

# **ANNUAL SYNAR REPORT**

**42 U.S.C. 300x-26**

OMB № 0930-0222

**FFY 2018**

**State: North Carolina**

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## INTRODUCTION

The Annual Synar Report (ASR) format provides the means for states to comply with the reporting provisions of the Public Health Service Act (42 U.S.C. 300x-26) and the Tobacco Regulation for the Substance Abuse Prevention and Treatment Block Grant (SABG) (45 C.F.R. 96.130 (e)).

### **How the Synar report helps the Center for Substance Abuse Prevention**

In accordance with the tobacco regulations, states are required to provide detailed information on progress made in enforcing youth tobacco access laws (FFY 2017 Compliance Progress) and future plans to ensure compliance with the Synar requirements to reduce youth tobacco access rates (FFY 2018 Intended Use Plan). These data are required by 42 U.S.C. 300x-26 and will be used by the Secretary to evaluate state compliance with the statute. Part of the mission of the Center for Substance Abuse Prevention (CSAP) is to assist states<sup>1</sup> by supporting Synar activities and providing technical assistance helpful in determining the type of enforcement measures and control strategies that are most effective. This information is helpful to CSAP in improving technical assistance resources and expertise on enforcement efforts and tobacco control program support activities, including state Synar program support services, through an enhanced technical assistance program involving conferences and workshops, development of training materials and guidance documents, and onsite technical assistance consultation.

### **How the Synar report can help states**

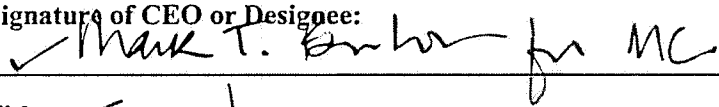
The information gathered for the Synar report can help states describe and analyze substate needs for program enhancements. These data can also be used to report to the state legislature and other state and local organizations on progress made to date in enforcing youth tobacco access laws when aggregated statistical data from state Synar reports can demonstrate to the Secretary the national progress in reducing youth tobacco access problems. This information will also provide Congress with a better understanding of state progress in implementing Synar, including state difficulties and successes in enforcing retailer compliance with youth tobacco access laws.

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<sup>1</sup>The term "state" is used to refer to all the states and territories required to comply with Synar as part of the Substance Abuse Prevention and Treatment Block Grant Program requirements (42 U.S.C. 300x-64 and 45 C.F.R. 96.121).

## FFY 2018: FUNDING AGREEMENTS/CERTIFICATIONS

The following form must be signed by the Chief Executive Officer or an authorized designee and submitted with this application. Documentation authorizing a designee must be attached to the application.

<b>PUBLIC HEALTH SERVICES ACT AND SYNAR AMENDMENT</b>	
42 U.S.C. 300x-26 requires each state to submit an annual report of its progress in meeting the requirements of the Synar Amendment and its implementing regulation (45 C.F.R. 96.130) to the Secretary of the Department of Health and Human Services. By signing below, the chief executive officer (or an authorized designee) of the applicant organization certifies that the state has complied with these reporting requirements and the certifications as set forth below.	
<b>SYNAR SURVEY SAMPLING METHODOLOGY</b>	
The state certifies that the Synar survey sampling methodology on file with the Center for Substance Abuse Prevention and submitted with the Annual Synar Report for FFY 2018 is up-to-date and approved by the Center for Substance Abuse Prevention.	
<b>SYNAR SURVEY INSPECTION PROTOCOL</b>	
The state certifies that the Synar Survey Inspection Protocol on file with the Center for Substance Abuse Prevention and submitted with the Annual Synar Report for FFY 2018 is up-to-date and approved by the Center for Substance Abuse Prevention.	
State: North Carolina	
Name of Chief Executive Officer or Designee: Mandy Cohen	
Signature of CEO or Designee: 	
Title: Secretary NC DHHS	Date Signed: 11/30/17
If signed by a designee, a copy of the designation must be attached.	

**SECTION I: FFY 2017 (Compliance Progress)**

**YOUTH ACCESS LAWS, ACTIVITIES, AND ENFORCEMENT**

42 U.S.C. 300x-26 requires the states to report information regarding the sale/distribution of tobacco products to individuals under age 18.

