



Wyoming's 2014 (FFY 2015) Synar Tobacco Compliance Inspection Report

WYSAC Technical Report No. CHES-1437

October 2014



Wyoming
Department
of Health

Commit to your health.

Wyoming's 2014 (FFY 2015) Synar Tobacco Compliance Inspection Report

By

Laran H. Despain, Ph.D., Assistant Research Scientist
Savannah Neuffer, M.A., Research Assistant

With the assistance of

Michael Dorssom, M.A., Associate Research Scientist

Wyoming Survey & Analysis Center

University of Wyoming • Dept. 3925
1000 East University Avenue • Laramie, WY 82071
wysac@uwyo.edu • <http://wysac.uwyo.edu>
(307) 766-2189 • Fax: (307) 766-2759

Under contract to

Wyoming Department of Health, Public Health Division
6101 Yellowstone Road, Suite 420
Cheyenne, WY 82002
(307) 777-6340

Citation for this document: WYSAC. (2014). *Wyoming's 2014 (FFY 2015) Synar tobacco compliance inspection report*, by L. H. Despain & S. Neuffer. (WYSAC Technical Report No. CHES-1437). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming.

Short reference: WYSAC (2014), *Wyoming's 2014 (FFY 2015) Synar report*.

© Wyoming Survey & Analysis Center, 2014.

Table of Contents

1.	Executive Summary.....	5
2.	Introduction.....	8
2.1.	Report Organization.....	8
3.	Inspection Study Methods.....	9
3.1.	Inspection Study Sampling Design.....	9
3.2.	Inspection Study Protocol.....	9
3.2.1.	Inspection Teams.....	9
3.2.2.	Inspection Protocol.....	10
3.2.3.	Recent Changes to Synar Protocols.....	11
3.3.	Inspected Stores.....	12
3.4.	Analysis.....	12
4.	Inspection Study Key Findings.....	13
4.1.	Retailer Violation Rate (RVR).....	13
4.2.	Additional Analyses.....	15
4.3.	Significant Associations with Violations.....	17
4.3.1.	Clerks Asking for Identification.....	17
4.3.2.	Strata.....	18
4.3.3.	Perceived Age of Youth Inspectors.....	19
4.3.4.	Estimated Clerk Age.....	20
4.3.5.	Outlet Type.....	21
5.	Conclusions.....	22
6.	References.....	23
7.	Appendices.....	24
Appendix A.	2014 (FFY 2015) Synar Inspection Study Script.....	24
Appendix B.	2014 (FFY 2015) Synar Inspection Study Detailed Results.....	26
Appendix C.	Detailed Calculations for the 2014 (FFY 2015) Synar Inspection Study.....	34
C.1.	Inspection Study Sampling Design.....	34
C.2.	RVR Calculations.....	37
C.3.	Analyses of Associations with Retailer Violations.....	38
Appendix D.	Information for CSAP's FFY 2015 (CY 2014) Annual Synar Report.....	41
Appendix E.	Synar Inspection Form 2014 (FFY 2015).....	49

List of Tables

Table 1. Weighted Retailer Violation Rates (RVRs), 2010–2014..... 13
Table 2. Synar Inspection Study Estimates and Sample Sizes..... 14
Table 3. Associations with Retailer Violation, by Tobacco Type 16

List of Figures

Figure 1. Association between Violations and Tobacco Type 15
Figure 2. Association between Violations and Clerks Asking for Identification..... 17
Figure 3. Association between Violations and Strata ¹² 18
Figure 4. Association between Violations and Perceived Age of Youth Inspectors 19
Figure 5. Association between Violations and Estimated Clerk Age..... 20
Figure 6. Association between Violations and Outlet Type 21

Wyoming's 2014 (FFY 2015) Synar Tobacco Compliance Inspection Report

1. Executive Summary

The Synar Amendment, enacted by the U.S. Congress in 1992, requires states to authorize and enforce laws prohibiting the sale and distribution of tobacco products to individuals under the age of 18 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2010). The SAMHSA regulation implementing the Synar Amendment requires states to conduct annual, random, and unannounced inspections to ensure compliance with state tobacco sales laws.

Since 2003, the Wyoming Department of Health has contracted with the Wyoming Survey & Analysis Center (WYSAC) at the University of Wyoming to conduct the Synar compliance inspections. For the Synar Inspection Study, WYSAC recruits minor buyers (16- and 17-year-old youth) each summer to conduct these inspections, under adult supervision, on a stratified random sample of tobacco retail stores in Wyoming. **The overall weighted retailer violation rate (RVR) in 2014 (FFY 2015) was 6.0%, below the federally stipulated maximum of 20.0%.** This RVR is similar to most RVRs since chewing tobacco was first included in the inspections in 2010. In general, the Wyoming RVR has been close to the national RVR (Table ES-1). The exception was in 2012 (FFY 2013) when a single Synar trip had an exceptionally high RVR, influencing the state RVR.

Table ES-1. Weighted Retailer Violation Rates (RVRs), 2010–2014

Synar Inspection Study year	RVR (in %)	95%, one-sided confidence interval (in %)	95%, two-sided confidence interval (in %)	National Weighted Average RVR (in %)
2010 (FFY 2011)*	7.3	0.0–9.0	5.3–9.3	8.5
2011 (FFY 2012)*	8.6	0.0–11.1	5.6–11.6	9.1
2012 (FFY 2013)	14.4	0.0–16.9	11.8–16.9	9.6
2013 (FFY 2014)	7.6	0.0–8.5	6.6–8.7	Unavailable
2014 (FFY 2015)	6.0	0.0–7.9	3.8–8.2	Unavailable

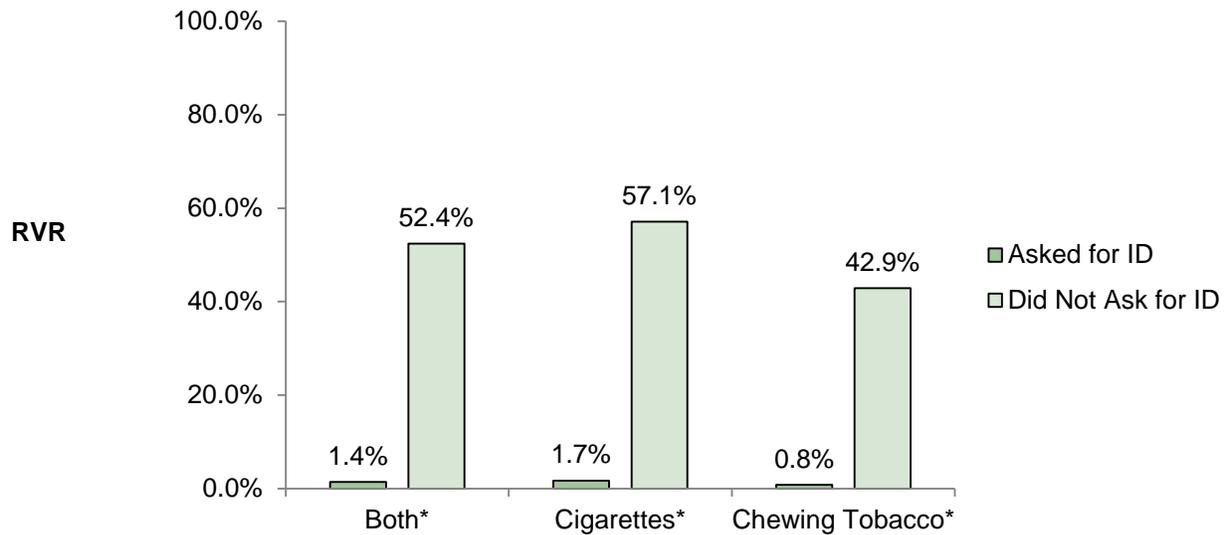
* Youth inspectors included 15-year-olds.

Sources: SAMHSA, 2014; WYSAC, 2010, 2011, 2012, 2013.

The results of the 2014 (FFY 2015) Inspection Study identify a few opportunities for intervention. First, training efforts could include training clerks to ask all customers for identification before selling them tobacco products. These trainings may have maximum impact by focusing on clerks working in rural areas. In addition to training clerks, it may be beneficial to work with outlet owners and managers to implement policies that require clerks to ask more customers for their identification. Such policies could complement the federal regulation to require all customers 26 years of age or younger to provide photo identification before purchasing tobacco products (Tobacco Control Act; Public Law 111-31). Third, increased law enforcement action in rural areas may reduce the RVR for those outlets, where violations are more likely to occur. Finally, educational efforts regarding placing tobacco out of customers' reach may benefit the Synar RVR and compliance with state law and federal regulations about the placement of tobacco products.

As in all Synar results since 2007 (WYSAC, 2013), clerks who asked the youth inspectors for identification (which they could not provide) were much less likely to violate than clerks who did not ask for identification (Figure ES-1). Only four clerks (three out of 169 cigarette inspections, one out of 71 chewing tobacco inspections) asked for identification and were found in violation.¹

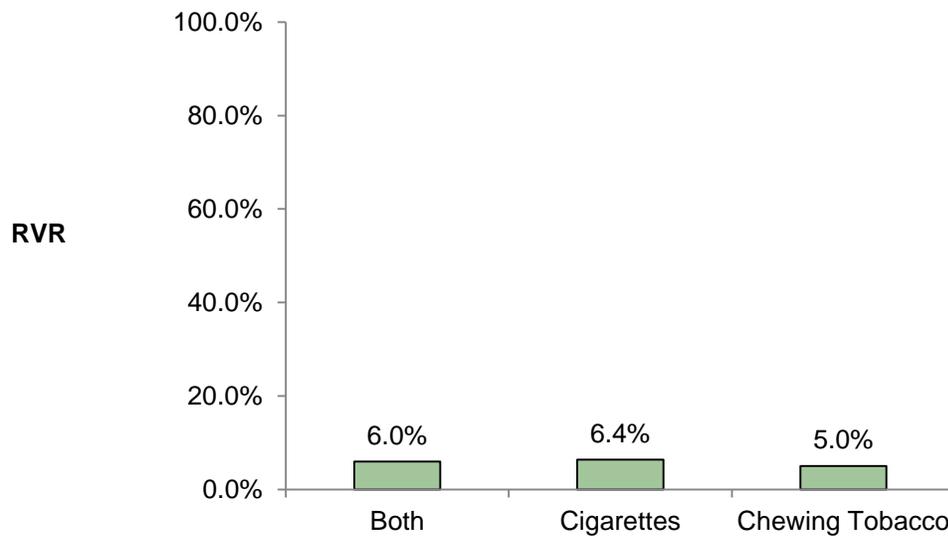
Figure ES-1. Association between Clerks Asking for Identification and Violations



*Indicates statistically significant difference within tobacco type.

Although the RVRs for cigarettes and chewing tobacco were not statistically significantly different (Figure ES-2), WYSAC analyzed results overall and for each tobacco type individually.

Figure ES-2. Violations by Tobacco Type



¹ Two data forms were missing the data about whether clerks asked for identification.

Overall and for cigarette inspections, inspections conducted in rural outlets had a higher RVR than inspections completed in urban outlets. The difference in RVR between rural and urban strata for chewing tobacco inspections is slightly smaller than the differences between strata for all inspections and for cigarette inspections. However, the difference for chewing tobacco inspections is not statistically significant, likely because of the relatively small number of chewing tobacco inspections. For each inspection type, youth with perceived ages (based on raters' estimates from photographs of the youth inspectors) younger than 18 had a higher RVR than youth with perceived ages of 18 or older. This counterintuitive result for perceived age could be driven by behavioral or individual factors of the youth inspectors or unknown factors in the regions where the younger-looking inspectors worked. RVRs demonstrating these relationships and additional results by tobacco type are detailed in Table ES-2.

Table ES-2. Results by Tobacco Type

Variable	Condition	Overall RVR (%)	Cigarette RVR (%)	Chewing tobacco RVR (%)
Strata	Urban	4.0	4.4	No statistically significant relationship†
	Rural	10.6*	*10.8	
Perceived age of youth inspector	Younger than 18	13.5*	13.0*	14.3*
	18 or older	3.9	4.7	1.9
Estimated clerk age	Younger than 25	13.0*	17.7*	No statistically significant relationship†
	25 and older	4.5	3.7	
Store type	Convenience store	1.9	No statistically significant relationship†	2.0
	Other outlet type	9.9*		11.9*

* High RVR condition.

† RVRs are included in the body of the report, Section 4.3.

