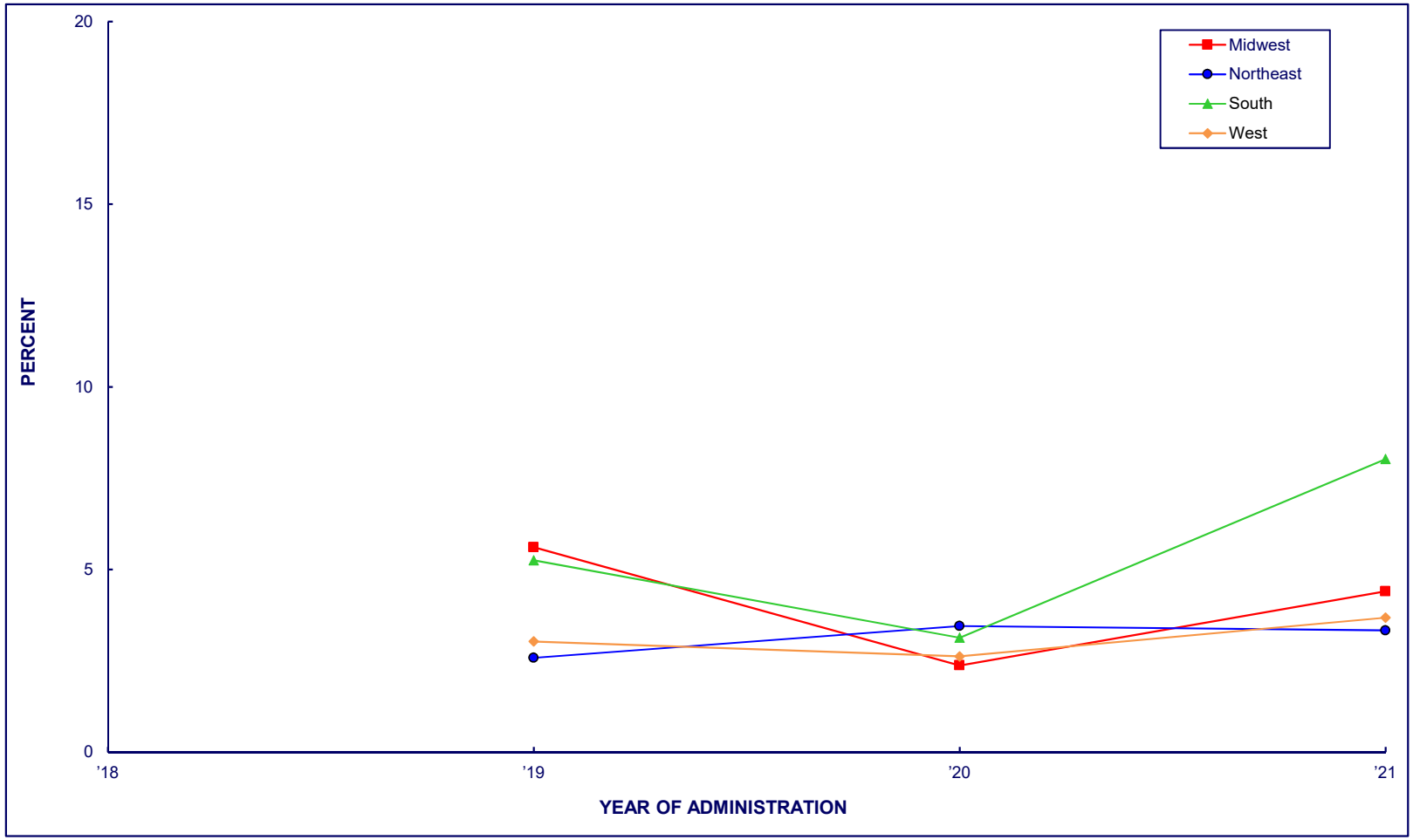
	2017	2018	2019	2020	2021	1-Year Change
White	7.6	12.7	12.6	15.7	20.4	+4.7 p<.001
Black	0.1	3.4	5.1	6.1	6.9	n.s.
Hispanic	4.1	5.6	8.6	10.1	10.4	n.s.

UPDATED FIGURE 95
VAPING NICOTINE
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Sex



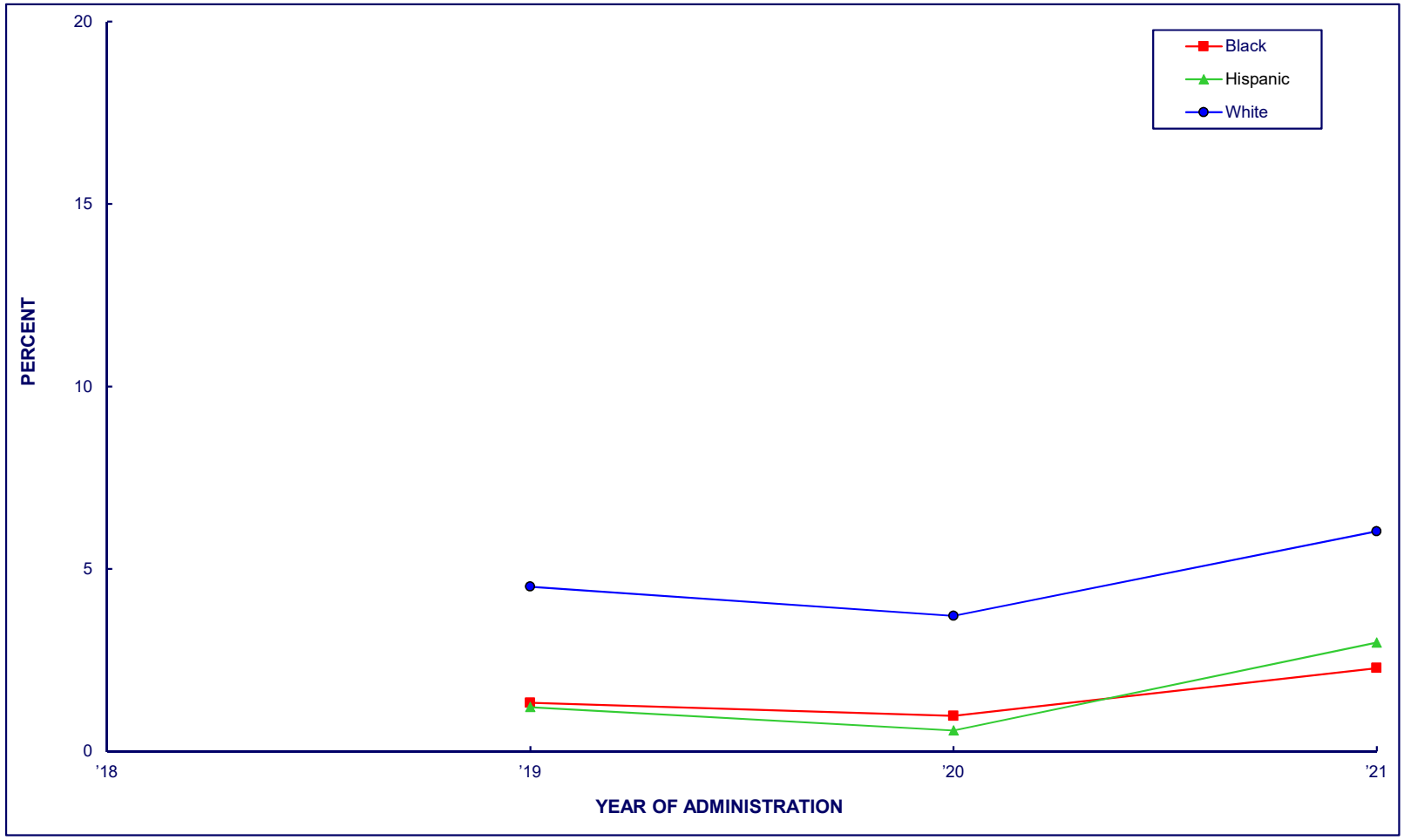
	2019	2020	2021	1-Year Change
Men	4.9	2.6	5.0	+2.3 p<.01
Women	3.4	3.0	5.3	+2.3 p<.01