**1. Please indicate any changes or additions to the state tobacco statute(s) relating to youth access since the last reporting year. If any changes were made to the state law(s) since the last reporting year, please attach a photocopy of the law to the hard copy of the ASR and also upload a copy of the state law to WebBGAS. (see 42 U.S.C. 300x-26).**

**a. Has there been a change in the minimum sale age for tobacco products?**

Yes  No

*If Yes, current minimum age:*  19  20  21

**b. Have there been any changes in state law that impact the state's protocol for conducting Synar inspections?**

Yes  No

*If Yes, indicate change. (Check all that apply.)*

Changed to require that law enforcement conduct inspections of tobacco outlets

Changed to make it illegal for youth to possess, purchase or receive tobacco

Changed to require ID to purchase tobacco

Changed definition of tobacco products

Other change(s) *(Please describe.)* \_\_\_\_\_

**c. Have there been any changes in state law that impact the following?**

Licensing of tobacco vendors  Yes  No

Penalties for sales to minors  Yes  No

Vending machines  Yes  No

Added product

Categories to youth access law  Yes  No

**2. Describe how the Annual Synar Report (see 45 C.F.R. 96.130(e)) was made public within the state prior to submission of the ASR. (Check all that apply.)**

Placed on file for public review

Posted on a state agency Web site *(Please provide exact Web address and the date when the FFY 2018 ASR was posted to this Web address.)*

*Web address:* <https://www.ncdhhs.gov/annual-synar-report>

*Date published:* 12/1/2017

Notice published in a newspaper or newsletter

Public hearing

- Announced in a news release, a press conference, or discussed in a media interview
- Distributed for review as part of the SABG application process
- Distributed through the public library system
- Published in an annual register
- Other (Please describe.) Distributed for review by the reviewers of the SABG application/report

**3. Identify the following agency or agencies (see 42 U.S.C. 300x-26 and 45 C.F.R. 96.130).**

**a. The state agency(ies) designated by the Governor for oversight of the Synar requirements:**

NC Department of Health and Human Services, Division of Mental Health  
Developmental Disabilities and Substance Abuse Services

Has this changed since last year's Annual Synar Report?

Yes  No

**b. The state agency(ies) responsible for conducting random, unannounced Synar inspections:**

NC Department of Health and Human Services, Division of Mental Health,  
Developmental Disabilities and Substance Abuse Services

Has this changed since last year's Annual Synar Report?

Yes  No

**c. The state agency(ies) responsible for enforcing youth tobacco access law(s):**

NC Department of Public Safety, State Bureau of Investigation, Alcohol Law  
Enforcement Branch

Has this changed since last year's Annual Synar Report?

Yes  No

**4. Identify the following agencies and describe their relationship with the agency responsible for the oversight of the Synar requirements.**

**a. Identify the state agency responsible for tobacco prevention activities (the agency that receives the Centers for Disease Control and Prevention's National Tobacco Control Program funding).**

NC Department of Health and Human Services, Division of Public Health, Tobacco  
Prevention and Control Branch

**b. Has the responsible agency changed since last year's Annual Synar Report?**

Yes  No

**c. Describe the coordination and collaboration that occur between the agency responsible for tobacco prevention and the agency responsible for oversight of**

**the Synar requirements. (Check all that apply.) The two agencies**

- Are the same
- Have a formal written memorandum of agreement
- Have an informal partnership
- Conduct joint planning activities
- Combine resources
- Have other collaborative arrangement(s) *(Please describe.)* \_\_\_\_\_
- No relationship

**d. Does a state agency contract with the Food and Drug Administration's Center for Tobacco Products (FDA/CTP) to enforce the youth access and advertising restrictions in the Family Smoking Prevention and Tobacco Control Act?**

- Yes    No (if no, go to Question 5)

**e. If yes, identify the state agency responsible for enforcing the youth access and advertising restrictions in the Family Smoking Prevention and Tobacco Control Act (the agency that is under contract to the Food and Drug Administration's Center for Tobacco Products (FDA/CTP)).**

*NC Department of Health and Human Services, Division of Mental Health, Developmental Disabilities and Substance Abuse Services*