2. Introduction

In 1992, the United States Congress enacted the Alcohol, Drug Abuse, and Mental Health Administration Reorganization Act, which includes an amendment (section 1926) aimed at decreasing youth access to tobacco. This amendment, named for its sponsor, former Congressman Mike Synar (Democrat, Oklahoma), requires states to adopt and enforce *state* laws prohibiting the sale of tobacco to youth under the age of 18. To be in compliance, states must also conduct annual, random, and unannounced inspections to ensure compliance with the state law and develop a strategy for achieving a retailer violation rate (RVR) of less than 20.0% (Substance Abuse and Mental Health Services Administration [SAMHSA], 2010). Since 2003, the Wyoming Department of Health (WDH) has contracted with the Wyoming Survey & Analysis Center (WYSAC) at the University of Wyoming to conduct Wyoming's annual Synar Inspection Study to assess tobacco retailers' compliance with the law.

The Family Smoking Prevention and Tobacco Control Act and Federal Retirement Reform (Tobacco Control Act; Public Law 111-31) was signed into law on June 22, 2009, giving the U.S. Food and Drug Administration (FDA) authority over the marketing, sale, and distribution of tobacco products. This Act includes the section Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco to Protect Children and Adolescents. These *federal* regulations were designed to reduce tobacco use by children and adolescents by placing restrictions on the marketing, sale, and distribution of tobacco products. For example, the Act requires tobacco retailers to verify that purchasers of tobacco products are 18 years of age or older with photo identification of anyone 26 years of age or younger. The Act also prohibits self-service displays and vending machines in areas accessible to youth, including when they are accompanied by an adult (FDA, 2010b). ISN Corp is contracted to conduct the FDA inspections in Wyoming (E. Baum, personal communication July 9, 2014). As of the writing of this report, insufficient FDA inspection results are publicly available for comparison to Synar findings.

2.1. Report Organization

This document contains seven sections. Sections 1 and 2 provide the Executive Summary and Introduction, respectively. Section 3 describes the data collection and analysis methods. Section 4 provides key findings of the 2014 (FFY 2015) Synar Inspection Study. Section 5 provides conclusions and gives recommendations based on the findings of the 2014 Synar Inspection Study. Section 6 contains a list of references cited in the report. Section 7 contains five (A-E) Appendices. Appendix A contains the script used to train youth inspectors. Appendix B displays the results for each question on the 2014 (FFY 2015) Synar Inspection Form. Appendix C includes detailed calculations for the inspection sampling design, the RVR, and the analyses of associations between violations and other factors. Appendix D contains information for CSAP's FFY 2015 Annual Synar Report.² Appendix E is the data collection form used for the 2014 (FFY 2015) Synar Inspection Study.

² Conducted in calendar year 2014.

3. Inspection Study Methods

This section includes descriptions of the sampling design, protocol, and analyses for the 2014 Synar Inspection Study.

3.1. Inspection Study Sampling Design

At the end of the 2013 (FFY 2014) Synar Inspection Study, WYSAC removed ineligible and closed stores from the tobacco retailer list. In the early summer of 2014, WYSAC requested updates to this revised list from the county-based community prevention professionals (CPPs) working for the Prevention Management Organization of Wyoming (PMO). WYSAC used this updated list of 519 stores for the 2014 (FFY 2015) tobacco retailer list frame for the Inspection Study.

As in previous years, WYSAC categorized each tobacco retail store into one of two strata based on its location in either an urban town or a rural town. WYSAC defined *urban* towns as having a population of 3,000 or more and *rural* towns as having a population less than 3,000. The list frame had 358 stores in the urban stratum and 161 stores in the rural stratum. WYSAC used the Synar Survey Estimation System (SSES), Version 5.1, to determine the sample size for each stratum. (See Appendix C.1 for more information about the sampling calculations and procedure.) WYSAC used a 20% safety margin for noncompletion, as recommended by SAMHSA (2011a). SSES yielded a planned sample size of 114 for the urban stratum and a planned sample size of 158 for the rural stratum, resulting in a total planned sample of 272 stores.³ WYSAC drew a random sample for each stratum using IBM SPSS Statistics Version 21.

3.2. Inspection Study Protocol

The 2014 (FFY 2015) Synar inspections began on July 18 and ended on September 20. Nine teams completed the inspections. The teams consisted of one adult supervisor/driver and two youth inspectors (one male and one female). Females completed 47.9% of the inspections (males completed 52.1%). WYSAC recruited 17 youth inspectors:⁴ eight 16-year-olds (who completed 47.1% of the inspections) and nine 17-year-olds (who completed 52.9% of the inspections).

3.2.1. Inspection Teams

As required by the Wyoming Attorney General, a local law enforcement officer (from county sheriff's offices and city police departments) was available for every inspection. Law enforcement officers did not accompany the youth inspectors into the stores. The primary role of the law enforcement officers was to observe the inspections; they did not issue any citations for noncompliance. WYSAC collaborated with the Wyoming Association of Sheriffs and Chiefs of Police (WASCOP) to identify and coordinate with local officers and deputies who had jurisdiction over the areas in which the teams conducted inspections.

WYSAC recruited two adults in the Laramie, Wyoming, area to be the adult supervisors. Prior to hiring the adult supervisors, WYSAC conducted criminal background checks and reviewed the

³ Because the sample size is dependent on the violation rate for the previous year in each strata and the 2013 (FFY 2014) 3.8% RVR for the urban strata was low, compared to 14.1% in 2012, this is substantially smaller than the sample size in 2013.

⁴ One female inspector became unavailable during an inspection trip. WYSAC hired a replacement, resulting in an odd number of youth inspectors.

driving records of applicants. WYSAC trained all adult supervisors in the Synar Inspection Study protocol. The adult supervisors were then responsible for training the youth inspectors.

In previous years, WYSAC recruited youth inspectors primarily by contacting youth inspectors from the previous year and rehiring them and/or seeking referrals. In 2012 (FFY 2013), WYSAC encountered difficulty recruiting youth with this snowball method. In 2013 and 2014, WYSAC recruited some youth inspectors by asking previous inspectors to participate again (if they were still in the eligible age range) and/or to provide referrals (especially if they had turned 18 or were no longer interested in participating). Additionally, WYSAC partnered with other organizations to identify youth contacts across the state. WYSAC partnered with the Wyoming Area Health Education Center (AHEC) summer camp, with the University of Wyoming summer swim camp, with Wyoming 4-H, and with some of the CPPs to recruit potential youth inspectors. When needed, WYSAC continued to use the snowball method by asking these youth for referrals. WYSAC first contacted potential youth inspectors via telephone to describe the project and speak with one of their parents or guardians. Once the youth inspector and the parent/guardian expressed interest, WYSAC sent them a written description of the project, a parent/guardian permission form, and hiring forms. WYSAC required completed parent permission forms before any youth inspectors could participate.

3.2.2. Inspection Protocol

All youth inspectors resided within the area they inspected, thereby reducing travel time and eliminating the need for overnight stays by the youth inspectors. To ensure consistency across inspections, all youth inspectors followed a written script (see Appendix A) and role-played with the adult supervisors until they mastered the buying procedure. Adult supervisors also trained youth inspectors to observe and describe certain aspects of the stores and clerks (e.g., the location of tobacco products, clerks' stated price of tobacco products, the presence of signs about not selling tobacco products to minors, the approximate age of the clerks, and the gender of the clerks).

Upon arriving at a store, one youth inspector (alternating between males and females) entered the store and, following the buyer script, attempted to purchase tobacco. During most cigarette inspections, youth inspectors attempted to purchase Marlboro Gold cigarettes. When those were unavailable, females attempted to purchase Camel Blues, and males attempted to purchase Camels. Because of WDH's interest in variables associated with violation rates for chewing tobacco, one out of every three inspections was for chewing tobacco. During chewing tobacco inspections, the youth inspectors (regardless of gender) asked for Skoal Wintergreen long cut or Copenhagen Wintergreen long cut (when Skoal Wintergreen was unavailable).

When youth inspectors knew anyone in the store (including any employee or customer), they left the store without attempting a purchase and returned to the car. If the second youth inspector did not know anyone in the store, he or she would then enter the store and attempt the buy. If both youth inspectors knew someone in the store, the team returned later to attempt the buy, schedule permitting.

Survey protocol required youth inspectors to leave their identification in the car with the adult supervisors or to leave it at home. This strategy allowed youth inspectors to answer honestly if a clerk asked for identification, saying, "I don't have it on me." Similarly, if asked their age, youth inspectors were trained to answer honestly. The youth inspectors each carried approximately \$1 in cash, so if a clerk was willing to sell the tobacco, they could not produce enough money to pay for it.

In accordance with protocol, no purchase attempts were consummated. The inspection was completed either by a clerk's refusal to sell or by a violation indicated by the youth inspector ending the transaction (e.g., when the clerk stated the price of the product and waited for payment).

Immediately following each inspection, youth inspectors returned to the vehicle and verbally reported the details of the inspection to the adult supervisors, who then entered this information on a data form (see Appendix E). WYSAC collected the forms at the end of each inspection trip. The information reported on the form includes the following:

- Youth inspector name, age, and gender;
- Store name and address (with corrections for the list frame as needed);
- Inspection date and time of day (morning or afternoon);
- Completion status of the inspection (e.g., ineligible store, eligible store that was not inspected, completed inspection);
- Clerk gender and estimated age;
- Type and brand of tobacco product requested;
- Location of tobacco products in the store (i.e., accessible or not for cigarettes and for chewing tobacco, regardless of the tobacco type targeted during the inspection);
- Outcome of the buy attempt (i.e., violation, nonviolation, noncompletion);
- Clerks' stated price for the tobacco products (primarily for inspections that ended in a violation), and
- The presence of any visible youth access messages (e.g., "No Sales to Minors").

Adult supervisors photographed each youth inspector on their first day of inspections. When the inspections were complete, WYSAC asked 42 raters unfamiliar with the Synar project to estimate the age of each youth inspector. Two respondents reported knowing a youth inspector, so WYSAC eliminated those raters' estimates for those youth. Two estimates were illegible, and WYSAC also eliminated those estimates. WYSAC then calculated the mean for the usable ratings for each youth to determine the *perceived age* for each inspector. These ratings allowed WYSAC to statistically test for whether and under what conditions the youth inspectors who *looked* 18 or older made more successful purchase attempts (i.e., more violations). The lowest perceived age was 17.1, and the highest perceived age was 21.3. Of the 17 youth inspectors, 14 had perceived ages of 18 or older, and three had perceived ages younger than 18. Because every youth inspector was and looked younger than 26, FDA regulations (FDA, 2010b) indicate that every youth inspector should have been asked for identification on every inspection.

3.2.3. Recent Changes to Synar Protocols

In 2010, the first year to include chewing tobacco inspections, youth inspectors were not instructed to ask for a specific flavor or cut of tobacco. WYSAC added flavors and cut to the 2011 protocol to improve the realism of purchase attempts. WYSAC used data on popular brands, flavors, and cuts of tobacco (University of Medicine and Dentistry of New Jersey [UMNDJ]-School of Public Health, 2006) to choose the brands, flavor, and cut for the script. Also in 2011, WYSAC altered the script, which had previously had youth inspectors ask for Marlboro or Camel *Lights*, to the replacement brands (Marlboro *Golds* and Camel *Blues*) introduced to the marketplace in response to the Family Smoking Prevention and Control Act prohibiting the use of the term light in branding cigarettes (FDA 2010a). In 2012, WYSAC increased the frequency of the inspections for chewing tobacco from one out of every five inspections (as it was in 2010 and 2011) to one out of every three

inspections to allow for analyses of factors associated with violations during chewing tobacco inspections. Until 2012, WYSAC employed 15-year-old youth inspectors in addition to 16- and 17-year-old youth inspectors.

3.3. Inspected Stores

Of the 272 stores in the sample, 25 were *ineligible*. These stores were ineligible for the following reasons: out of business (3), did not sell tobacco products (10), inaccessible by youth (6), temporary closure (2), could not be located (3), and duplicated in the sample frame (1). Thus, the total number of *eligible* stores was 247. Another five stores were coded as eligible but *not inspected*. These stores were coded as not inspected for the following reasons: both youth inspectors knew salesperson (1) and other (4): no support from law enforcement (3), and missing data for inspection outcome (1). WYSAC inspected and used data for 242 stores, or 98.0% of the eligible stores in the sample. Of these, 101 inspected stores were in the urban stratum and 141 inspected stores were in the rural stratum.

3.4. Analysis

To calculate the weighted RVR and most of the descriptive statistics reported in Sections 3.2 and 3.3 (above), WYSAC used SSES Version 5.1, an add-in for Microsoft Excel. SAMHSA distributes and recommends use of this software to facilitate reporting of analyses by each state. To facilitate identification of SSES output tables, WYSAC copied the relevant output tables from SSES directly into this document, preserving the formatting as generated by SSES (e.g., purple shading).