UPDATED FIGURE 96
VAPING NICOTINE
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Geographic Region



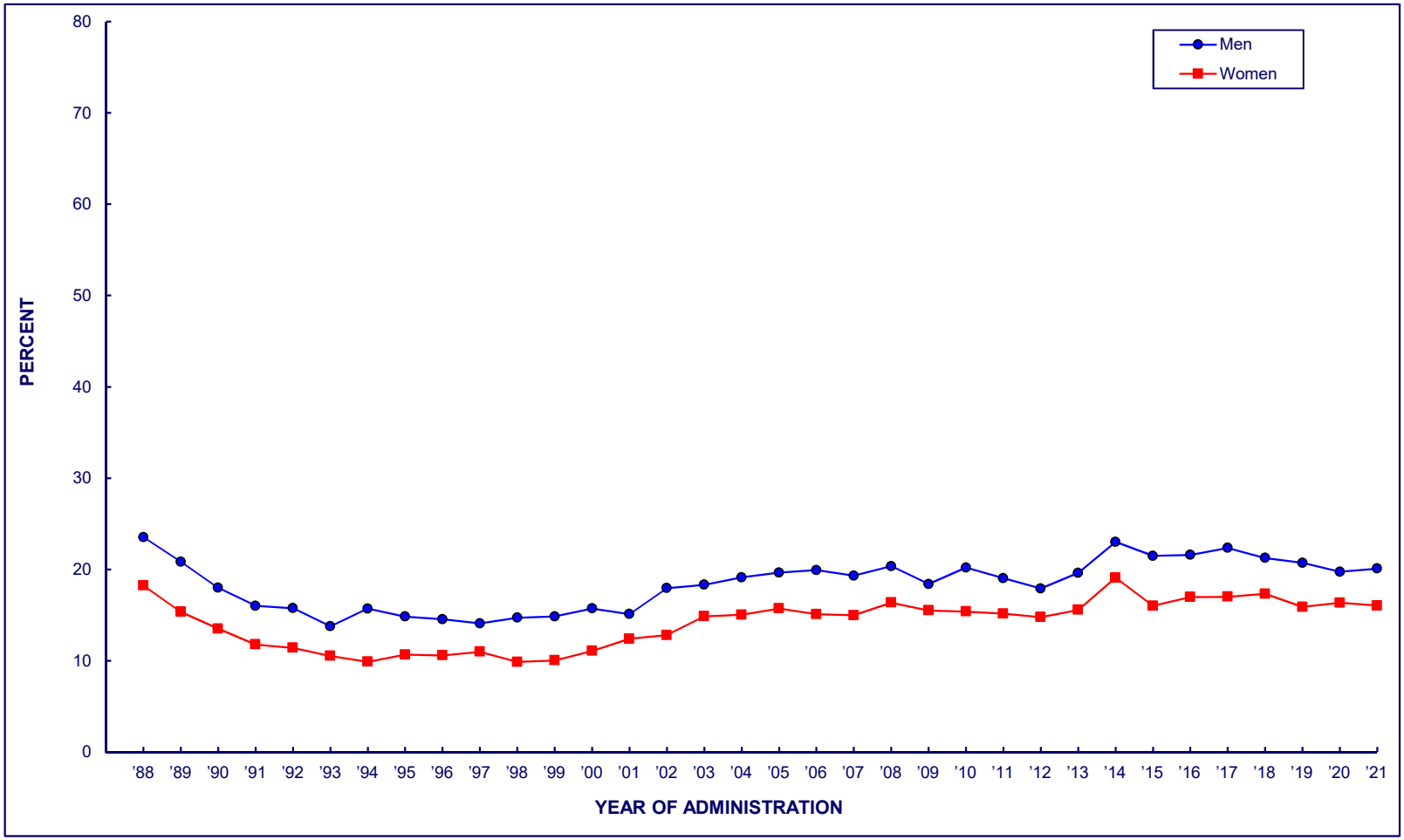
	2019	2020	2021	1-Year Change
Northeast	2.6	3.5	3.3	n.s.
Midwest	5.6	2.4	4.4	+2.0 p<.05
South	5.3	3.1	8.0	+4.9 p<.001
West	3.0	2.6	3.7	n.s.

UPDATED FIGURE 97
VAPING NICOTINE
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity



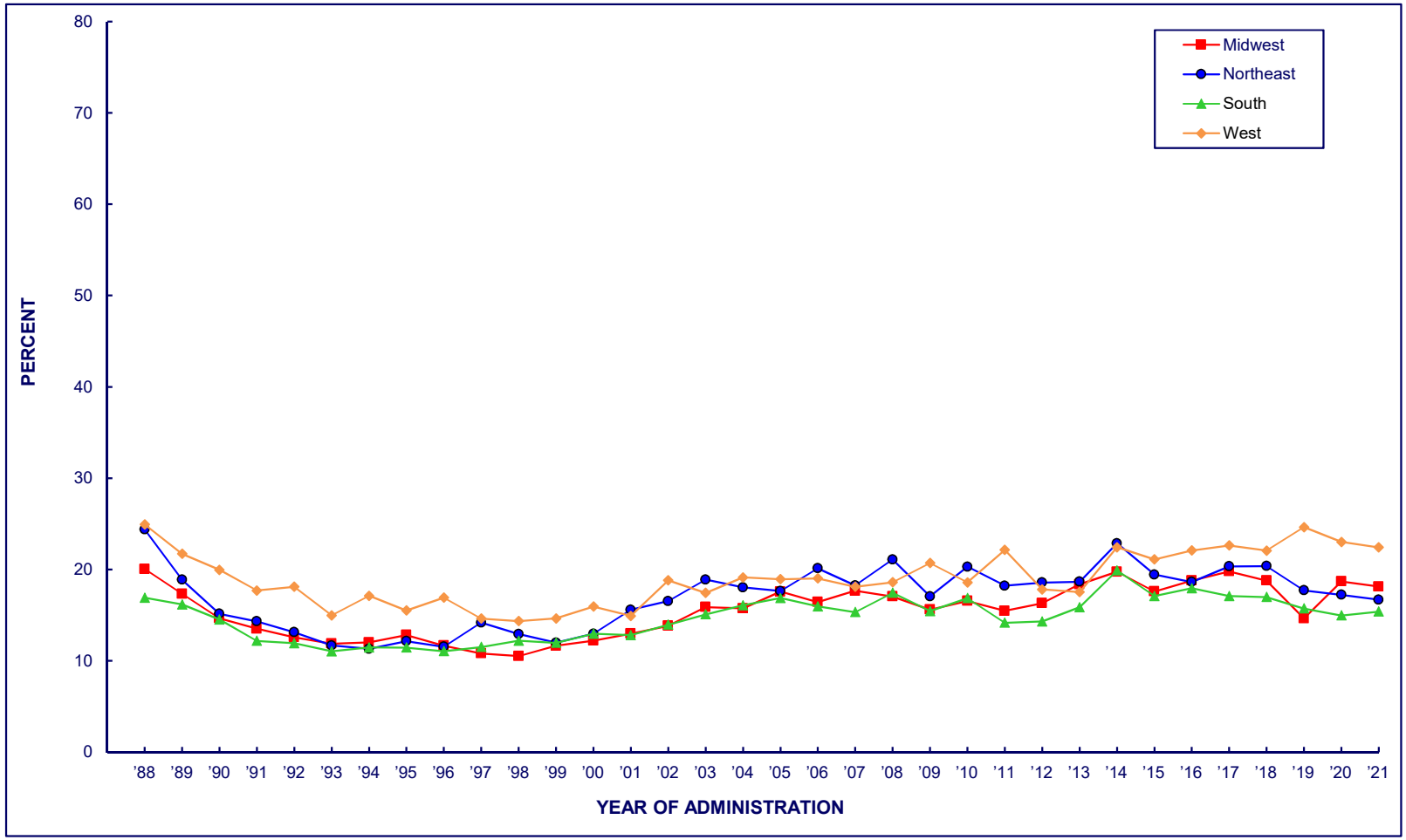
	2019	2020	2021	1-Year Change
White	4.5	3.7	6.0	+2.3 p<.01
Black	1.3	1.0	2.3	n.s.
Hispanic	1.2	0.6	3.0	n.s.