**f. Has the responsible agency changed since last year's Annual Synar Report?**

- Yes    No

**g. Describe the coordination and collaboration that occur between the agency contracted with the FDA to enforce federal youth tobacco access laws and the agency responsible for oversight of the Synar requirements. (Check all that apply.) The two agencies:**

- Are the same
- Have a formal written memorandum of agreement
- Have an informal partnership
- Conduct joint planning activities
- Combine resources
- Have other collaborative arrangement(s) *(Please describe.)* \_\_\_\_\_
- No relationship

**h. Does the state use data from the FDA enforcement inspections for Synar survey reporting?**

- Yes    No

5. Please answer the following questions regarding the state's activities to enforce the state's youth access to tobacco law(s) in FFY 2017 (see 42 U.S.C. 300x-26 and 45 C.F.R. 96.130(e)).

a. Which one of the following describes the enforcement of state youth access to tobacco laws carried out in your state? (Check one category only.)

Enforcement is conducted exclusively by local law enforcement agencies.

Enforcement is conducted exclusively by state agency(ies).

Enforcement is conducted by both local *and* state agencies.



- b. The following items concern penalties imposed for all violations of state youth access to tobacco laws by LOCAL AND/OR STATE LAW ENFORCEMENT AGENCIES (this does not include enforcement of local laws or federal youth tobacco access laws). Please fill in the number requested. If state law does not allow for an item, please mark "NA" (not applicable). If a response for an item is unknown, please mark "UNK." The chart must be filled in completely.

PENALTY	OWNERS	CLERKS	TOTAL
Number of citations issued	NA	40	40
Number of fines assessed	NA	UNK	UNK
Number of permits/licenses suspended	NA		NA
Number of permits/licenses revoked	NA		NA
Other (Please describe.)			

Note: Data on the number of citations issued was collected by the Administrative Office of the Courts (AOC) for calendar year 2016 and confirmed some of these citations are within FFY reported.

- c. Are citations or warnings issued to retailers or clerks who sell tobacco to minors for inspections that are part of the Synar survey?

Yes  No

If "Yes" to 5c, please describe the state's procedure for minimizing risk of bias to the survey results from retailers alerting each other to the presence of the survey teams:

- d. Which one of the following best describes the level of enforcement of state youth access to tobacco laws carried out in your state? (Check one category only.)

- Enforcement is conducted only at those outlets randomly selected for the Synar survey.
- Enforcement is conducted only at a subset of outlets not randomly selected for the Synar survey.
- Enforcement is conducted at a combination of outlets randomly selected for the Synar survey and outlets not randomly selected for the Synar survey.

- e. Did every tobacco outlet in the state receive at least one compliance check that included enforcement of the state youth tobacco access law(s) in the last year?

Yes  No

- f. What additional activities are conducted in your state to support enforcement and compliance with state youth tobacco access law(s)? (Check all that apply and briefly describe each activity in the text boxes below each activity.)

Merchant education and/or training

1. Red Flag Merchant Education Packet: SSA contracted with the Governor's Institute to assist with coordination to organize and disseminate Red Flag retailer education program materials to retailers and substance abuse prevention providers as well as other local groups/agencies working on merchant education activities.
2. NC Alcohol Law Enforcement (ALE) conducted 469 Be A Responsible Seller/Server-BARS trainings during SFY 2017 to educate 3,623 retailers and their employees on laws and penalties for selling tobacco and alcohol to minors.
3. ALE developed an online retailer training that is promoted to all outlets inspected by ALE agents. ALE continues to work on improving the utilization and tracking usage of the web-based training.

- Incentives for merchants who are in compliance (e.g., non-enforcement compliance checks in which compliant retailers are given positive reinforcement and noncompliant retailers are warned about youth access laws)

- Community education regarding youth access laws

Local substance abuse prevention provider agencies conducted community education with schools, local agencies and other partners in their catchment areas to provide education on youth tobacco use, state/federal youth access laws and how communities can be involved.