WYSAC conducted additional analyses in IBM SPSS Statistics version 22.⁵ WYSAC conducted crosstab analyses to identify variables associated with violations. Depending on the specific analysis, WYSAC used Pearson's chi-squared test or Fisher's exact test to identify statistically significant associations. Fisher's exact test is an alternative to Pearson's chi-squared test. It provides more reliable results than Pearson's chi-squared in analyses when the crosstabs only has a few observations in some of the conditions. As a general rule, Fisher's exact tests are preferred when more than 25% of conditions (e.g., clerks refusing to sell chewing tobacco when they did not ask for identification) have fewer than five expected observations or when any condition has zero observations.⁶ In Appendix C.3, WYSAC reports which test WYSAC used for each reported association. In the report, WYSAC reports significant differences when $p < .05$, suggesting that one can say with 95% confidence that the differences are not due to chance. In general, WYSAC accounts for the stratified sample by reporting weighted data (consistent with SSES). However, WYSAC occasionally reports unweighted counts for clarity (such as in Appendix B).

In previous years (2009, 2010), WYSAC created a logistic regression model to determine the most influential factors in predicting whether a clerk would attempt to sell tobacco products to minors, when statistically controlling for the other predictors. In those years, the primary predictor in models of violations was whether clerks asked youth inspectors for identification. In 2011 (FFY2012), the relationship between clerks asking for identification and being willing to sell the tobacco product was nearly perfect: only one clerk who asked for identification was willing to sell. Therefore, WYSAC used asking for identification as a proxy for violation in developing a logistic regression

⁵ Version 22 became available under a University of Wyoming license between the sample draw and the analysis.

⁶ Because of the unique characteristics of Fisher's exact test, two tailed tests (as were used with Pearson's chi squared) tend to be overly conservative (Agresti, 2007 pp. 45–48). Therefore, WYSAC used one-tailed Fisher's exact tests.

model (WYSAC, 2011). Since 2012 (FFY 2013), WYSAC has not been able to perform a similar logistic regression. Although asking for identification and violations have been strongly related, they have not been so strongly related that WYSAC could treat asking for identification as a proxy for violation (as in 2011). When WYSAC attempted to model predictors of violations, asking for identification (or not) was a necessary variable (because of the strength of the association) but interfered with developing a model that would be more informative than the results from crosstab analyses. In effect, the variable about asking for identification have masked the effects of other variables in the model or otherwise interfered with developing a good model. Given these limitations, WYSAC does not provide results from a logistic regression analysis for this report but remains open to conducting such analyses for future inspections.

4. Inspection Study Key Findings

Because percentages reported in this section demonstrate RVRs within groups, they do not total 100% within or across subsections. **RVRs and other percentages differ slightly between this section and Appendix B because of missing data in follow-up analyses (e.g., if a youth inspector did not report whether the clerk asked for identification for a specific inspection) and the effects of weighting.**

4.1. Retailer Violation Rate (RVR)

The RVR is the weighted percentage of stores that attempted to sell to a youth inspector. Consistent with SAMHSA (2010, 2011b) guidelines, WYSAC weighted the data to account for different sampling ratios (i.e., sampling different percentages of the urban and rural stores) and different completion rates for the two strata (see Appendix C.2 for the RVR formula and detailed calculations). In 2014 (FFY 2015), the overall (both tobacco types combined) weighted RVR was 6.0%. When using two-sided confidence intervals, the 2014 (FFY 2015) was significantly lower than in 2012 (FFY 2013; Table 1). Because chewing tobacco inspections did not occur before 2010, RVRs from 2010 and later should not be directly compared to nor combined with previous RVRs. Note that the 2010 (FFY 2011) and 2011 (FFY 2012) inspections included 15-year-old youth inspectors. The high RVR in 2012 was heavily influenced by the results of a single inspection trip (WYSAC, 2012). Table 1 also presents the available national weighted Synar RVRs for comparison.

Table 1. Weighted Retailer Violation Rates (RVRs), 2010–2014

Synar Inspection Study year	RVR (in %)	95%, one-sided confidence interval of RVR (in %)	95%, two-sided confidence interval of RVR (in %)	National Weighted Average RVR (in %)
2010 (FFY 2011)*	7.3	0.0–9.0	5.3–9.3	8.5
2011 (FFY 2012)*	8.6	0.0–11.1	5.6–11.6	9.1
2012 (FFY 2013)	14.4	0.0–16.9	11.8–16.9	9.6
2013 (FFY 2014)	7.6	0.0–8.5	6.6–8.7	Unavailable
2014 (FFY 2015)	6.0	0.0–7.9	3.8–8.2	Unavailable

* Youth inspectors included 15-year-olds.

Sources: SAMHSA, 2014; WYSAC, 2010, 2011, 2012, 2013.

SSES provided a summary table of Synar Inspection Study estimates and sample sizes (Table 2). The standard error was $\pm 1.1\%$, which meets the SAMHSA precision requirement of less than $\pm 3.0\%$. Because WYSAC drew a sample of stores and did not inspect *all* stores in Wyoming, SSES calculated 95% confidence intervals (to account for the possibility of sampling error). Therefore, as shown in Table 2, WYSAC is 95% confident that the “true” value of the RVR is between 0% and 7.9%.⁷ Even when accounting for the more conservative two-sided confidence interval, the likely maximum RVR (8.2%) is still below the 20% noncompliance standard set by SAMHSA (see SAMHSA, 2011b, for details about SSES).

Table 2. Synar Inspection Study Estimates and Sample Sizes

CSAP-SYNAR REPORT	
State	WY
Federal Fiscal Year (FFY)	2015
Date	9/26/2014 15:31
Data	final SSES data file.xlsx
Analysis Option	Stratified SRS with FPC
Estimates	
Unweighted Retailer Violation Rate	7.9%
Weighted Retailer Violation Rate	6.0%
Standard Error	1.1%
Is SAMHSA Precision Requirement met?	YES
Right-sided 95% Confidence Interval	[0.0%, 7.9%]
Two-sided 95% Confidence Interval	[3.8%, 8.2%]
Design Effect	0.8
Accuracy Rate (unweighted)	90.8%
Accuracy Rate (weighted)	90.6%
Completion Rate (unweighted)	98.0%
Sample Size for Current Year	
Effective Sample Size	203
Target (Minimum) Sample Size	203
Original Sample Size	272
Eligible Sample Size	247
Final Sample Size	242
Overall Sampling Rate	51.4%

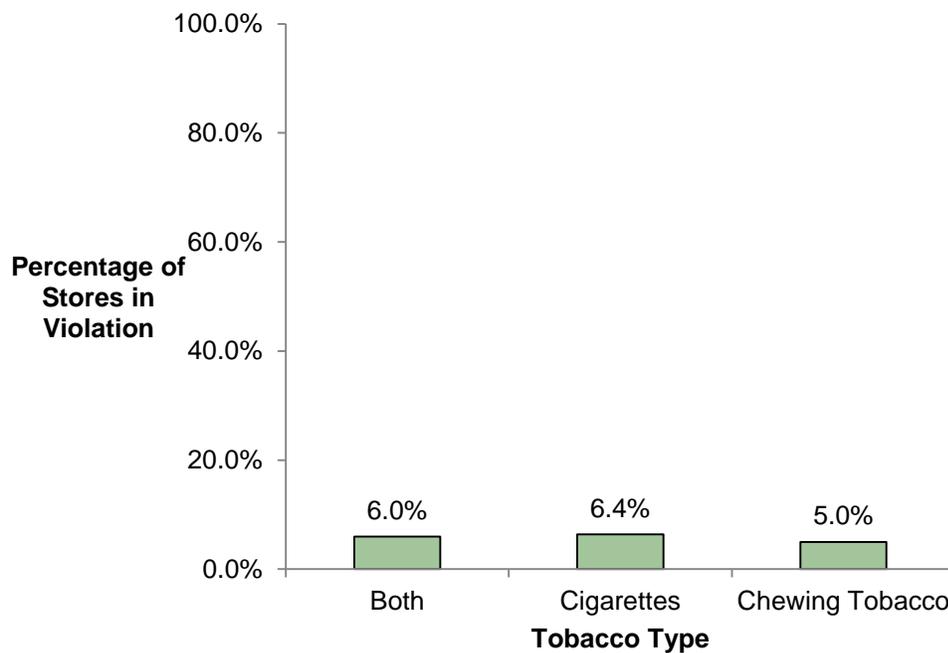
⁷ WYSAC used a one-sided confidence interval to determine the sample size and uses the same in the body of this report. WYSAC also provides two-sided confidence intervals in Table 1.

4.2. Additional Analyses

WYSAC used SPSS Statistics Version 22 to identify variables associated with retailer violations, using the customary criteria of $p < .05$ to identify statistically significant differences. WYSAC weighted the data by strata with a noncompletion adjustment factor, as suggested by SAMHSA (2010) and as programmed in SSES (SAMHSA, 2011b; details are provided in Appendix C.3).

Although the RVRs for cigarettes and chewing tobacco were not statistically significantly different, Wyoming's high prevalence of chewing tobacco use among youth, compared to the national prevalence rate, (Youth Risk Behavior Surveillance System [YRBSS], 2013) makes it important to analyze results for both types of tobacco (Figure 1).

Figure 1. Violations by Tobacco Type



Analyses also did not indicate statistically significant associations between violations and

- Clerk gender,
- Adult supervisor,
- Youth sex,
- Youth age,
- The presence/absence of signs regarding youth access to tobacco products,⁸ and
- Whether clerks asked the inspectors for their age,⁹

Therefore, WYSAC does not present detailed results for those variables in the body of this report.¹⁰

⁸ Fifteen of 241 stores with valid data (one data form was missing the response to the item about signs regarding youth access to tobacco products) did not have these signs.

⁹ Sixteen of 242 clerks at stores with valid data asked the youth inspectors for their age.

¹⁰ Results are in Appendix C.3.

A summary of the other statistical results follows in Table 3. A discussion of the statistically significant associations follows in Section 4.3.

Table 3. Associations with Retailer Violation, by Tobacco Type

Variable	Condition	Overall RVR (%)	Cigarette RVR (%)	Chewing tobacco RVR (%)
Strata	Urban	4.0	4.4	No statistically significant relationship
	Rural	10.6*	*10.8	
Perceived age of youth inspector	Younger than 18	13.5*	13.0*	14.3*
	18 or older	3.9	4.7	1.9
Estimated clerk age	Younger than 25	13.0*	17.7*	No statistically significant relationship
	25 and older	4.5	3.7	
Store type	Convenience store	1.9	No statistically significant relationship	2.0
	Other outlet type	9.9*		11.9*

* High RVR condition.

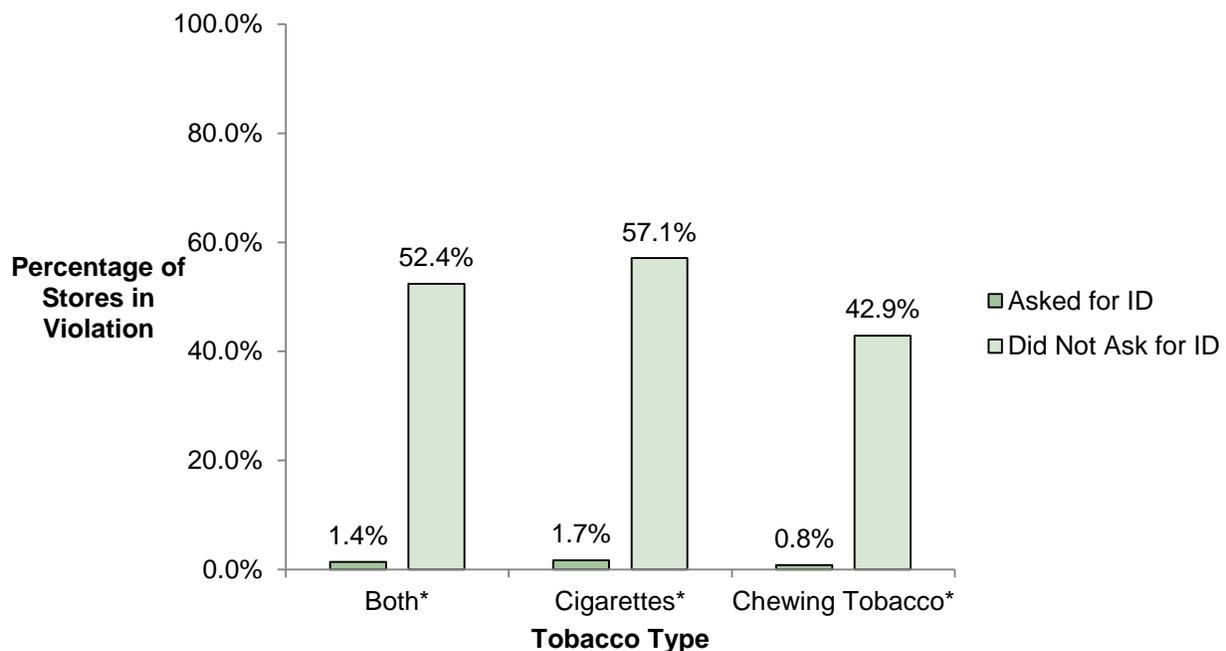
4.3. Significant Associations with Violations

In this section, WYSAC reports detailed results for key variables associated with clerks' willingness to sell tobacco to minors.