UPDATED FIGURE 98
ANY DRUG OTHER THAN MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30, by Sex



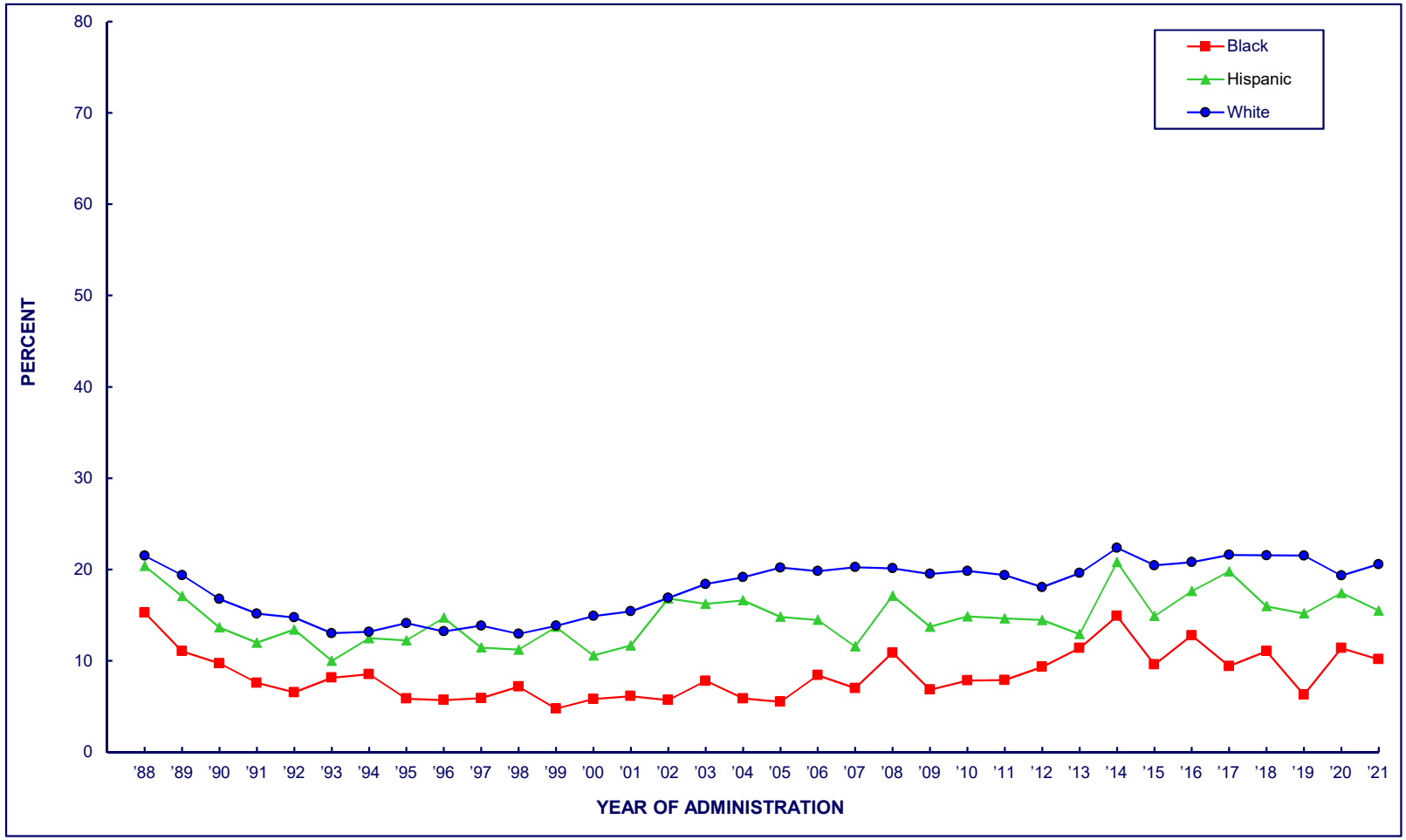
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	23.5	20.9	18.0	16.0	15.8	13.8	15.7	14.8	14.5	14.1	14.7	14.9	15.7	15.1	18.0	18.3	19.1	19.7	19.9	19.3	20.4	18.4	20.2	19.0	17.9	19.6	23.0	21.5	21.6	22.4	21.3	20.7	19.7	20.1	n.s.
Women	18.2	15.4	13.5	11.8	11.4	10.5	9.9	10.7	10.6	11.0	9.9	10.0	11.1	12.4	12.8	14.9	15.0	15.7	15.1	15.0	16.4	15.5	15.4	15.2	14.8	15.6	19.1	16.0	17.0	17.0	17.3	15.9	16.4	16.1	n.s.

UPDATED FIGURE 99
ANY DRUG OTHER THAN MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30, by Geographic Region



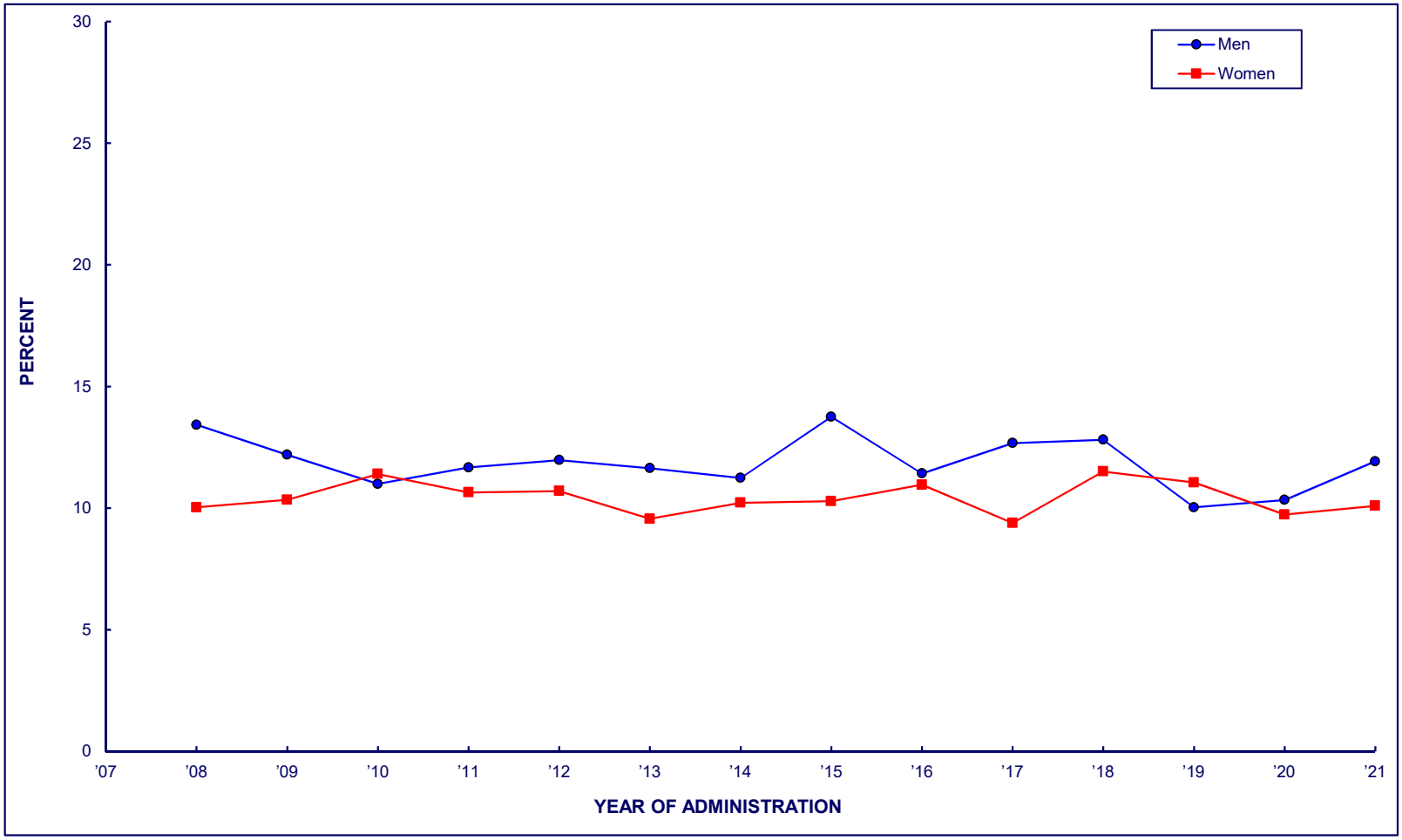
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	24.4	18.9	15.1	14.3	13.1	11.7	11.3	12.2	11.5	14.2	12.9	12.0	13.0	15.6	16.5	18.9	18.0	17.6	20.1	18.3	21.1	17.1	20.3	18.2	18.6	18.7	22.9	19.4	18.6	20.3	20.4	17.7	17.2	16.7	n.s.
Midwest	20.1	17.3	14.7	13.5	12.6	11.9	12.0	12.8	11.7	10.8	10.5	11.6	12.2	13.0	13.8	15.9	15.7	17.6	16.4	17.7	17.0	15.6	16.6	15.5	16.3	18.4	19.7	17.6	18.8	19.8	18.8	14.6	18.7	18.1	n.s.
South	16.9	16.2	14.5	12.2	11.9	11.0	11.5	11.5	11.0	11.5	12.2	12.0	13.0	12.8	14.0	15.1	16.1	16.9	16.0	15.3	17.4	15.4	16.9	14.2	14.3	15.9	19.9	17.1	17.9	17.1	17.0	15.7	15.0	15.4	n.s.
West	24.9	21.7	20.0	17.7	18.1	15.0	17.1	15.5	16.9	14.6	14.3	14.6	15.9	14.9	18.8	17.4	19.1	18.9	19.0	18.1	18.6	20.7	18.6	22.1	17.8	17.5	22.4	21.1	22.1	22.6	22.1	24.6	23.0	22.4	n.s.