- Media use to publicize compliance inspection results

- Community mobilization to increase support for retailer compliance with youth access laws

4. SSA and the Governor's Institute hosted three "Partnering to Reduce Youth Access" regional workshops in 2017 on April 20, 2017 in Greenville, NC, April 4th in Raleigh, NC and April 6th in Hickory, NC. There were approximately a total of 48 participants from local providers and LMEs across the state.
5. SSA (in partnership with the Governor's Institute and Counter Tools) provided a 90-minute webinar on November 29, 2016 with local providers offering technical assistance on the latest updates to the NC Store Mapper software. There were 30 agencies across the state in attendance.
6. Local Management Entities (LME/MCOs) and their Provider Agencies also conducted youth access related programs in the areas of community mobilization, community and merchant education, public relations and law enforcement activities. The LME/MCOs are required by the SSA (through their performance contract) to provide these services at a minimum of 48 hours per each six month reporting period. They often visit local retailers to assess their state youth access law, its penalties, the Red Flag retailer campaign and other resources.

Other activities (Please list.) \_\_\_\_\_  
\_\_\_\_\_

### SYNAR SURVEY METHODS AND RESULTS

The following questions pertain to the survey methodology and results of the Synar survey used by the state to meet the requirements of the Synar Regulation in FFY 2017 (see 42 U.S.C. 300x-26 and 45 C.F.R. 96.130).

**6. Has the sampling methodology changed from the previous year?**

Yes  No

*The state is required to have an approved up-to-date description of the Synar sampling methodology on file with CSAP. Please submit a copy of your Synar Survey Sampling Methodology (Appendix B). If the sampling methodology changed from the previous reporting year, these changes must be reflected in the methodology submitted.*

**a. If yes, describe how and when this change was communicated to SAMHSA**

\_\_\_\_\_

**7. Please answer the following questions regarding the state's annual random, unannounced inspections of tobacco outlets (see 45 C.F.R. 96.130(d)(2)).**

**a. Did the state use the optional Synar Survey Estimation System (SSES) to analyze the Synar survey data?**

Yes  No

*If Yes, attach SSES summary tables 1, 2, 3, and 4 to the hard copy of the ASR and upload a copy of SSES tables 1–5 (in Excel) to WebBGAS. Then go to Question 8. If No, continue to Question 7b.*

**b. Report the weighted and unweighted Retailer Violation Rate (RVR) estimates, the standard error, accuracy rate (number of eligible outlets divided by the total number of sampled outlets), and completion rate (number of eligible outlets inspected divided by the total number of eligible outlets).**

Unweighted RVR \_\_\_\_\_

Weighted RVR \_\_\_\_\_

Standard error (s.e.) of the (weighted) RVR \_\_\_\_\_

Fill in the blanks to calculate the right limit of the right-sided 95% confidence interval.

$$\text{RVR Estimate} + (1.645 \times \text{Standard Error}) = \text{Right Limit}$$

plus      (1.645      times      Standard Error)      equals      Right Limit

Accuracy rate \_\_\_\_\_

Completion rate \_\_\_\_\_

c. **Fill out Form 1 in Appendix A (Forms 1–5).** *(Required regardless of the sample design.)*

d. **How were the (weighted) RVR estimate and its standard error obtained?**  
*(Check the one that applies.)*

- Form 2 (Optional) in Appendix A (Forms 1–5) *(Attach completed Form 2.)*  
 Other *(Please specify. Provide formulas and calculations or attach and explain the program code and output with description of all variable names.)*

e. **If stratification was used, did any strata in the sample contain only one outlet or cluster this year?**

- Yes    No    No stratification

*If Yes, explain how this situation was dealt with in variance estimation.*

f. **Was a cluster sample design used?**

- Yes    No

*If Yes, fill out and attach Form 3 in Appendix A (Forms 1–5), and answer the following question.*

*If No, go to Question 7g.*

**Were any certainty primary sampling units selected this year?**

- Yes    No

*If Yes, explain how the certainty clusters were dealt with in variance estimation.*

g. **Report the following outlet sample sizes for the Synar survey.**

	Sample Size
<b>Effective sample size</b> (sample size needed to meet the SAMHSA precision requirement assuming simple random sampling)	
<b>Target sample size</b> (the product of the effective sample size and the design effect)	
<b>Original sample size</b> (inflated sample size of the target sample to counter the sample attrition due to ineligibility and noncompletion)	