4.3.1. Clerks Asking for Identification

Overall and for each type of tobacco, clerks who asked youth inspectors for identification were much less likely to violate than clerks who did not ask for identification (Figure 2). For each category of inspection (tobacco types combined, cigarettes, and chewing tobacco), the odds of clerks being willing to sell tobacco products to the youth inspectors were more than 70 times higher when they did not ask for identification compared to when they did ask for identification: 72.6 times higher overall, 76.3 times higher for cigarette inspections, and 86.5 times higher for chewing tobacco inspections. Only four clerks (three out of 169 cigarette inspections, one out of 71 chewing tobacco inspections) asked for identification and were found in violation.¹¹

Figure 2. Association between Violations and Clerks Asking for Identification



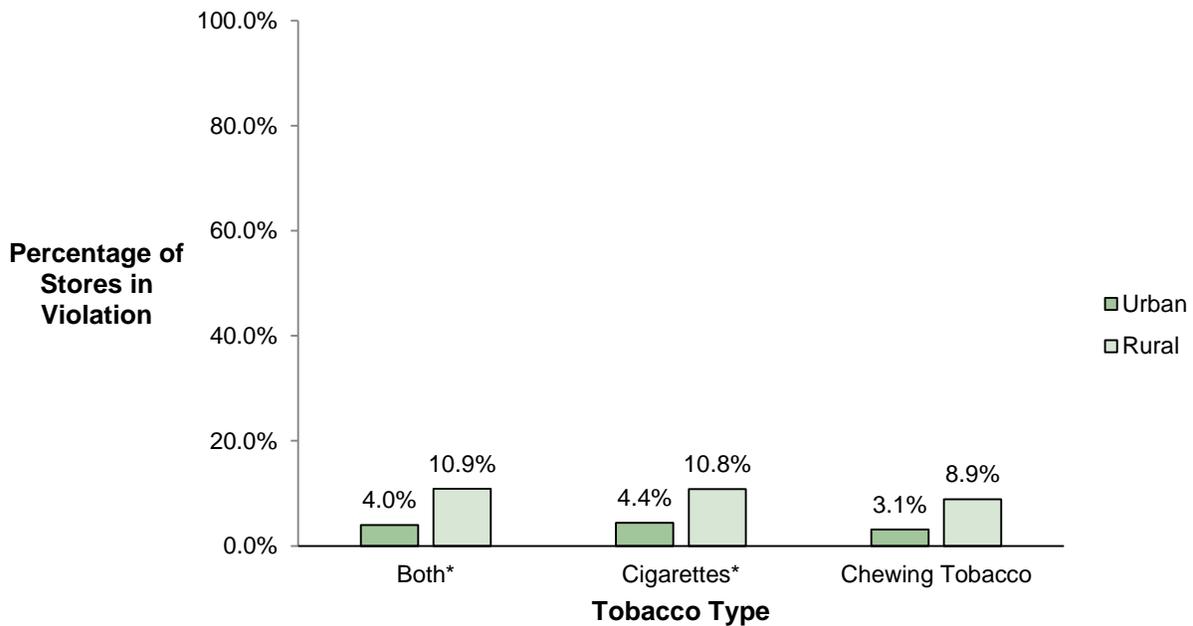
*Indicates statistically significant difference within tobacco type.

¹¹ Two data forms were missing the data about whether clerks asked for identification.

4.3.2. Strata¹²

Overall, inspections conducted in rural outlets had a higher RVR than inspections completed in urban outlets. For cigarette inspections, inspections conducted in rural outlets had a higher RVR than inspections completed in urban outlets. The magnitude of the difference in RVR between rural and urban strata for chewing tobacco inspections is slightly smaller than the differences between strata for all inspections and for cigarette inspections. However, the difference for chewing tobacco inspections is not statistically significant, likely because of the relatively small number of chewing tobacco inspections. (Figure 3).

Figure 3. Association between Violations and Strata¹²



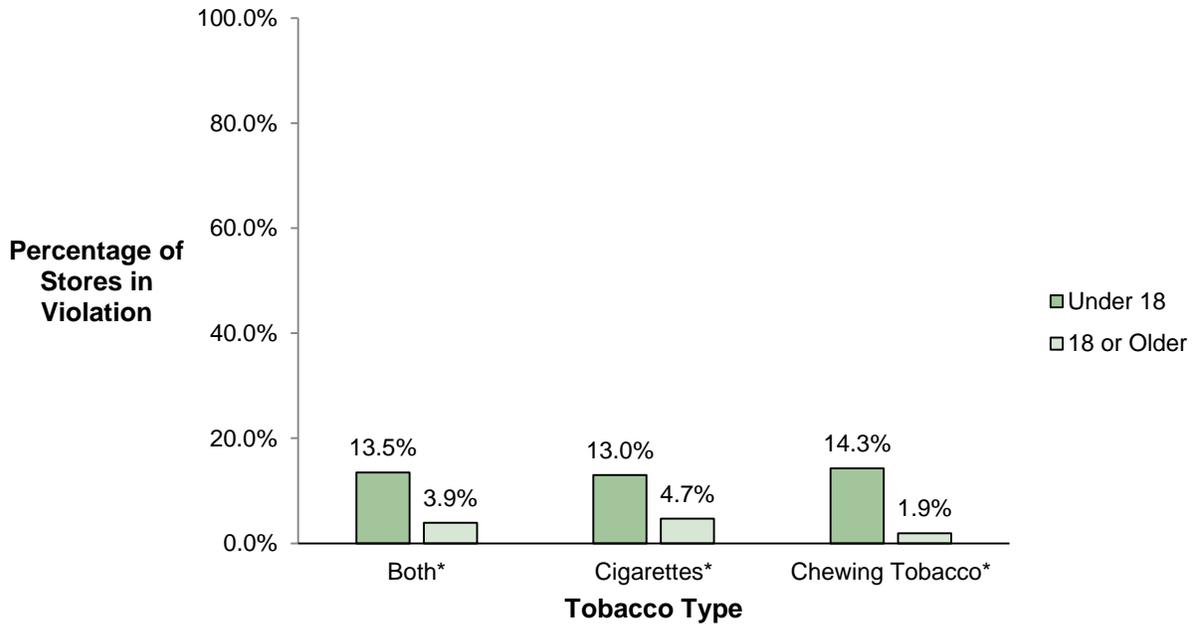
*Indicates statistically significant difference.

¹² Stratum RVRs reported here are weighted, unlike those reported by SSES. The overall weighted and unweighted RVRs (4.0% for urban, 10.6% for rural) are similar.

4.3.3. Perceived Age of Youth Inspectors

Overall and for each type of tobacco, inspections completed by youth with estimated perceived ages of 17 or younger had a higher RVR than those completed by youth who looked 18 or older (Figure 4). This counterintuitive result could be driven by behavioral or individual factors of the three youth inspectors who had perceived ages of 17 or younger or unknown factors in the regions where these inspectors worked.

Figure 4. Association between Violations and Perceived Age of Youth Inspectors

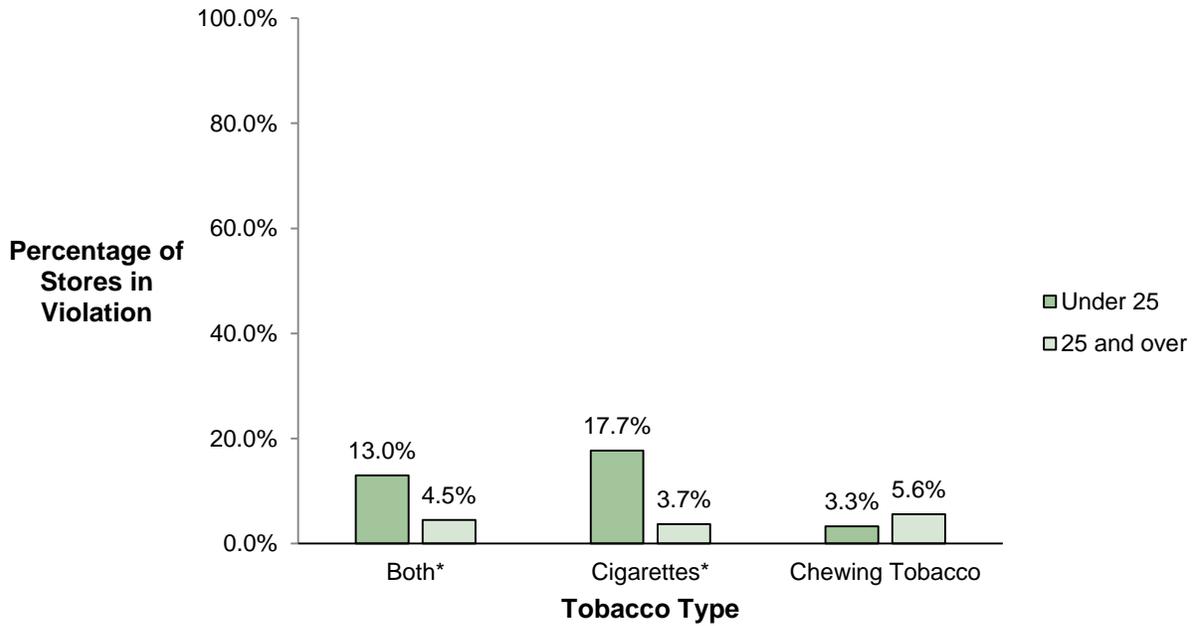


*Indicates statistically significant difference.

4.3.4. Estimated Clerk Age

Overall, clerks younger than 25 (as estimated by the youth inspectors) had a higher RVR than clerks 25 years of age or older. For cigarette inspections, clerks younger than 25 had a higher RVR than clerks 25 years of age or older. For chewing tobacco inspections, there was not a statistically significant relationship between estimated clerk age and RVR (Figure 5).

Figure 5. Association between Violations and Estimated Clerk Age

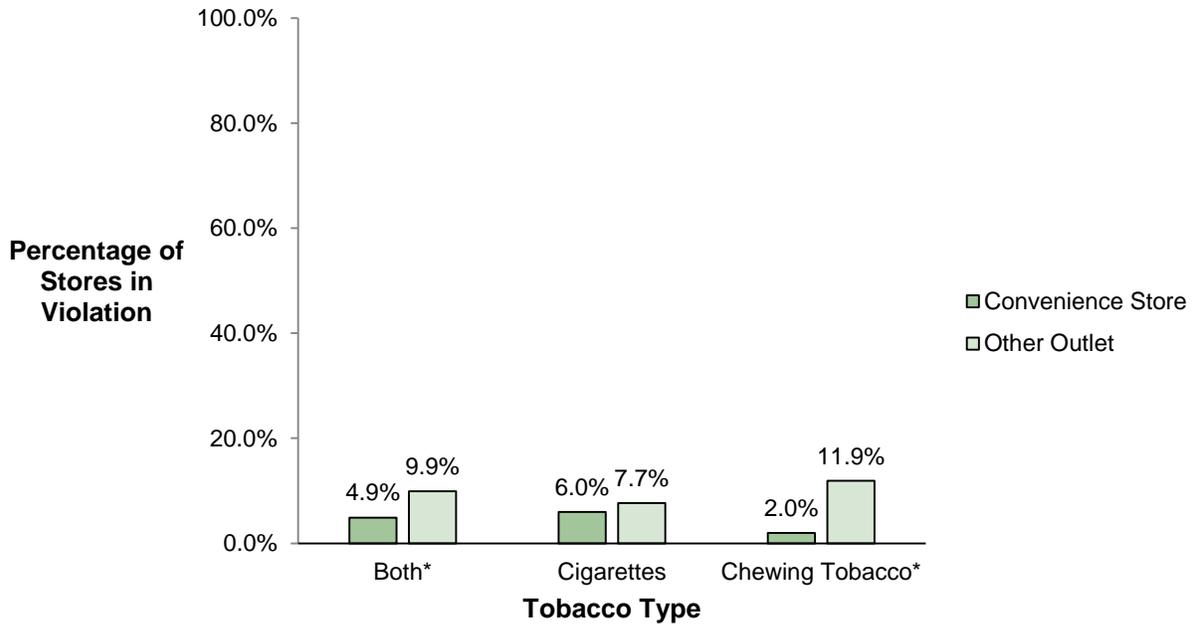


*Indicates statistically significant difference.