UPDATED FIGURE 100
ANY DRUG OTHER THAN MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



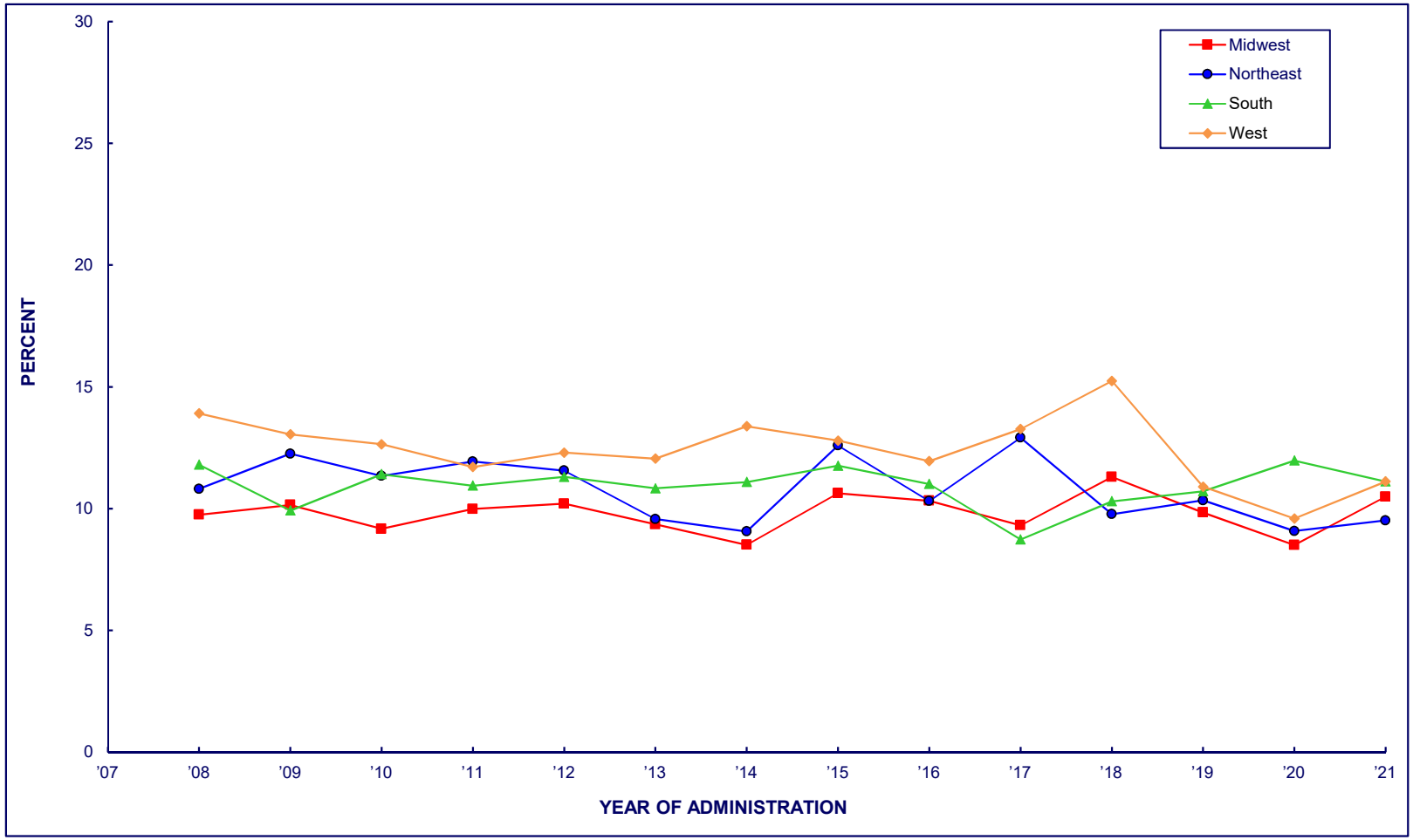
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	21.5	19.4	16.8	15.2	14.8	13.0	13.2	14.1	13.2	13.8	13.0	13.8	14.9	15.4	16.9	18.4	19.2	20.2	19.8	20.2	20.1	19.5	19.8	19.4	18.1	19.6	22.4	20.5	20.8	21.6	21.6	21.5	19.3	20.6	n.s.
Black	15.3	11.0	9.7	7.6	6.5	8.1	8.5	5.9	5.7	5.9	7.2	4.8	5.8	6.1	5.7	7.8	5.9	5.5	8.4	7.0	10.9	6.8	7.8	7.9	9.3	11.4	14.9	9.6	12.8	9.4	11.1	6.3	11.4	10.2	n.s.
Hispanic	20.4	17.1	13.7	12.0	13.4	10.0	12.5	12.2	14.7	11.4	11.2	13.7	10.6	11.7	16.8	16.2	16.6	14.8	14.5	11.6	17.1	13.7	14.9	14.6	14.5	12.9	20.8	14.9	17.6	19.8	16.0	15.2	17.4	15.5	n.s.

UPDATED FIGURE 101
ANY DRUG OTHER THAN MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 35 through 50, by Sex