<b>Eligible sample size</b> (number of outlets found to be eligible in the sample)	
<b>Final sample size</b> (number of eligible outlets in the sample for which an inspection was completed)	

**h. Fill out Form 4 in Appendix A (Forms 1–5).**

**8. Did the state’s Synar survey use a list frame?**

Yes  No

*If Yes, answer the following questions about its coverage.*

**a. The calendar year of the latest Sampling frame coverage study:** \_\_\_\_\_

**b. Percent coverage from the latest Sampling frame coverage study:** \_\_\_\_\_

**c. Was a new study conducted in this reporting period?**

Yes  No

*If Yes, please complete Appendix D (List Sampling Frame Coverage Study) and submit it with the Annual Synar Report.*

**d. The calendar year of the next coverage study planned:** \_\_\_\_\_

**9. Has the Synar survey inspection protocol changed from the previous year?**

Yes  No

*The state is required to have an approved up-to-date description of the Synar inspection protocol on file with CSAP. Please submit a copy of your Synar Survey Inspection Protocol (Appendix C). If the inspection protocol changed from the previous year, these changes must be reflected in the protocol submitted.*

**a. If Yes, describe how and when this change was communicated to SAMHSA**

**b. Provide the inspection period: From 02/02/2017 to 05/21/2017**  
MM/DD/YY MM/DD/YY

**c. Provide the number of youth inspectors used in the current inspection year:**

5

NOTE: If the state uses SSES, please ensure that the number reported in 9b matches that reported in SSES Table 4, or explain any difference.

one inspector aged up during the survey and was listed as two inspectors in analysis

**d. Fill out and attach Form 5 in Appendix A (Forms 1–5). (Not required if the state used SSES to analyze the Synar survey data.)**

## SECTION II: FFY 2018 (Intended Use):

Public law 42 U.S.C. 300x-26 of the Public Health Service Act and 45 C.F.R. 96.130 (e) (4, 5) require that the states provide information on future plans to ensure compliance with the Synar requirements to reduce youth tobacco access.

**1. In the upcoming year, does the state anticipate any changes in:**

Synar sampling methodology  Yes  No

Synar inspection protocol  Yes  No

*If changes are made in either the Synar sampling methodology or the Synar inspection protocol, the state is required to obtain approval from CSAP prior to implementation of the change and file an updated Synar Survey Sampling Methodology (Appendix B) or an updated Synar Survey Inspection Protocol (Appendix C), as appropriate.*

**2. Please describe the state's plans to maintain and/or reduce the target rate for Synar inspections to be completed in FFY 2018. Include a brief description of plans for law enforcement efforts to enforce youth tobacco access laws, activities that support law enforcement efforts to enforce youth tobacco access laws, and any anticipated changes in youth tobacco access legislation or regulation in the state.**

In the 2017, legislative long session, DHHS-Divisions of Mental Health and Public Health legislative liaisons worked together to attempt to introduce a proposal to add tobacco to ALE subject matter jurisdiction statute. NC currently has a state contract with ALE that provides funding towards tobacco enforcement activities. ALE works directly with retailers to enforce the state youth access to tobacco law (GS14-313.) Activities include inspections of ABC outlets, retailer trainings (face to face and online), public education, training and marketing using the Red Flag Retailer Campaign materials and statewide distribution of signs and brochures to promote compliance with the law.

The Local Management Entities (LME/MCOs) and their provider agencies will continue to report in the SAPTBG Semi-Annual Compliance Report regarding their regional efforts in merchant education, law enforcement related activities and media/public relations. The SSA will work closely with the providers to conduct more targeted merchant education in areas where non-compliance is high and to coordinate more retailer trainings in their catchment areas.

The state does not anticipate any changes to its youth tobacco access law, but will seek any opportunities to address policies that would strengthen the law. The SSA continues to work on the barriers in NC around tobacco enforcement and regrets to see that the RVR has increased from 14.3% to 18.5%. The state will continue to be diligent in its efforts to reduce youth tobacco use and access.