4.3.5. Outlet Type

Overall, inspections conducted in outlets other than convenience stores had a higher RVR than inspections completed in convenience stores with or without gas (Figure 6). For cigarette inspections, there was not a statistically significant relationship between store type and RVR. For chewing tobacco inspections, inspections conducted in stores other than convenience stores had a higher RVR than inspections completed in convenience stores with or without gas.

Figure 6. Association between Violations and Outlet Type



*Indicates statistically significant difference.

5. Conclusions

For the 2014 (FFY 2015) Synar Inspection Study, the RVR was 6.0%, below the federally stipulated maximum of 20.0%, even when accounting for error with a 95% confidence interval (one- or two-sided). Despite changes to methods over time (e.g., adding chewing tobacco as one out of every five inspections in 2010, increasing that tobacco type to one out of every three inspections in 2012, and increasing the minimum age of youth inspectors to 16), Wyoming's RVR has generally been between 6% and 10% since 2000 (FFY 2001). The one exception was a 14.4% RVR in 2012 (FFY 2013) that was heavily influenced by one inspection trip with a high RVR (WYSAC, 2012).

Additionally, several variables related to clerks' willingness to sell tobacco products to minors have been stable predictors of violations. As in previous years, the variable most strongly associated with violations is whether clerks ask for identification. Few clerks who ask for identification are willing to sell tobacco products to youth who do not produce identification.

Since WYSAC first included chewing tobacco inspections, results comparing RVRs for cigarettes and chewing tobacco have been inconsistent. In 2010, 2012, and 2014, the RVRs for cigarettes and chewing tobacco were not statistically significantly different. In 2011 and 2013, they were statistically significantly different. Because of this instability, WYSAC suggests continuing with the current ratio of cigarette to chewing tobacco inspections to provide WDH with data that could be used to identify strategies to reduce the RVR for chewing tobacco inspections. This approach would allow WYSAC to continue to identify different predictors of RVR for the different tobacco types.

Although not all recent inspections have found this to be the case (e.g., WYSAC, 2010, 2011, 2012), rural stores had a higher RVR than urban stores in 2014 and 2013 (WYSAC, 2013). Because of this difference and the lower coverage rate for rural stores (WYSAC, 2013), WYSAC suggests continuing with the current, CSAP-approved sampling method that oversamples rural stores (relative to optimal allocation for a stratified sample). The urban RVRs for 2014 and 2013 were fairly similar; the rural RVR for 2014 was lower than in 2013.

Typically, older age or perceived age has been associated with clerks' willingness to sell tobacco products, with older or older looking youth inspectors having higher RVRs. The contrary finding in this report (younger-looking inspectors having a higher RVR) may indicate that this relationship is not strong or may be driven by inspectors' behavioral or other individual factors rather than by appearance alone. Unknown regional factors may also play a role in the relationship because youth only work in one region.

The results of the 2014 (FFY 2015) Synar Inspection Study identify a few opportunities for intervention. First, training efforts could include training clerks to ask all customers for identification before selling them tobacco products. These trainings may have maximum impact by focusing on clerks working in rural areas. In addition to training clerks, it may be beneficial to work with outlet owners and managers to implement and enforce policies that require clerks to ask more customers for their identification. Such policies could complement the federal regulation to ask all customers 26 years of age or younger to provide photo identification before purchasing tobacco products (Tobacco Control Act; Public Law 111-31). Third, increased law enforcement action in rural areas may reduce the RVR for those outlets, where violations are more likely to occur. Finally, educational efforts regarding placing tobacco out of customers' reach may benefit the Synar RVR and compliance with state law and federal regulations about the placement of tobacco products.

6. References

- Agresti, A. (2007). *An introduction to categorical data analysis* (2nd Edition). Hoboken, NJ: John Wiley & Sons, Inc.
- Family Smoking Prevention and Tobacco Control and Federal Retirement Reform, Pub. L. No. 111-31-June22, 2009. Retrieved September 20, 2011, from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_public_laws&docid=f:publ031.111.pdf
- Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention. (2010). *Implementing the Synar regulation: Tobacco store inspection*. Retrieved October 1, 2010 from CSAP's State Online Resource Center (SORCE) <http://sorce.e-prevention.org>
- Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention. (2011a). *Implementing the Synar regulation: Sample design guidance*. Washington, D.C.: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration
- Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention. (2011b). *Synar Survey Estimation System: Draft version 5.0: User manual*. Retrieved September 19, 2011, from CSAP's State Online Resource Center (SORCE) <http://sorce.e-prevention.org>
- Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention. (2014). *FFY 2013 Annual Synar Reports: Tobacco sales to youth*. Retrieved August 29, 2014, from <http://beta.samhsa.gov/sites/default/files/synar-annual-report-2013.pdf>
- University of Medicine and Dentistry of New Jersey -School of Public Health. (2006). *Tobacco surveillance data brief: Cigars and smokeless tobacco*, Volume 1, Issue 4. Retrieved September 22, 2011, from http://www.state.nj.us/health/as/ctcp/documents/cigars_smokeless_tobacco_brief06.pdf
- U.S. Food and Drug Administration. (2010a). *Light, low, mild, or similar descriptors*. Retrieved October 15, 2010, from <http://www.fda.gov/TobaccoProducts/Labeling/MisleadingDescriptors/default.htm>
- U.S. Food and Drug Administration. (2010b). *Protecting kids from tobacco: Regulations restricting the sale and distribution of cigarettes and smokeless tobacco to protect children and adolescents*. Retrieved September 22, 2011, from <http://www.fda.gov/TobaccoProducts/ProtectingKidsfromTobacco/RegsRestrictingSale/ucm204589.htm#Advertising>
- WYSAC. (2010). *Wyoming's 2010 Synar tobacco compliance report: Coverage and inspection studies*, by T. C. Cook, L. H. Despain, & O. Wasilik. (WYSAC Technical Report No. CHES-1011). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming.
- WYSAC. (2011). *Wyoming's 2011 Synar tobacco compliance report*, by L. H. Despain, & A. Cisler. (WYSAC Technical Report No. CHES-1114). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming.
- WYSAC. (2012). *Wyoming's 2012 (FFY 2013) Synar tobacco compliance report*, by L. H. Despain, O. Dziadkowiec, & P. T. Grandjean. (WYSAC Technical Report No. DER-1242). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming.
- WYSAC. (2013). *Wyoming's 2013 (FFY 2014) Synar tobacco compliance report: Coverage and inspection studies*, by L. H. Despain & P. T. Grandjean. (WYSAC Technical Report No. CHES-1344). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming.
- Youth Risk Behavior Surveillance System [Data File 1991–2013]*. (2013). Atlanta, GA: Centers for Disease Control and Prevention. Retrieved June 13, 2014, from <http://www.cdc.gov/healthyyouth/yrbs/index.htm>

7. Appendices

Appendix A. 2014 (FFY 2015) Synar Inspection Study Script

The adult supervisors trained the youth inspectors to follow the protocol below.

Script and instructions:

Please practice this script with your supervisor until you feel comfortable attempting your first purchase.

In two out of three inspections, you will ask for cigarettes. Before you go into the store, your supervisor will let you know what to ask for. If you're asking for cigarettes, follow this script:

If the cigarettes are within reach:

Select a pack of Marlboro Golds and place it on the counter.

If the cigarettes are behind the counter:

Say: "I'd like a pack of Marlboro Golds."

If the store does not have Marlboro Golds:

Young women pick up a pack of Camel Blues or ask: "How about a pack of Camel Blues?"

Young men pick up a pack of Camels or ask: "How about a pack of Camels?"

If the store has none of these options:

Say: "Then whatever you've got."

If the clerk asks for ID:

Say: "I don't have any ID with me."

If the clerk asks your age:

Be truthful in telling your age.

If the clerk asks who the tobacco is for:

Say: "For me."

If the clerk refuses to sell (they might say something like, "Sorry, I can't sell that to you.):

Leave the store.

If the clerk offers to sell (they ring up the purchase and wait for your money):

Fumble in your pocket and produce only one dollar, then say, "I don't have enough money, never mind," or "Sorry, I thought this was a \$10 bill," then leave the store.

If another customer offers to buy the cigarettes for you:

Say: "No, thank you," then leave the store.

For every third inspection, you will ask for smokeless tobacco (chew), instead of cigarettes. Before you go into the store, your supervisor will let you know what to ask for. If you're asking for smokeless tobacco, follow this script:

If the smokeless tobacco is within reach:

Select a can of Skoal Wintergreen and place it on the counter.

If the smokeless tobacco is behind the counter:

Say: "I'd like a can of Skoal Wintergreen."

If the store does not have Skoal:

Pick up a can of Copenhagen Wintergreen or ask, "How about a can of Copenhagen Wintergreen?"

For either brand, if the clerk asks what cut you want (likely a choice between long cut and fine cut)"

Say: "Long cut."

If the store has none of these options:

Say: "Then whatever you've got."

If the clerk asks for ID:

Say: "I don't have any ID with me."

If the clerk asks your age:

Be truthful in telling your age.

If the clerk asks who the tobacco is for:

Say: "For me."

If the clerk refuses to sell (they might say something like, "Sorry, I can't sell that to you."):

Leave the store.

If the clerk offers to sell (they ring up the purchase and wait for your money):

Fumble in your pocket and produce only one dollar, then say, "I don't have enough money, never mind," or "Sorry, I thought this was a \$10 bill," then leave the store.

If another customer offers to buy the chew for you:

Say: "No, thank you," then leave the store.

Appendix B. 2014 (FFY 2015) Synar Inspection Study Detailed Results

For every question on the 2014 (FFY 2015) Synar Inspection Form, WYSAC provides the unweighted frequencies, unweighted percentages, and weighted percentages (except items 6 and 7, which ask about eligibility and inspection status, respectively) in this appendix. Of the 272 outlets in the sample, 25 were *ineligible* (see items 6 and 6a). Another 5 outlets were coded as eligible, but *not inspected* (see items 7 and 7a). Thus, WYSAC has a total of 242 inspected outlets for inclusion in analyses. For every question (except for 6 and 7), WYSAC only reports information for the 242 stores included in the analyses. For questions 6 and 7, WYSAC provides information on all 272 stores in the sample and does not provide weighted percentages because part of the weighting accounts for ineligible outlets and incomplete inspections. Because of rounding, not all percentages add to 100.0%. Because analyses in the body of the report omitted outlets with missing data on specific items (e.g., if a youth inspector did not report the location of cigarettes, it is treated as missing data in this appendix and was not included in the analysis testing for an association between accessibility of tobacco products and violation), reported percentages in this appendix may differ from those reported in the body of the report. For items with missing data, WYSAC provides unweighted frequencies.

1. Inspection month

	Frequency	Valid, unweighted percent	Valid, weighted percent
July	89	36.8	30.7
August	151	62.4	68.8
September	2	0.8	0.4
Valid total	242	100.0	100.0

2. Time of visit

	Frequency	Valid, unweighted percent	Valid, weighted percent
AM	143	59.1	57.9
PM	99	40.9	42.1
Valid total	242	100.0	100.0

3. Age of youth inspector

	Frequency	Valid, unweighted percent	Valid, weighted percent
Stores inspected by 16-year-olds	114	47.1	49.1
Stores inspected by 17-year-olds	128	52.9	50.9
Valid total	242	100.0	100.0

4. Gender of youth inspector

	Frequency	Valid, unweighted percent	Valid, weighted percent
Male	126	52.1	53.2
Female	116	47.9	46.8
Valid total	242	100.0	100.0

5. Outlet county

	Frequency	Valid, unweighted percent	Valid, weighted percent
Fremont	23	9.5	11.5
Lincoln	22	9.1	4.9
Laramie	21	8.7	12.0
Carbon	19	7.9	6.5
Natrona	17	7.0	8.8
Big Horn	13	5.4	2.9
Crook	13	5.4	2.9
Sublette	12	5.0	2.7
Albany	11	4.5	6.1
Campbell	11	4.5	6.6
Sweetwater	11	4.5	4.7
Uinta	10	4.1	3.6
Park	8	3.3	5.4
Sheridan	8	3.3	4.1
Teton	8	3.3	3.6
Weston	7	2.9	3.4
Platte	6	2.5	1.8
Converse	5	2.1	1.6
Johnson	5	2.1	2.5
Niobrara	4	1.7	0.9
Goshen	3	1.2	0.7
Washakie	3	1.2	1.6
Hot Springs	2	0.8	1.4
Valid Total	242	100.0	100.0

6. Was the outlet (store) eligible for an inspection?

	Frequency	Valid, unweighted percent
Yes	247	90.8
No	25	9.2
Valid total	272	100.0

Note. Includes all tobacco retailers in the sample, unlike the majority of tables in this appendix.