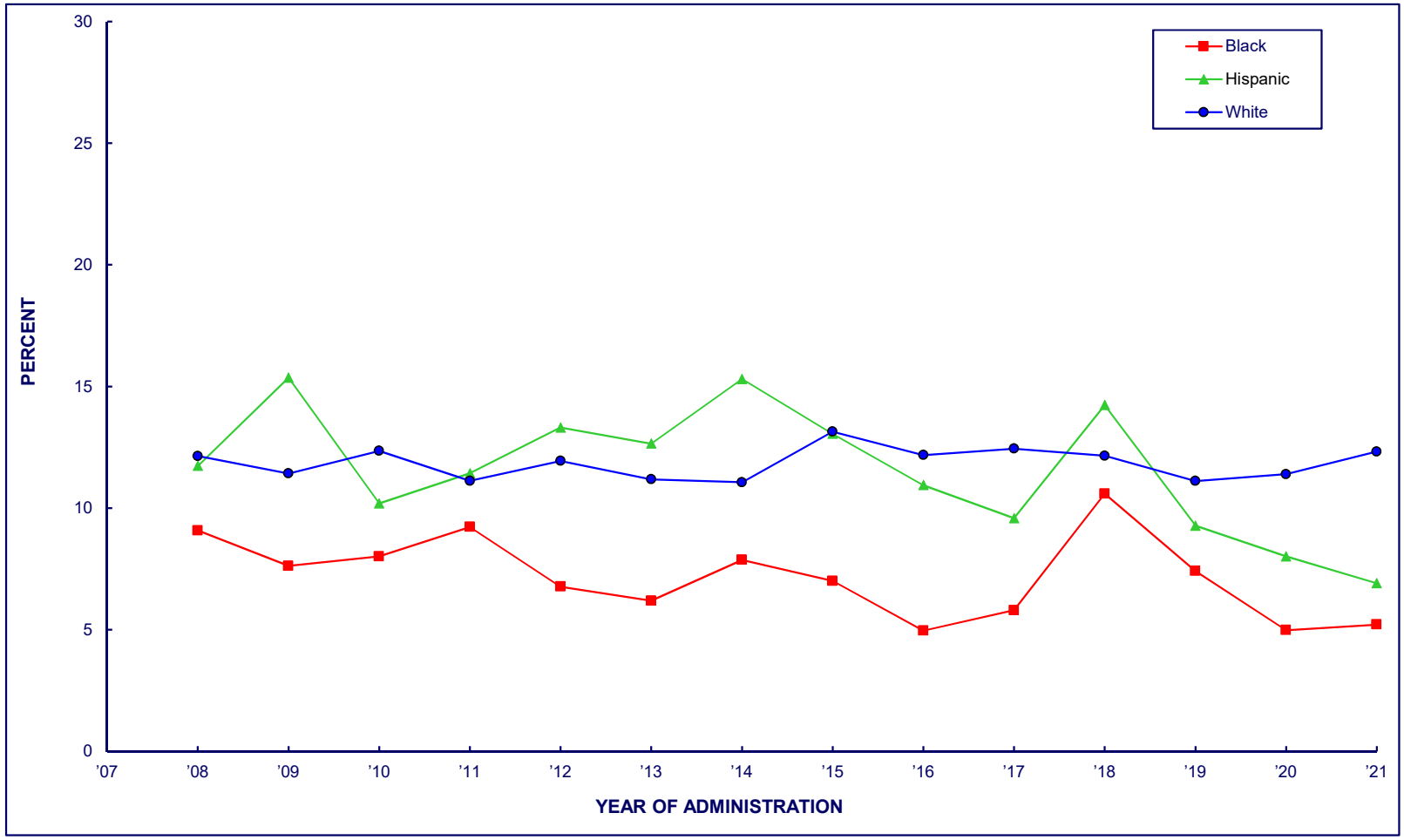
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	13.4	12.2	11.0	11.7	12.0	11.6	11.2	13.8	11.4	12.7	12.8	10.0	10.3	11.9	n.s.
Women	10.0	10.3	11.4	10.6	10.7	9.6	10.2	10.3	11.0	9.4	11.5	11.1	9.7	10.1	n.s.

UPDATED FIGURE 102
ANY DRUG OTHER THAN MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 35 through 50, by Geographic Region



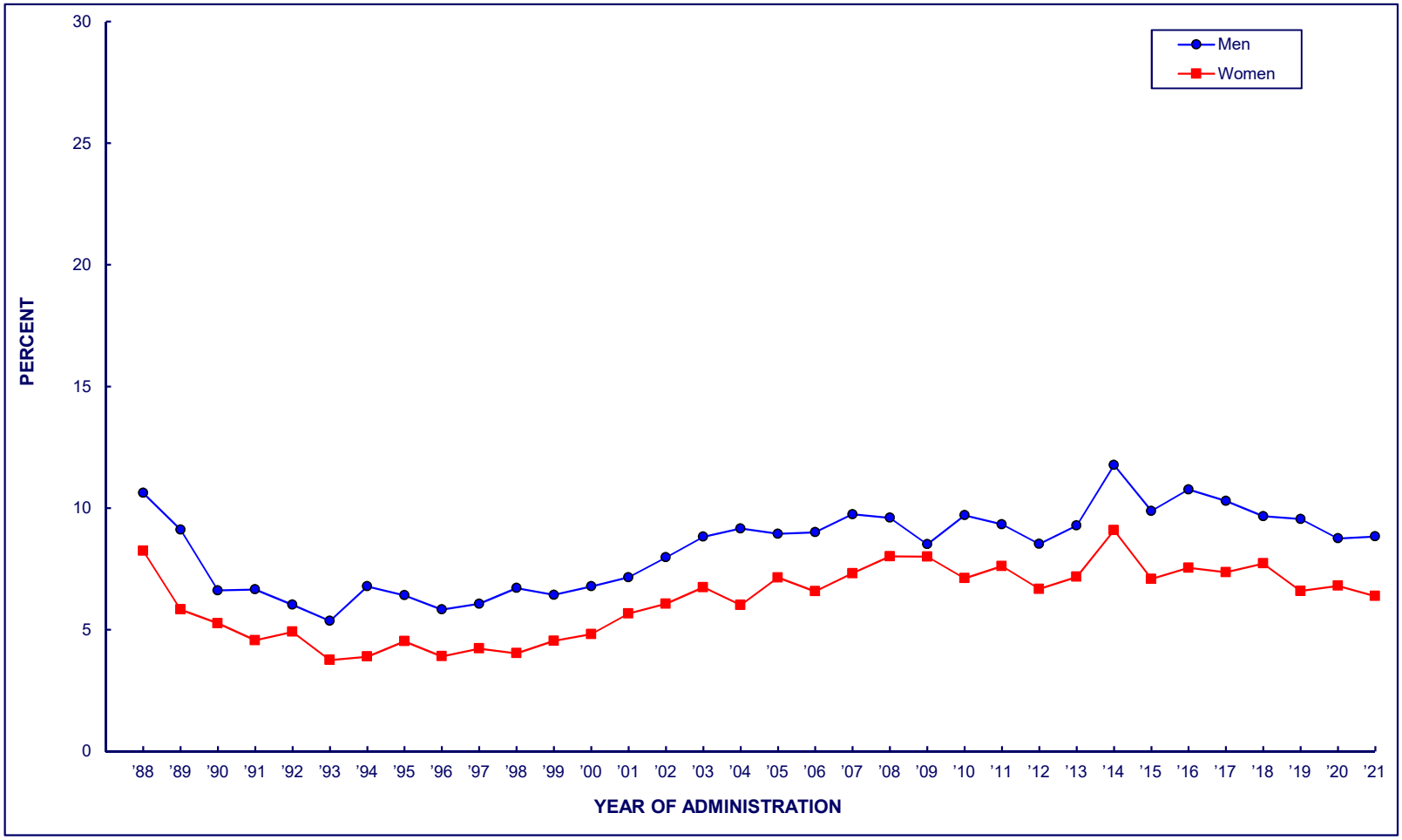
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	10.8	12.3	11.3	11.9	11.6	9.6	9.1	12.6	10.3	12.9	9.8	10.3	9.1	9.5	n.s.
Midwest	9.8	10.2	9.2	10.0	10.2	9.4	8.5	10.6	10.3	9.3	11.3	9.8	8.5	10.5	n.s.
South	11.8	9.9	11.4	10.9	11.3	10.8	11.1	11.8	11.0	8.7	10.3	10.7	12.0	11.1	n.s.
West	13.9	13.1	12.6	11.7	12.3	12.1	13.4	12.8	12.0	13.3	15.2	10.9	9.6	11.1	n.s.