**3. Describe any challenges the state faces in complying with the Synar regulation. (Check all that apply and describe each challenge in the text box below it.)**

Limited resources for law enforcement of youth access laws

The SSA continues to be concerned about the state's ability to maintain active enforcement of NCGS 14-313. The NC Health and Wellness Trust Fund

Commission (HWTF) which has provided funding for education and enforcement activities since 2002 was abolished effective June 30, 2011. The Division of Public Health received funding for 1 year (SFY 2012) to continue the HWTF's Teen Tobacco Prevention and Cessation Initiative. This funding ended June 30, 2012. In 2017 legislative session, some tobacco prevention/cessation funding was reestablished from the general budget and allocated to the Division of Public Health in the amount of \$500,000.00 non-recurring dollars for youth and young adults and \$500,000 for cessation through the QuitlineNC services as well as the program "you Quit Two Quit" to reach pregnant women. The prevention and cessation appropriation does not fund direct enforcement for illegal tobacco sales to minors. In 2014, NC Alcohol Law Enforcement's (ALE) duties were realigned which restricted how the agency conducts tobacco and alcohol compliance inspections. The SSA was able to identify minimal state funds to support enforcement activities through a contract with ALE.

- Limited resources for activities to support enforcement and compliance with youth tobacco access laws

The state is currently using some SAPT Block Grant funds through a contract with the Governor's Institute to assist with non-enforcement related Synar activities such as disseminating and printing the state's Red Flag retailer education materials and hosting regional workshops. The SSA also uses some state funds to support retailer education and training through a contract with ALE.

- Limitations in the state youth tobacco access laws

NC youth tobacco access law needs to identify an enforcement agency. Currently, the law allows law enforcement to enforce the law which is great. However, it was more beneficial when the Governor's Executive Order of 1994 was enforced which listed ALE as the youth tobacco law enforcement agency. Since 2014, that executive order has not been enforced, which now limits ALE efforts towards tobacco enforcement.

- Limited public support for enforcement of youth tobacco access laws

- Limitations on completeness/accuracy of list of tobacco outlets

- Limited expertise in survey methodology

- Laws/regulations limiting the use of minors in tobacco inspections

- Difficulties recruiting youth inspectors

[Empty text box]

- Issues regarding the balance of inspections conducted by youth inspectors age 15 and under

[Empty text box]

- Issues regarding the balance of inspections conducted by one gender of youth inspectors

[Empty text box]

- Geographic, demographic, and logistical considerations in conducting inspections

[Empty text box]

- Cultural factors (e.g., language barriers, young people purchasing for their elders)

Cultural factors relate to language barriers. The state has merchant education materials available in English and Spanish only. The state has to assess the need to have retailer materials in other languages.

- Issues regarding sources of tobacco under tribal jurisdiction

[Empty text box]

- Other challenges (*Please list.*)

[Empty text box]



**APPENDIX A: SSES Tables 1–4**  
(Tables 1-5 Uploaded to WebBGAS)

**TABLE 1: Synar Survey Estimates and Sample Sizes**

**TABLE 2: Synar Survey Results by Stratum and by OTC/VM**

**TABLE 3: Synar Survey Sample Tally Summary**

**TABLE 4: Synar Survey Inspection Results by Youth Inspector Characteristics**

APPENDIX B: SYNAR SURVEY SAMPLING METHODOLOGY

State: NC  
 FFY: 2018

1. What type of sampling frame is used?

- List frame (Go to Question 2.)
- Area frame (Go to Question 3.)
- List-assisted area frame (Go to Question 2.)

2. List all sources of the list frame. Indicate the type of source from the list below. Provide a brief description of the frame source. Explain how the lists are updated (method), including how new outlets are identified and added to the frame. In addition, explain how often the lists are updated (cycle). (After completing this question, go to Question 4.)

Use the corresponding number to indicate Type of Source in the table below.

- 1 – Statewide commercial business list
- 2 – Local commercial business list
- 3 – Statewide tobacco license/permit list
- 4 – Statewide retail license/permit list
- 5 – Statewide liquor license/permit list
- 6 – Other

Name of Frame Source	Type of Source	Description	Updating Method and Cycle

3. If an area frame is used, describe how area sampling units are defined and formed.

Multi-stage design: A multi-stage design was used to facilitate the development of the sampling frame and to reduce field cost. Since no comprehensive listing of outlets is available, an area sampling frame is used. Two stages were used in the design. The sampling and data collection methods are basically unchanged from the previous survey except sample areas are canvassed in the field as the source of sample outlets rather than the D&B list of businesses as used in past Synar surveys.