6a. If NO, mark one of the following reasons the store was ineligible for inspection:

	Frequency	Valid, unweighted percent
Inaccessible to youth	6	24.0
Out of business	3	12.0
Does not sell tobacco products	10	40.0
Could not locate	3	12.0
Temporary closure	2	8.0
Duplicate	1	4.0
Valid total	25	100.0

Note. Includes only the 25 ineligible tobacco retailers from item 6, unlike the majority of tables in this appendix.

7. If outlet is eligible, was inspection completed?

	Frequency	Valid, unweighted percent
Yes	242	98.0
No	4	1.6
Inspection completed, but missing data on outcome of inspection (violation/nonviolation)*	1	0.4
Valid total	247	100.0
Ineligible	25	
Total	272	

* Per CSAP guidelines, WYSAC treated this store as eligible, incomplete in all analyses.

Note. Includes all tobacco retailers in the sample, unlike the majority of tables in this appendix.

7a. If NO, mark one of the following reasons the inspection was not completed:

	Frequency	Valid, unweighted percent
Both youth inspectors knew someone in the store	1	25.0
Other (specify): <i>see below</i>	3	47.5
Valid total	4	100.0

Note. Includes only the four uninspected, eligible tobacco retailers from item 7.

“Other” response:

- No support from local law enforcement (3)

8. Type of store

	Frequency	Valid, unweighted percent	Valid, weighted percent
Convenience (no gas)	16	6.6	4.5
Convenience (with gas)	162	66.9	69.9
Pharmacy / Drug store	4	1.7	2.7
Grocery store	34	14.0	13.0
Discount / Superstore (e.g., Wal-Mart, Target)	15	6.2	6.1
Tobacco store	2	.8	1.4
Restaurant / Cafe	4	1.7	0.9
Other (specify):	5	2.1	1.6
Valid total	242	100.0	100.0

“Other” responses:

- General Merchandise Store (1)
- Grocery and gas (1)
- Mini discount (1)
- Newsstand (1)
- Sporting goods store (1)

9. Location of cigarettes

	Frequency	Valid, unweighted percent	Valid, weighted percent
Not accessible (customers require assistance from an employee to obtain cigarettes)	3	1.2	0.7
Accessible (customers can pick up a pack of cigarettes without the assistance of an employee)	238	98.8	99.3
Valid total	241	100.0	100.0
Missing data	1		
Total	242		

10. Location of chewing tobacco

	Frequency	Valid, unweighted percent	Valid, weighted percent
Accessible (customers can pick up a pack of cigarettes without the assistance of an employee)	2	0.8	0.4
Not accessible (customers require assistance from an employee to obtain cigarettes)	235	99.2	99.6
Valid total	237	100.0	100.0
Youth Inspector Could Not Locate	5		
Total	242		

Constructed variable. Overall tobacco accessibility

	Frequency	Valid, unweighted percent	Valid, weighted percent
Cigarettes and/or chewing tobacco accessible (customers can pick up tobacco products without the assistance of an employee)	3	1.3	0.7
Neither cigarettes nor chewing tobacco accessible (customers require assistance from an employee to obtain tobacco products)	233	98.7	99.3
Valid Total	236	100.0	100.0
Missing data (includes outlets with unknown accessibility of either or both tobacco types)	6		
Total	242		

Note. Youth inspectors asked for a specific type of tobacco product (cigarettes or chewing tobacco) and were trained to look for the other type of tobacco product during each inspection. It is possible that a display for chewing tobacco may have been out of their line of sight during a cigarette inspection, or vice versa. In such cases, “youth inspector could not locate” would not be a valid indicator of that product’s accessibility in that retailer, so WYSAC treats that response as missing. Treating this response as missing or valid data did not affect the conclusions in the report.

11. Were there any youth access signs present in the store (e.g., “No Sales to Minors”)?

	Frequency	Valid, unweighted percent	Valid, weighted percent
Yes	226	93.8	95.7
No	15	6.2	4.3
Valid total	241	100.0	100.0
No answer	1		
Total	242		

12. Clerk gender

	Frequency	Valid, unweighted percent	Valid, weighted percent
Man	50	20.8	22.9
Woman	190	79.2	77.1
Valid total	240	100.0	100.0
No answer	2		
Total	242		

13. Approximate age of clerk

	Frequency	Valid, unweighted percent	Valid, weighted percent
Under 18	4	1.7	0.9
18-24	38	15.8	18.7
25-34	74	30.7	33.2
35-44	51	21.2	19.2
45-54	36	14.9	14.0
55-64	25	10.4	8.8
65-85	13	5.4	5.2
Valid total	241	100.0	100.0
No answer	1		
Total	242		

14. If inspection was completed, was buy attempt successful?

	Frequency	Valid, unweighted percent	Valid, weighted percent
Yes (violation)	19	7.9	6.0
No (nonviolation)	223	92.1	94.0
Valid total	242	100.0	100.0

14a. If YES, how much was the pack/can?

	Frequency	Valid, unweighted percent	Valid, weighted percent
\$2.00-\$4.49	47	30.3	29.0
\$4.50-\$4.99	35	22.6	25.5
\$5.00-\$5.49	53	34.2	37.0
\$5.50-\$8.50	20	12.9	8.5
Valid Total	155	100.0	100.0
Missing	87		
Total	242		

Note. Data for this table include recorded prices for nonviolations.

Constructed variable. If YES, how much was the pack of cigarettes?

	Frequency	Valid, unweighted percent	Valid, weighted percent
\$2.00-\$4.49	11	10.0	10.6
\$4.50-\$4.99	31	28.2	30.9
\$5.00-\$5.49	50	45.5	47.5
\$5.50-\$8.50	18	16.4	11.0
Valid Total	110	100.0	100.0
Missing	59		
Total	169		

Note. Data for this table include recorded prices for nonviolations.

Constructed variable. If YES, how much was the can of chewing tobacco?

	Frequency	Valid, unweighted percent	Valid, weighted percent
\$2.00-\$4.49	36	80.0	73.9
\$4.50-\$4.99	4	8.9	12.4
\$5.00-\$5.49	3	6.7	11.2
\$5.50-\$8.50	2	4.4	2.4
Valid Total	45	100.0	100.0
Missing	28		
Total	73		

Note. Data for this table include recorded prices for nonviolations.

15. What type of tobacco did the youth inspector ask for? (Every third inspection should be for chewing tobacco.)

Tobacco type	Frequency	Valid, unweighted percent	Valid, weighted percent
Cigarettes	169	69.8	70.0
Chewing tobacco	73	30.2	30.0
Valid total	242	100.0	

16. What tobacco brand was attempted to be purchased?

Tobacco type	Tobacco brand	Frequency	Valid, unweighted percent	Valid, weighted percent
Cigarettes	Marlboro Gold	164	68.0	68.6
	Marlboro	3	1.2	1.1
	Camel Blue	0	0.0	0.0
	Camel	2	0.8	0.4
Smokeless tobacco	Skoal Wintergreen	68	28.2	28.9
	Copenhagen Wintergreen	4	1.7	0.9
Valid total		242	100.0	100.0

17. Did the clerk ask for youth's ID?

	Frequency	Valid, unweighted percent	Valid, weighted percent
Yes	214	89.2	90.9
No	26	10.8	9.1
Valid total	240	100.0	100.0
No answer	2		
Total	242		

18. Did the clerk ask for youth's age?

	Frequency	Valid, unweighted percent	Valid, weighted percent
Yes	16	6.7	6.4
No	224	93.3	93.6
Valid total	240	100.0	100.0
No answer	2		
Total	242		

Appendix C. Detailed Calculations for the 2014 (FFY 2015) Synar Inspection Study

C.1. Inspection Study Sampling Design

Tables C-1 and C-2 provide information on the sample sizes for the two strata, depicting output from the SSES Sample Size Calculator. WYSAC entered several variables (under "Input Information" in each table). An explanation of each variable follows:

- **One-sided option for 95% Confidence Interval** meets the same precision requirement with a smaller sample size than the two-sided choice.
- **Outlet Frame Size** represents the total population of tobacco retail stores on the list frame. Because WYSAC conducted the sample size calculations separately for each stratum, the outlet frame size is specific to the stratum (urban or rural). The original list frame had 358 urban municipality outlets and 161 rural municipality outlets.
- **Expected Retailer Violation Rate (RVR)** is the weighted RVR from last year's survey. Again, the weighted RVR is specific for each stratum. The rural municipality RVR from 2013 (FFY 2014) was 17.4% and the urban municipality RVR from 2013 was 3.8%.
- **Design Effect** is estimated from last year's survey. The design effect normally accounts for the loss of effectiveness by using a sampling design other than a simple random sample. Because WYSAC conducted the sample size calculations separately and conducted a simple random sample within each stratum, the design effect for both strata was 1.
- **Expected Accuracy Rate** is the percentage of outlets whose information was accurate on last year's list frame. This rate provides an estimate of the proportion of outlets on the list frame that are eligible for the Synar survey. This percentage is specific to each stratum. The expected accuracy rate from 2013 (FFY 2014) was 92.5% for the rural stratum and 93.5% for the urban stratum.
- **Expected Completion Rate** is the percentage of stores inspected by last year's inspection teams. The numerator is the percentage of outlets visited; the denominator is the number of outlets drawn for the sample. This percentage is specific to each stratum. The expected completion rate for the rural stratum was 97.1% and 96.3% for the urban stratum.
- **Safety Margin Used** is the percentage by which the sample size is inflated to ensure a large enough sample size. A safety margin allows WYSAC to account for ineligible outlets (e.g., businesses that had closed, were not accessible to minors, or did not sell tobacco) on the list frame. WYSAC used a safety margin of 20.0% for each stratum.

Once WYSAC entered this information, SSES provided three outputs: effective sample size, target sample size, and planned original sample size for each strata. Definitions for each of these outputs follow. Numerical values are in Tables C-1 (rural strata) and C-2 (urban strata).

- **Effective Sample Size** is the sample size needed to meet the SAMHSA precision requirement under simple random sampling.
- **Target (Minimum) Sample Size** is the sample size needed to achieve the desired precision requirement with a complex sampling design. This number is the product of the effective sample size and the design effect. Because the design effect for both strata is 1, the effective sample size is the same as the target sample size.
- **Planned Original Sample Size** is the actual sample size WYSAC used to draw the sample. To compute this number, SSES inflates the target sample size using the accuracy and completion rates and incorporates the safety margin.