UPDATED FIGURE 103
ANY DRUG OTHER THAN MARIJUANA
Trends in 12-Month Prevalence
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity



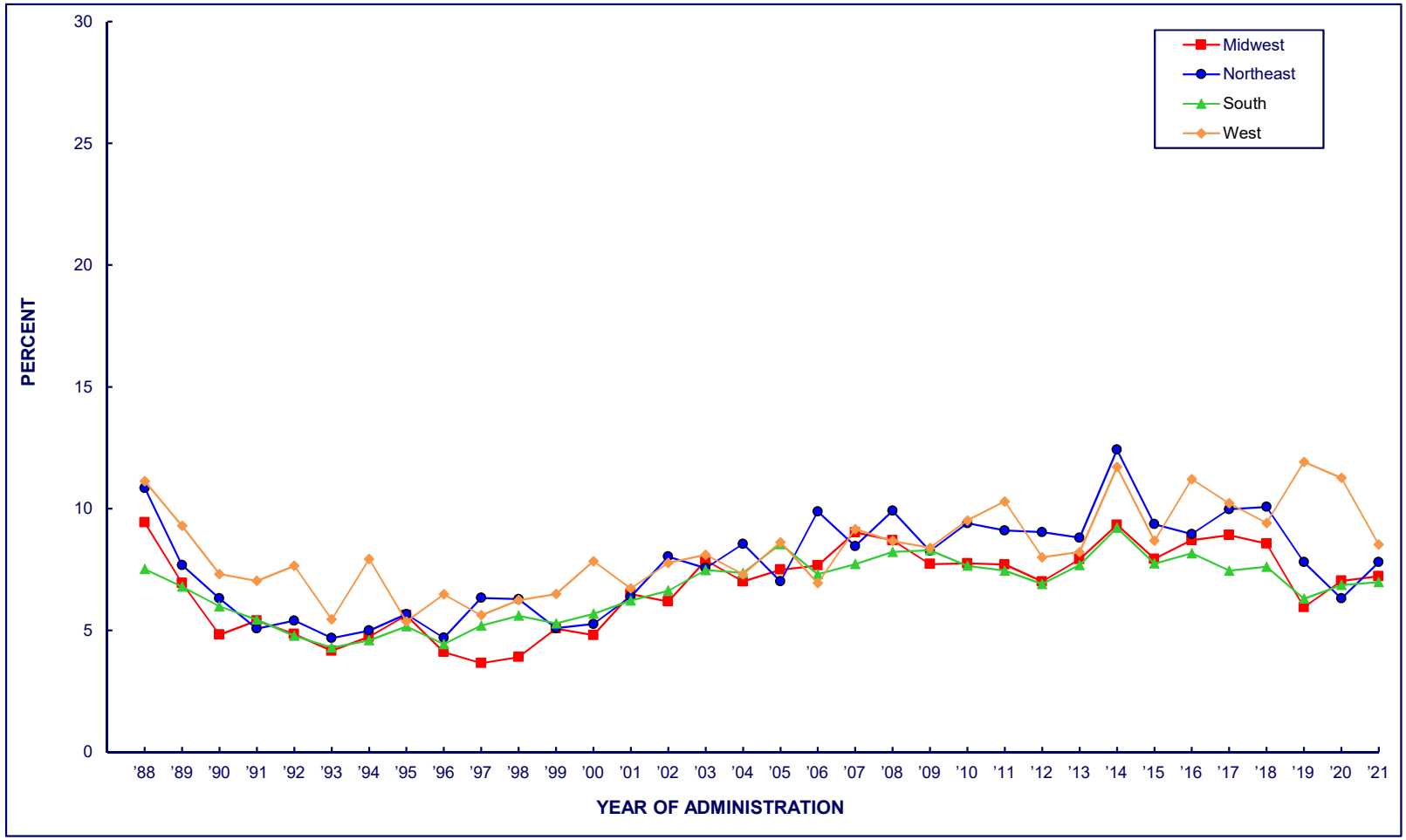
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	12.1	11.4	12.4	11.1	11.9	11.2	11.1	13.1	12.2	12.4	12.2	11.1	11.4	12.3	n.s.
Black	9.1	7.6	8.0	9.2	6.8	6.2	7.9	7.0	5.0	5.8	10.6	7.4	5.0	5.2	n.s.
Hispanic	11.7	15.4	10.2	11.4	13.3	12.7	15.3	13.1	10.9	9.6	14.2	9.3	8.0	6.9	n.s.

UPDATED FIGURE 104
ANY DRUG OTHER THAN MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Sex



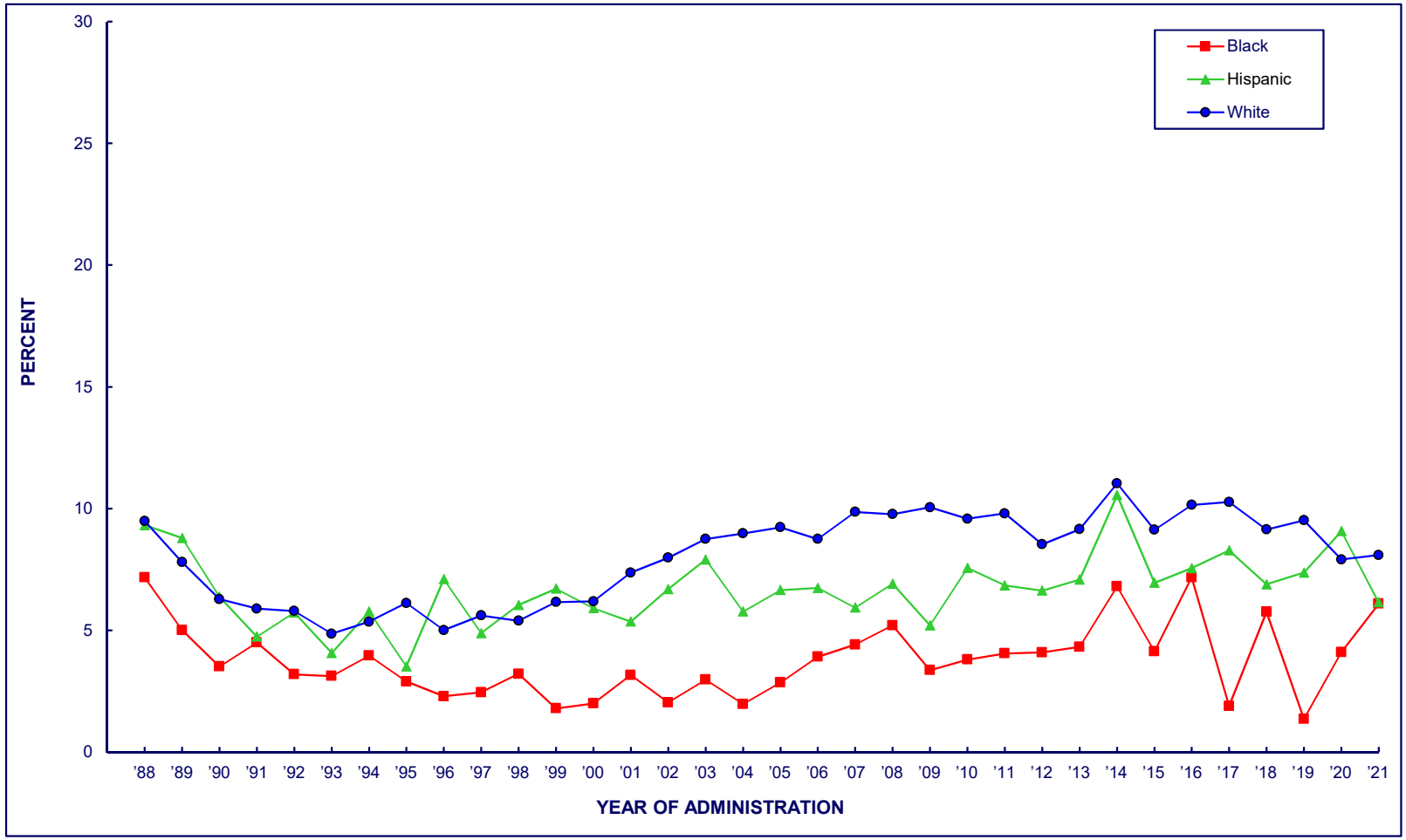
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	10.6	9.1	6.6	6.7	6.0	5.4	6.8	6.4	5.8	6.1	6.7	6.4	6.8	7.2	8.0	8.8	9.2	8.9	9.0	9.7	9.6	8.5	9.7	9.3	8.5	9.3	11.8	9.9	10.8	10.3	9.7	9.6	8.8	8.8	n.s.
Women	8.2	5.8	5.3	4.6	4.9	3.8	3.9	4.5	3.9	4.2	4.0	4.5	4.8	5.7	6.1	6.7	6.0	7.1	6.6	7.3	8.0	8.0	7.1	7.6	6.7	7.2	9.1	7.1	7.5	7.4	7.7	6.6	6.8	6.4	n.s.