Stage 1: In this stage, the State’s 100 counties singly or in pairs comprised the primary sampling units (PSUs); minimum PSU size is 10 potential outlets. This combination resulted in a total of 100 PSUs. These PSUs were stratified into 4 primary strata based on mental health districts and into secondary strata within each of those 4 strata, based on estimated number of outlets. This resulted in a total of 13 explicit final strata. Within these strata, PSUs were sorted by size to achieve additional stratification. PSUs were selected from each of these strata using probability proportional to size (field costs and estimated number of outlets). Three of the PSUs were selected with certainty and used as certainty strata. In the certainty strata, the ZIP code areas become the PSUs.

Stage 2: Within the sample PSUs of the non-certainty strata, second stage units (SSUs) are postal ZIP areas. The SSUs are selected from the sample PSUs with probability proportional to size and one subarea (anticipated to have approximately 10 to 12 outlets) is selected in each sample SSU to obtain nearly equal sampling weights. All ZIP areas that are 50 percent or more within the sample county (based on population) have a nonzero probability of being selected. ZIPs with no potential outlets according to D&B are assigned a size measure of 1. Certainty ZIP areas are given a chance of receiving more than one canvass area (consistent with expected number of hits). All random numbers were generated within Excel spreadsheet using the random number function (RAND).

a. **Is any area left out in the formation of the area frame?**

Yes  No

*If Yes, what percentage of the state's population is not covered by the area frame?*

\_\_\_\_\_ %

4. **Federal regulation requires that vending machines be inspected as part of the Synar survey. Are vending machines included in the Synar survey?**

Yes  No

*If No, please indicate the reason(s) they are not included in the Synar survey. Please check all that apply.*

- State law bans vending machines.
- State law bans vending machines from locations accessible to youth.
- State has a contract with the FDA and is actively enforcing the vending machine requirements of the Family Smoking Prevention and Tobacco Control Act.
- Other (*Please describe.*) \_\_\_\_\_

*If Yes, please indicate how likely it is that vending machines will be sampled.*

- Vending machines are sampled separately to ensure vending machines are included in the sample
- Vending machines are sampled together with over the counter outlets, so it is possible that no vending machines were sampled, however they are included in the sampling frame and have a non-zero probability of selection
- Other reasons (*Please describe.*) \_\_\_\_\_

5. **Which category below best describes the sample design? (Check only one.)**

**Census** (*STOP HERE: Appendix B is complete.*)

**Unstratified statewide sample:**

- Simple random sample (*Go to Question 9.*)
- Systematic random sample (*Go to Question 6.*)
- Single-stage cluster sample (*Go to Question 8.*)
- Multistage cluster sample (*Go to Question 8.*)

**Stratified sample:**

- Simple random sample (*Go to Question 7.*)
- Systematic random sample (*Go to Question 6.*)
- Single-stage cluster sample (*Go to Question 7.*)
- Multistage cluster sample (*Go to Question 7.*)
- Other** (*Please describe and go to Question 9.*) \_\_\_\_\_

**6. Describe the systematic sampling methods.** (*After completing Question 6, go to Question 7 if stratification is used. Otherwise go to Question 9.*)

Primary Sampling Units are selected with probability proportional to a size measure, based on cost and size, using systematic sampling from a random number start within strata and the random number is generated in EXCEL using RAND. Clusters are selected with equal probabilities using same systematic sampling procedure.

**7. Provide the following information about stratification.**

**a. Provide a full description of the strata that are created.**

The PSUs were stratified into 4 primary strata based on mental health districts and into secondary strata within each of those 4 strata, based on estimated number of outlets. This resulted in a total of 13 explicit final strata.

**b. Is clustering used within the stratified sample?**

- Yes** (*Go to Question 8.*)
- No** (*Go to Question 9.*)

**8. Provide the following information about clustering.**

**a. Provide a full description of how clusters are formed.** (*If multistage clusters are used, give definitions of clusters at each stage.*)

Stage 1: In this stage, the State's 100 counties singly or in pairs comprise the primary sampling units (PSUs); minimum PSU size is 10 potential outlets. This combination results in a total of 100 PSUs, counting the certainty PSUs as one each. Within the strata described above, PSUs were sorted by size to achieve additional stratification. PSUs were selected from each of these strata using probability proportional to size (field costs and estimated number of outlets).