Table C-1. SSES Sample Size Output for the *Rural* Sampling Frame

Synar Survey	
State	WY rural strata
FFY	2015
Date	7/2/2014 16:38

Input Information	
Option for 95% Confidence Interval	One-Sided
Outlet Frame Size	161
Expected Retailer Violation Rate	17.40%
Design Effect	1
Expected Accuracy Rate	92.50%
Expected Completion Rate	97.10%
Safety Margin Used	20%

Sample Size	
Effective Sample Size	118
Target(Minimum) Sample Size	118
Planned Original Sample Size	158

Table C-2. SSES Sample Size Output for the *Urban* Sampling Frame

Synar Survey	
State	WY urban strata
FFY	2015
Date	7/2/2014 16:36

Input Information	
Option for 95% Confidence Interval	One-Sided
Outlet Frame Size	358
Expected Retailer Violation Rate	3.80%
Design Effect	1
Expected Accuracy Rate	93.50%
Expected Completion Rate	96.30%
Safety Margin Used	20%

Sample Size	
Effective Sample Size	85
Target(Minimum) Sample Size	85
Planned Original Sample Size	114

Based on the FFY 2015 (calendar year 2014) Synar results, the input values for the FFY 2016 (calendar year 2015) Synar inspections are as follows:

- Rural stratum
 - Expected RVR = 10.6%
 - Expected accuracy rate = $144/158 = 91.1\%$
 - Expected completion rate = $141/144 = 97.9\%$
- Urban stratum
 - Expected RVR = 4.0%
 - Expected accuracy rate = $103/114 = 90.4\%$
 - Expected completion rate = $101/103 = 98.1\%$

C.2. RVR Calculations

WYSAC estimated the number of total outlets eligible for inspection in the list frame by

$$N_{urban} \left(\frac{n_{1\ urban}}{n_{urban}} \right) + N_{rural} \left(\frac{n_{1\ rural}}{n_{rural}} \right) = N_{total}$$

where

N_{total}	= the estimated number of total outlets eligible for inspection in the list frame
N_{urban}	= the number of urban stratum outlets on the list frame
$n_{1\ urban}$	= the number of outlets eligible for inspection within the urban stratum
n_{urban}	= the number of outlets in the original sample within the urban stratum
N_{rural}	= the number of rural stratum outlets on the list frame
$n_{1\ rural}$	= the number of outlets eligible for inspection within the rural stratum
n_{rural}	= the number of outlets in the original sample within the rural stratum

This gives an estimated number of total outlets eligible for inspection:

$$358 \frac{103}{114} + 161 \frac{144}{158} = 474.986$$

WYSAC estimated the weighted RVR by

$$\left(\frac{x_{urban}}{n_{2\ urban}} \right) \left(\frac{n_{1\ urban}}{n_{urban}} \right) \left(\frac{N_{urban}}{N_{total}} \right) + \left(\frac{x_{rural}}{n_{2\ rural}} \right) \left(\frac{n_{1\ rural}}{n_{rural}} \right) \left(\frac{N_{rural}}{N_{total}} \right) = \text{weighted RVR}$$

Where, in addition to the variables defined above

x_{urban}	= the number of noncompliant outlets within the urban stratum
$n_{2\ urban}$	= the number of outlets inspected within the urban stratum
x_{rural}	= the number of noncompliant outlets within the rural stratum
$n_{2\ rural}$	= the number of outlets inspected within the rural stratum

Thus, the weighted noncompliance rate for the 2014 (FFY 2015) Synar Inspection Study was

$$\left(\frac{4}{101} \right) \left(\frac{103}{114} \right) \left(\frac{358}{474.986} \right) + \left(\frac{15}{141} \right) \left(\frac{144}{158} \right) \left(\frac{161}{474.986} \right) = .060 \text{ or } 6.0\%$$

C.3. Analyses of Associations with Retailer Violations

The tables below present the results of WYSAC's analyses to examine the possible association between selected variables and retailer violations. WYSAC used one-tailed Fisher's exact tests because two tailed tests (as were used with Pearson's chi squared) tend to be overly conservative (Agresti, 2007, pp. 45–48). The blue shading in each table indicates conclusions that were not consistent across tobacco type. Italics indicate statistically significant findings.

Table C-3. Tested Associations with Retailer Violation: Tobacco, Cigarettes and Chewing Tobacco Combined.

Variable	χ^2	Degrees of freedom	Weighted number of outlets included in analysis	Statistical significance (<i>p</i>)	Higher RVR situation*
<i>Ask for identification</i>	175.350	1	465	< .001	<i>Not asking for ID</i>
<i>Perceived age of youth inspector, dichotomized</i>	13.535	1	470	< .001	<i>Look younger than 18</i>
<i>Rural/Urban stratum</i>	8.265	1	471	.004	<i>Rural</i>
<i>Time of inspection</i>	7.194	1	470	.007	<i>Morning</i>
<i>Estimated clerk age, dichotomized</i>	9.236	1	468	.002	<i>Younger than 25</i>
<i>Store type, dichotomized</i>	3.985	1	471	.046	<i>Not convenience store</i>
<i>Month of inspection, dichotomized</i>	5.592	1	469	.018	<i>August and September, combined</i>
Accessibility of any tobacco product, dichotomized	Fisher's exact test			.166	Accessible tobacco
Clerk gender	1.251	1	463	.263	Woman
Adult supervisor	0.842	1	469	.359	One adult supervisor
Youth inspector gender	1.472	1	470	.225	Male
Youth inspector age	0.767	1	471	.381	17
Youth access signs	3.006	1	467	.083	No youth access signs
Ask age	1.022	1	465	.312	Asking for age
Type of tobacco	0.335	1	469	.563	Cigarettes

*The higher RVR situation for nonsignificant associations is provided for informational purposes only.

Note. The number of outlets included in analyses varies because of weighting and missing data. As in the report, WYSAC dichotomized perceived age of youth inspector (18 or older vs. younger than 18), estimated clerk age (24 and younger vs. older than 24), store type (convenience with or without gas vs. all others), month of inspection (July vs. August and September), and tobacco accessibility (all accessible vs. at least some accessible). Italics indicate statistically significant findings.

Table C-4. Tested Associations with Retailer Violation: Cigarettes Only.

Variable	χ^2	Degrees of freedom	Weighted number of outlets included in analysis	Statistical significance (p)	Higher RVR situation*
<i>Ask for identification</i>	132.400	1	330	< .001	<i>Not asking for ID</i>
<i>Perceived age of youth inspector, dichotomized</i>	6.448	1	330	.011	<i>Look younger than 18</i>
<i>Rural/Urban stratum</i>	4.842	1	330	.028	<i>Rural</i>
<i>Time of inspection</i>	7.477	1	329	.006	<i>Morning</i>
<i>Estimated clerk age, dichotomized</i>	16.496	1	329	< .001	<i>Younger than 24</i>
Store type, dichotomized	0.293	1	329	.588	Not convenience store
Month of inspection	2.931	1	329	.087	August (no inspections in September)
Accessibility of cigarettes	Fisher's exact test		328	.876	Cigarettes not accessible
Clerk gender	0.078	1	326	.780	.517
Adult supervisor	0.223	1	330	.636	One adult supervisor
Youth inspector gender	3.401	1	329	.065	Male
Youth inspector age	0.383	1	330	.536	17 years old
Youth access signs	2.161	1	326	.142	No youth access signs
Ask age	2.076	1	329	.150	Asking for age

*The higher RVR situation for nonsignificant associations is provided for informational purposes only.

Note. The number of outlets included in analyses varies because of weighting and missing data. As in the report, WYSAC dichotomized perceived age of youth inspector (18 or older vs. younger than 18), estimated clerk age (24 and younger vs. older than 24), and store type (convenience with or without gas vs. all others). Italics indicate statistically significant findings.

Table C-5. Tested Associations with Retailer Violation: Chewing Tobacco Only.

Variable	χ^2	Degrees of freedom	Weighted number of outlets included in analysis	Statistical significance (p)	Higher RVR situation*
<i>Ask for identification</i>	45.458	1	136	< .001	<i>Not asking for ID</i>
<i>Perceived age of youth inspector, dichotomized</i>	8.573	1	141	.003	<i>Look younger than 18</i>
Rural/Urban stratum	Fisher's exact test		141	.147	Rural
Time of inspection	Fisher's exact test		140	.401	Morning
Estimated clerk age, dichotomized	0.241	1	138	.624	Older than 24
<i>Store type, dichotomized</i>	<i>Fisher's exact test</i>		140	.026	<i>Not a convenience store</i>
Month of inspection	Fisher's exact test		140	.077	August and September, combined
Accessibility of chewing tobacco	Fisher's exact test		135	.052	Accessible chewing tobacco
Clerk gender	2.629	1	137	.105	Woman
Adult supervisor	Fisher's exact test		141	.257	One adult supervisor
Youth inspector gender [†]	Fisher's exact test		140	.359	Female
Youth inspector age	Fisher's exact test		141	.251	17 years old
Youth access signs	1.338	1	140	.247	No youth access signs
Ask age	0.400	1	136	.527	Not asking for age

*The higher RVR situation for nonsignificant associations is provided for informational purposes only.

Note. The number of outlets included in analyses varies because of weighting and missing data. As in the report, WYSAC dichotomized perceived age of youth inspector (18 or older vs. younger than 18), estimated clerk age (24 and younger vs. older than 24), store type (convenience with or without gas vs. all others), and month of inspection (July vs. August and September). Italics indicate statistically significant findings.

Appendix D. Information for CSAP's FFY 2015 (CY 2014) Annual Synar Report

This appendix provides the information WDH needs to complete the FFY 2015 (calendar year 2014) Annual Synar Report (ASR) for the Substance Abuse and Mental Health Services Administration (SAMHSA). In this appendix, WYSAC provides answers to ASR questions specific to the coverage study and inspections. All other answers are more appropriately determined by WDH. WYSAC is available for technical assistance.

Section I: Questions 6–9

- Question 6. No, the sampling methodology has not changed since the 2013 (FFY 2014) Synar Survey.
- Question 7a. Yes, WYSAC used the optional Synar Survey Estimation System (SSES) to analyze the Synar Survey data. The SSES summary tables are included in this appendix. WYSAC will also e-mail electronic copies of the SSES output to WDH.
- Questions 7b–7h not required because WYSAC used SSES.
- Question 8. Yes, WYSAC used a list frame.
 - 8a. 2013
 - 8b. 83.4%
 - 8c. No, there was not a new coverage study for this reporting period.
 - 8d. 2016
- Question 9. No, the inspection protocol has not changed since 2013 (FFY 2014).
 - 9a. WYSAC conducted the inspections between 07/18/14 and 09/20/14.
 - 9b. Seventeen youth inspectors participated in the 2014 Synar Survey (FFY 2015).
 - 9c. Form 5 is not required because WYSAC used SSES.

Section II: Questions 1 and 3

- Question 1. WYSAC does not anticipate any changes in the Synar sampling methodology. WYSAC is considering changes to the data form that would not alter the inspection protocol.
- Question 3. WDH may check the appropriate fields for enforcement, legal, and/or other challenges it faces surrounding the Synar amendment. As far as the inspections, the challenges include the following:
 - Difficulties recruiting youth inspectors.
 - Issues regarding the age balance of youth inspectors.
 - Geographic, demographic, and logistical considerations in conducting inspections.
 - Other challenges: Limited support from law enforcement agencies required to be involved in non-enforcement Synar inspections
- *Briefly describe all checked challenges and propose a plan for each, or indicate the state's need for technical assistance related to each relevant challenge.*
 - Difficulties recruiting youth inspectors: WYSAC is developing relationships with youth organizations with reach across the state (e.g., 4-H) to develop contacts with youth.

Issues regarding the age balance of youth inspectors: Approximately 53% of inspections in 2014 (FFY 2015) were conducted by 17-year-olds, and the remaining

48% were conducted by 16-year-olds. However, this balance was not evenly distributed across genders: 22% of the inspections completed by males were completed by 16-year-olds compared to 74% of the inspections completed by females having been completed by 16-year-olds. Altering recruitment to balance the age of inspectors within gender would add difficulty to the already difficult task of recruiting youth in a rural state.

Geographic, demographic, and logistical considerations in conducting inspections: Wyoming is one of the most rural states, which creates unavoidable logistical issues. WYSAC will continue to use a stratified sample design to maximize efficiency.

Other challenges: Limited support from law enforcement agencies required for non-enforcement Synar inspections. WYSAC and the Wyoming Department of Health will discuss and identify strategies to address this challenge.

Appendix A: Forms

- Because WYSAC used SSES, WYSAC does not need to complete these forms. The SSES tables are included in this appendix. WYSAC will also provide an electronic copy of all SSES tables to WDH.

Appendix B: Questions 1–10

- Question 1. WYSAC used a *list frame* sampling method.
- Question 2: Please see Section 3.1 of the technical report for details. WDH may complete this list as appropriate. Annually, WYSAC updates the list frame from the Synar inspections and, when available, the coverage study.
- Question 3. Skip this question because WYSAC used a list frame, not an area frame.
- Question 4. WYSAC does not include vending machines in the Synar Survey because state law bans them from locations accessible to youth. Federal law also bans them from areas accessible to youth.
- Question 5. WYSAC used a *stratified sample* with a *simple random sample*.
- Question 6: Skip this question because WYSAC did not use a systematic sampling method.
- Question 7: Information about stratification:
 - 7a. WYSAC categorized each outlet into one of two strata. WYSAC defined the urban stratum as outlets being located in a town with a population of at least 3,000 and the rural stratum as outlets being located in a town with a population of fewer than 3,000.
 - 7b. WYSAC did not use clustering within the stratified sample.
- Question 8: Skip this question because WYSAC did not use clustering.
- Question 9: WYSAC used SSES to calculate the effective, target, and original sample sizes. WYSAC ran the State Level SSES Sample Size Calculator twice, once for the rural stratum and once for the urban stratum. This increases the sample size and reduces error.
- Question 9c. Skip this question because WYSAC used SSES.
- Question 10a.
 - For the rural stratum:
 - RVR: 17.4%
 - Frame Size: 161
 - Design Effect: 1

Safety Margin: 20%
 Accuracy (Eligibility) Rate: 92.5%
 Completion Rate: 97.1%

For the urban stratum:
 RVR: 3.8%
 Frame Size: 358
 Design Effect: 1
 Safety Margin: 20%
 Accuracy (Eligibility) Rate: 93.5%
 Completion Rate: 96.3%

- Question 10b. Skip this question because WYSAC uses the state level sample size calculator for each stratum individually, as has been approved by SAMHSA.
- Question 10c. Skip this question because WYSAC used SSES.