UPDATED FIGURE 105
ANY DRUG OTHER THAN MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Geographic Region



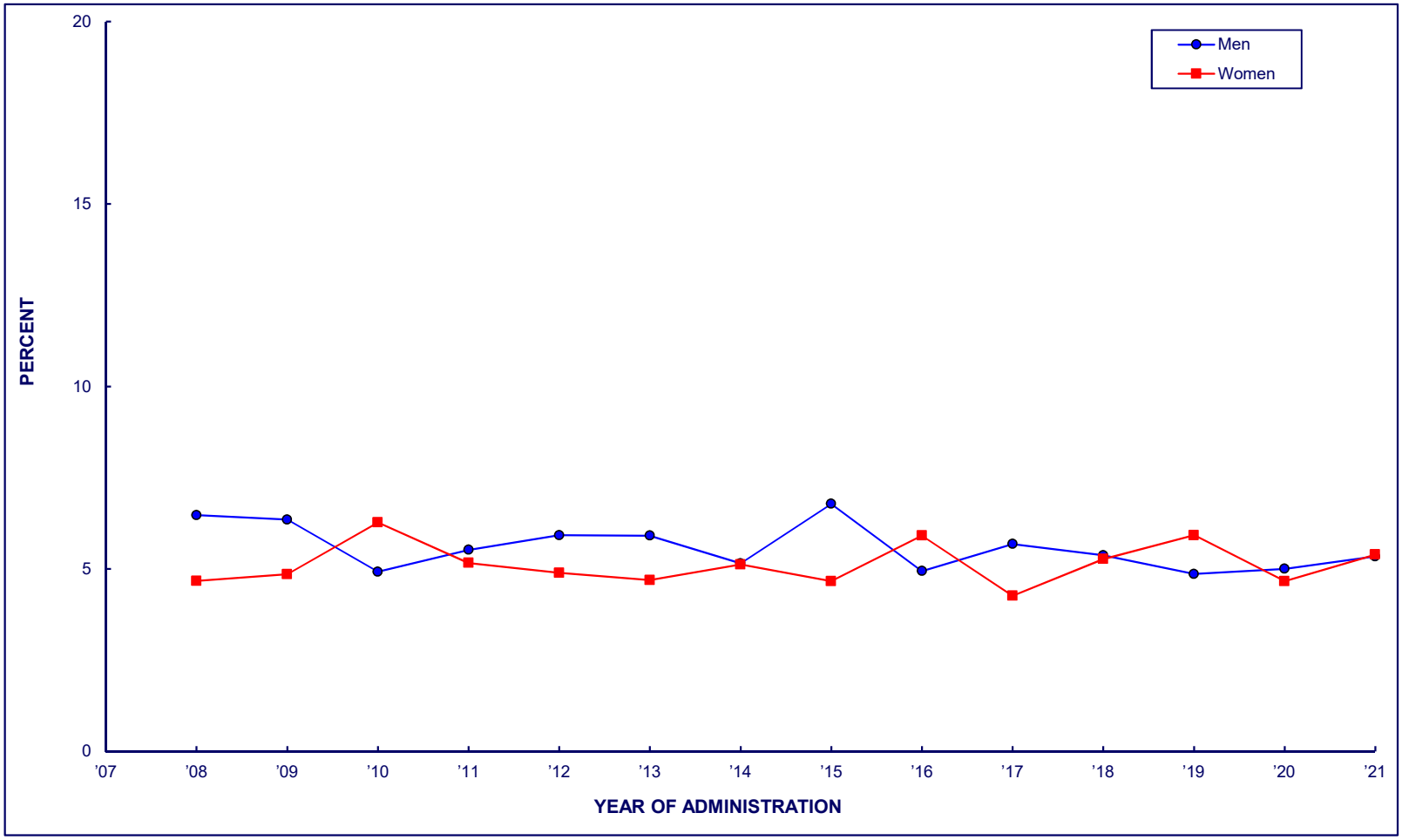
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	10.8	7.7	6.3	5.1	5.4	4.7	5.0	5.7	4.7	6.3	6.3	5.1	5.3	6.4	8.0	7.6	8.6	7.0	9.9	8.5	9.9	8.3	9.4	9.1	9.0	8.8	12.4	9.4	9.0	10.0	10.1	7.8	6.3	7.8	n.s.
Midwest	9.4	6.9	4.8	5.4	4.8	4.2	4.7	5.6	4.1	3.7	3.9	5.1	4.8	6.5	6.2	7.9	7.0	7.5	7.7	9.0	8.7	7.7	7.8	7.7	7.0	7.9	9.3	7.9	8.7	8.9	8.6	6.0	7.0	7.2	n.s.
South	7.5	6.8	6.0	5.4	4.8	4.3	4.6	5.2	4.4	5.2	5.6	5.3	5.7	6.2	6.6	7.5	7.4	8.5	7.3	7.7	8.2	8.3	7.7	7.5	6.9	7.7	9.2	7.7	8.2	7.5	7.6	6.3	6.9	7.0	n.s.
West	11.1	9.3	7.3	7.0	7.7	5.5	7.9	5.4	6.5	5.6	6.2	6.5	7.8	6.7	7.8	8.1	7.3	8.6	6.9	9.2	8.7	8.4	9.5	10.3	8.0	8.2	11.7	8.7	11.2	10.2	9.4	11.9	11.3	8.5	n.s.

UPDATED FIGURE 106
ANY DRUG OTHER THAN MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 19 through 30, by Race/Ethnicity