Appendix C: Questions 1–7

Note: WYSAC has attached the Synar inspection form as Appendix E of the technical report and as a separate file. Upload this form to WebBGAS under the heading “Synar Inspection Form.” WYSAC has attached the Synar training protocol as a separate file for WDH to upload to WebBGAS under the heading “Synar Inspection Protocol.”

- Question 1: Wyoming Synar Survey protocol:
 - 1a. Consummated buy attempts are *not permitted*.
 - 1b. Youth inspectors are *not permitted* to carry ID.
 - 1c. Adult inspectors are *permitted* to enter the outlet *under specified circumstances*. Adult inspectors may enter the outlet during early inspections as part of training the youth inspectors or to verify that youth are following protocol if they determine there is a need to do so. They are trained to enter and leave separately from the youth.
 - 1d. Youth inspectors are *required* to be compensated.
- Question 2: The agency that conducts the random, unannounced Synar inspections is a private contractor. The agency name is the Wyoming Survey & Analysis Center (WYSAC) at the University of Wyoming.
- Question 3: The Synar inspections are *never* combined with law enforcement efforts.
- Question 4: During most cigarette inspections, youth inspectors attempted to purchase Marlboro Gold cigarettes. When unavailable, females attempted to purchase Camel Blues (did not occur in FFY 2015), and males attempted to purchase Camels. One out of every three inspections was for smokeless tobacco. During smokeless tobacco inspections, the youth inspectors (regardless of gender) asked for Skoal Wintergreen long cut or Copenhagen Wintergreen long cut (when Skoal Wintergreen was unavailable).
- Question 5: Eight 16-year-olds and nine 17-year-olds participated in the FFY 2015 (2014) Synar Inspection Study. One driver worked with two young women, resulting in nine teams. Each of the nine teams included both a male and female youth inspector. All youth inspectors resided within the area they inspected, thereby reducing travel time and eliminating the need for overnight stays. To ensure consistency in buying procedure, all youth followed a written script and role-played with the adult supervisors until they mastered the buying procedure. Adult supervisors also trained youth inspectors to look for certain elements while in the store (e.g., the location of tobacco products, the approximate age of the clerk, gender of the clerk, and the presence of youth access messages). To ensure

consistency in buying procedure, all youth followed a written script and role-played with the adult supervisors until they mastered the buying procedure.

WYSAC recruited adults from the Laramie, Wyoming, area to fill the adult supervisor role. Prior to hiring the adult supervisors, WYSAC conducted criminal background checks and reviewed driving records. WYSAC trained all adult supervisors in Synar protocol. The adult supervisors were then responsible for training the youth inspectors. WYSAC recruited most youth inspectors through state-wide organizations that work with youth (4-H and summer camps hosted by the University of Wyoming) and by asking previous buyers to participate again or provide referrals. Community prevention professionals administering prevention programming at the county-level also provided contacts. WYSAC first contacted potential youth inspectors via telephone to describe the project and speak with one of their parents or guardians. Once the youth inspector and the parent/guardian expressed interest, WYSAC sent them a written description of the project, a parent permission form, and hiring forms. They required completed parent permission forms before any youth could participate.

- Question 6: Legal or procedural requirements instituted by the state to address the issue of youth inspectors' immunity during inspections:
 - 6a. WYSAC instituted no legal requirements.
 - 6b. Yes. Youth inspectors are not permitted to have identification on them during the inspection, helping to maintain confidentiality. They are instructed to refrain from buy attempts if they know anyone at the location. Also, no purchase is ever consummated as the youth inspectors are not permitted to take more than \$1.00 with them on inspections.
- Question 7: Legal or procedural requirements instituted by the state to address the issue of the safety of youth inspectors during all aspects of the Synar inspection process:
 - 7a. WYSAC instituted no legal requirements.
 - 7b. Yes. All minors participating in the program must have parental approval and a signed consent form. These youth inspectors are supervised by University of Wyoming contracted adult supervisors. Law enforcement officers were available (by being at the inspection site or available by phone) in case they were needed.
- Question 8: Legal or procedural requirements instituted by the state regarding how inspections are to be conducted:
 - 8a. WYSAC instituted no legal requirements.
 - 8b. Minors are required to be 16 or 17 years of age and are required to be trained by an adult supervisor prior to participating in the inspections. Youth are not allowed to stay overnight away from home while traveling for inspections. Youth also request smokeless tobacco on every third inspection. As part of the smokeless tobacco inspections, youth were instructed to ask for a specific flavor and cut (if asked about cut).

SSES Tables 1-4

SSES Table 1 (Synar Survey Estimates and Sample Sizes)

CSAP-SYNAR REPORT

State	WY
Federal Fiscal Year (FFY)	2015
Date	10/3/2014 7:59
Data	final SSES data file.xlsx
Analysis Option	Stratified SRS with FPC

Estimates

Unweighted Retailer Violation Rate	7.9%
Weighted Retailer Violation Rate	6.0%
Standard Error	1.1%
Is SAMHSA Precision Requirement met?	YES
Right-sided 95% Confidence Interval	[0.0%, 7.9%]
Two-sided 95% Confidence Interval	[3.8%, 8.2%]
Design Effect	0.8
Accuracy Rate (unweighted)	90.8%
Accuracy Rate (weighted)	90.6%
Completion Rate (unweighted)	98.0%

Sample Size for Current Year

Effective Sample Size	203
Target (Minimum) Sample Size	203
Original Sample Size	272
Eligible Sample Size	247
Final Sample Size	242
Overall Sampling Rate	51.4%

SSES Table 2 (Synar Survey Results by Stratum and by OTC/VM)

STATE: WY

FFY: 2015

Samp. Stratum	Var. Stratum	Outlet Frame Size	Estimated Outlet Population Size	Number of PSU Clusters Created	Number of PSU Clusters in Sample	Outlet Sample Size	Number of Eligible Outlets in Sample	Number of Sample Outlets Inspected	Number of Sample Outlets in Violation	Retailer Violation Rate(%)	Standard Error(%)
All Outlets											
rural	2	161	147	N/A	N/A	158	144	141	15	10.6%	
urban	1	358	323	N/A	N/A	114	103	101	4	4.0%	
Total		519	470			272	247	242	19	6.0%	1.1%
Over the Counter Outlets											
rural	2	161	147	N/A	N/A	158	144	141	15	10.6%	
urban	1	358	323	N/A	N/A	114	103	101	4	4.0%	
Total		519	470			272	247	242	19	6.0%	1.1%
Vending Machines											
rural	2	0	0	N/A	N/A	0	0	0	0	0.0%	
urban	1	0	0	N/A	N/A	0	0	0	0	0.0%	
Total		0	0			0	0	0	0	0.0%	0.0%

SSES Table 3 (Synar Survey Sample Tally Summary)STATE: WY
FFY:
2015

Disposition Code	Description	Count	Subtotal
EC	Eligible and inspection complete outlet	242	
Total (Eligible Completes)			242
N1	In operation but closed at time of visit	0	
N2	Unsafe to access	0	
N3	Presence of police	0	
N4	Youth inspector knows salesperson	1	
N5	Moved to new location but not inspected	0	
N6	Drive thru only/youth inspector has no driver's license	0	
N7	Tobacco out of stock	0	
N8	Run out of time	0	
N9	Other noncompletion (see below)	4	
Total (Eligible Noncompletes)			5
I1	Out of Business	3	
I2	Does not sell tobacco products	10	
I3	Inaccessible by youth	6	
I4	Private club or private residence	0	
I5	Temporary closure	2	
I6	Can't be located	3	
I7	Wholesale only/Carton sale only	0	
I8	Vending machine broken	0	
I9	Duplicate	1	
I10	Other ineligibility	0	
Total (Ineligibles)			25
Grand Total			272

Give reasons and counts for other noncompletion:

Reason	Count
Lack of support from law enforcement	3
Missing data for inspection outcome	1

SSES Table 4 (Synar Survey Inspection Results by Youth Inspector Characteristics)

STATE:
WY
FFY:
2015

Frequency Distribution

Gender	Age	Number of Inspectors	Attempted Buys	Successful Buys
Male	14	0	0	0
	15	0	0	0
	16	2	28	3
	17	6	98	8
	18	0	0	0
	Subtotal		8	126
Female	14	0	0	0
	15	0	0	0
	16	6	86	6
	17	3	30	2
	18	0	0	0
	Subtotal		9	116
Other		0	0	0
Grand Total		17	242	19

Buy Rate in Percent by Age and Gender

Age	Male	Female	Total
14	0.0%	0.0%	0.0%
15	0.0%	0.0%	0.0%
16	10.7%	7.0%	7.9%
17	8.2%	6.7%	7.8%
18	0.0%	0.0%	0.0%
Other			0.0%
Total	8.7%	6.9%	7.9%

Appendix E. Synar Inspection Form 2014 (FFY 2015)

The Synar Inspection Form for 2014 (FFY 2015) is on the following two pages.



Synar Inspection Form

Please complete this form as accurately as possible and write legibly.
Use pen or pencil to fill in circles completely, as shown.

Mark Answers Like This	<input type="radio"/>	<input type="checkbox"/>
NOT Like This	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Inspection Date: (MM/DD/YY) / /

Time of Visit: AM PM

Youth Inspector

Gender: Male Female

Name: _____

Age:

Adult Supervisor

Name: _____

Outlet Information

ID:

Hand ID:
(for office use only)

Name: _____ Address: _____

City: _____ State: _____ Zip Code: _____

Updated Outlet Information/ Corrections (if needed)

Name: _____ Address: _____

City: _____ State: _____ Zip Code: _____

Eligibility/ Completion

Was the outlet (store) eligible for an inspection?

Yes No



If NO, mark one of the following reasons the store was ineligible for inspection:

- | | |
|---|---|
| <input type="radio"/> Out of business | <input type="radio"/> Could not locate |
| <input type="radio"/> Does not sell tobacco products | <input type="radio"/> Wholesale only / carton sale only |
| <input type="radio"/> Inaccessible to youth | <input type="radio"/> Vending machine |
| <input type="radio"/> Private club / personal residence | <input type="radio"/> Duplicate |
| <input type="radio"/> Temporary closure | <input type="radio"/> Other (specify): _____ |

If outlet was eligible, was inspection completed?

Yes No



If NO, mark one of the following reasons the inspection was not completed:

- | | |
|---|--|
| <input type="radio"/> In operation, but closed at time of visit | <input type="radio"/> Drive through only |
| <input type="radio"/> Unsafe to access | <input type="radio"/> Tobacco out of stock |
| <input type="radio"/> Presence of police | <input type="radio"/> Ran out of time |
| <input type="radio"/> Both youth inspectors know someone in the store | <input type="radio"/> Other (specify): _____ |

Continued on back



Synar Inspection Form

General Store and Clerk Information

Type of Store:

- Convenience (no gas)
- Convenience (with gas)
- Pharmacy / Drug store
- Grocery store
- Discount / Superstore (e.g., Wal-Mart, Target)
- Tobacco store
- Restaurant / Cafe
- Other (specify): _____

Location of Cigarettes:

- Accessible (customers can pick up a pack of cigarettes without the assistance of an employee)
- Not Accessible (customers require assistance from an employee to obtain cigarettes)
- Youth Inspector Could Not Locate

Location of Chewing Tobacco:

- Accessible (customers can pick up a can of chew without the assistance of an employee)
- Not Accessible (customers require assistance from an employee to obtain chew)
- Youth Inspector Could Not Locate

Were there any youth access signs present in the store? (e.g., "No Sales to Minors")

- Yes
- No

Clerk Gender:

- Male
- Female
- Don't know / Not sure

Approximate Age of Clerk:

If inspection was completed, was buy attempt successful?

- Yes (Violation)
- No (Nonviolation)
- Not Completed



If YES, how much was the pack/can? \$ _____

What type of tobacco did the youth inspector ask for? (Every third inspection should be for chewing tobacco.)

- Cigarettes
- Chewing Tobacco

What tobacco brand was attempted to be purchased?

- Marlboro
- Marlboro Golds
- Other brand (please specify): _____
- Camel
- Camel Blues
- Skoal Wintergreen
- Copenhagen Wintergreen

Did the clerk ask for youth's ID?

- Yes
- No

Did the clerk ask for youth's age?

- Yes
- No

Notes:

Youth Inspector Initial: _____ **Adult Inspector Signature:** _____