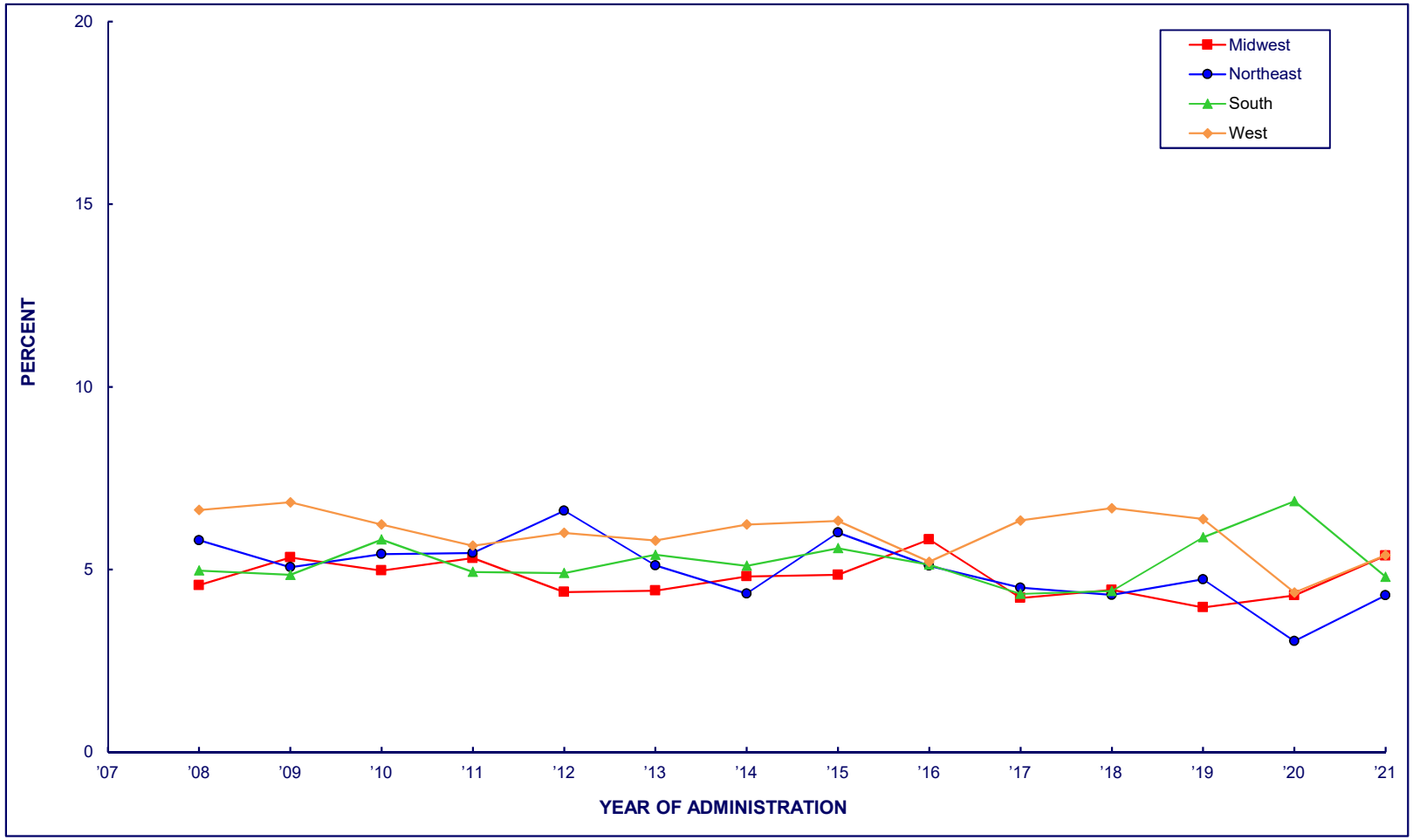
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	9.5	7.8	6.3	5.9	5.8	4.9	5.4	6.1	5.0	5.6	5.4	6.2	6.2	7.4	8.0	8.8	9.0	9.2	8.8	9.9	9.8	10.1	9.6	9.8	8.5	9.2	11.0	9.1	10.2	10.3	9.1	9.5	7.9	8.1	n.s.
Black	7.2	5.0	3.5	4.5	3.2	3.1	4.0	2.9	2.3	2.5	3.2	1.8	2.0	3.2	2.0	3.0	2.0	2.9	3.9	4.4	5.2	3.4	3.8	4.1	4.1	4.3	6.8	4.1	7.2	1.9	5.8	1.4	4.1	6.1	n.s.
Hispanic	9.3	8.8	6.4	4.7	5.7	4.1	5.8	3.5	7.1	4.9	6.0	6.7	5.9	5.4	6.7	7.9	5.8	6.7	6.7	5.9	6.9	5.2	7.6	6.8	6.6	7.1	10.6	7.0	7.6	8.3	6.9	7.4	9.1	6.2	n.s.

UPDATED FIGURE 107
ANY DRUG OTHER THAN MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Sex



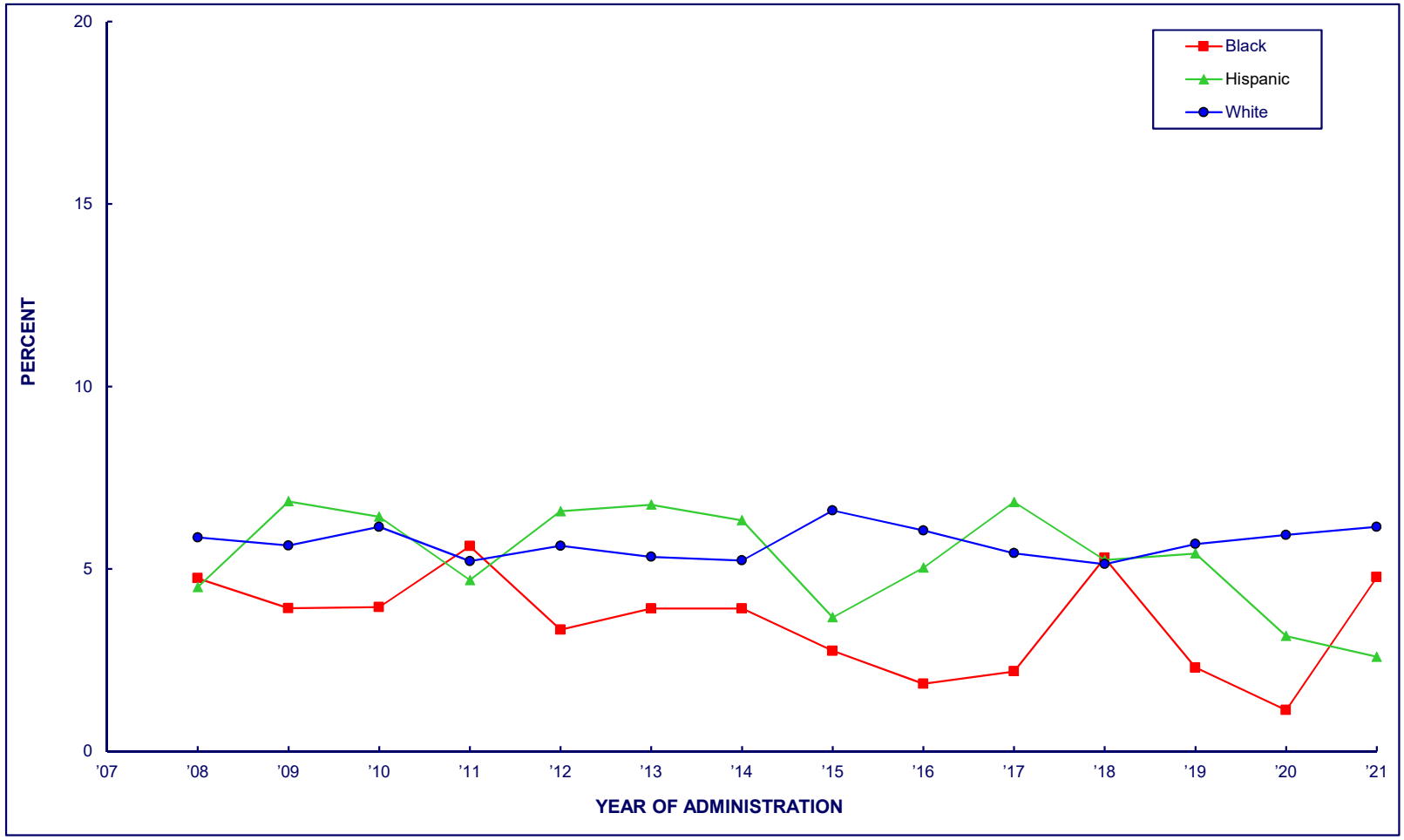
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Men	6.5	6.4	4.9	5.5	5.9	5.9	5.2	6.8	4.9	5.7	5.4	4.9	5.0	5.3	n.s.
Women	4.7	4.9	6.3	5.2	4.9	4.7	5.1	4.7	5.9	4.3	5.3	5.9	4.7	5.4	n.s.

UPDATED FIGURE 108
ANY DRUG OTHER THAN MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Geographic Region



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
Northeast	5.8	5.1	5.4	5.5	6.6	5.1	4.3	6.0	5.1	4.5	4.3	4.7	3.0	4.3	n.s.
Midwest	4.6	5.3	5.0	5.3	4.4	4.4	4.8	4.9	5.8	4.2	4.4	4.0	4.3	5.4	n.s.
South	5.0	4.9	5.8	4.9	4.9	5.4	5.1	5.6	5.1	4.3	4.4	5.9	6.9	4.8	n.s.
West	6.6	6.8	6.2	5.7	6.0	5.8	6.2	6.3	5.2	6.3	6.7	6.4	4.4	5.4	n.s.

UPDATED FIGURE 109
ANY DRUG OTHER THAN MARIJUANA
Trends in 30-Day Prevalence
among Respondents of Modal Ages 35 through 50, by Race/Ethnicity



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1-Year Change
White	5.9	5.6	6.2	5.2	5.6	5.3	5.2	6.6	6.1	5.4	5.1	5.7	5.9	6.2	n.s.
Black	4.7	3.9	4.0	5.6	3.3	3.9	3.9	2.8	1.9	2.2	5.3	2.3	1.1	4.8	n.s.
Hispanic	4.5	6.9	6.4	4.7	6.6	6.8	6.3	3.7	5.0	6.8	5.2	5.4	3.2	2.6	n.s.