Stage 2: Within the sample PSUs, second stage units (SSUs) are ZIP areas. The SSUs are selected from the sample PSUs with probability proportional to size and one subarea (anticipated to have approximately 10 to 12 outlets) is selected in each sample SSU to obtain nearly equal sampling weights. All ZIP areas that are 50 percent or more within the sample county (based on population) have a nonzero probability of being selected if that county is selected. ZIPs with no potential outlets according to D&B are assigned a size measure of 1. Certainty ZIP areas are given a chance of receiving more than one canvass area (consistent with expected number of hits).

- b. Specify the sampling method (simple random, systematic, or probability proportional to size sampling) for each stage of sampling and describe how the method(s) is (are) implemented.

Stage 1. PSUs in *certainty* strata are clusters of approximately 10 outlets each and are selected using systematic random sampling with equal probabilities. PSUs in *noncertainty* strata are counties or pairs of counties and selected using systematic random sampling with probabilities based on size and cost.

Stage 2. SSUs are final stage clusters of proximate outlets selected from sample PSUs in noncertainty strata; these are selected using random systematic sampling with equal probabilities. Random numbers are generated with RAND in Excel.

9. Provide the following information about determining the Synar Sample.

- a. Was the Synar Survey Estimation System (SSES) used to calculate the sample size?

Yes (Respond to part b.)

No (Respond to part c and Question 10c.)

- b. SSES Sample Size Calculator used?

State Level (Respond to Question 10a.)

Stratum Level (Respond to Question 10a and 10b.)

- c. Provide the formulas for determining the effective, target, and original outlet sample sizes.

10. Provide the following information about sample size calculations for the Synar survey conducted in FFY 2017.

- a. If the state uses the sample size formulas embedded in the SSES Sample Size Calculator to calculate the state level sample size, please provide the following information:

**Inputs for Effective Sample Size:**

RVR: 14.3

Frame Size: 13,034

**Input for Target Sample Size:**

Design Effect: 1.4

**Inputs for Original Sample Size:**

Safety Margin: 20%

Accuracy (Eligibility) Rate: 95.9

Completion Rate: 97.7

- b. If the state uses the sample size formulas embedded in the SSES Sample Size Calculator to calculate the stratum level sample sizes, please provide the stratum level information:**

- c. If the state does not use the sample size formulas embedded in the SSES Sample Size Calculator, please provide all inputs required to calculate the effective, target, and original sample sizes as indicated in Question 9.**

## APPENDIX C: SYNAR SURVEY INSPECTION PROTOCOL SUMMARY

State: NC  
FFY: 2018

*Note: Upload to WebBGAS a copy of the Synar inspection form under the heading "Synar Inspection Form" and a copy of the protocol used to train inspection teams on conducting and reporting the results of the Synar inspections under the heading "Synar Inspection Protocol."*

### 1. How does the state Synar survey protocol address the following?

#### a. Consummated buy attempts?

- Required  
 Permitted under specified circumstances (Describe:     )  
 Not permitted

#### b. Youth inspectors to carry ID?

- Required  
 Permitted under specified circumstances (Describe:     )  
 Not permitted

#### c. Adult inspectors to enter the outlet?

- Required  
 Permitted under specified circumstances (Describe: unsafe or problem situations     )  
Not permitted

#### d. Youth inspectors to be compensated?

- Required  
 Permitted under specified circumstances (Describe:     )  
 Not permitted

### 2. Identify the agency(ies) or entity(ies) that actually conduct the random, unannounced Synar inspections of tobacco outlets. (Check all that apply.)

- Law enforcement agency(ies)  
 State or local government agency(ies) other than law enforcement  
 Private contractor(s)  
 Other

List the agency name(s): Governor's Institute

3. Are Synar inspections combined with law enforcement efforts (i.e., do law enforcement representatives issue warnings or citations to retailers found in violation of the law at the time of the inspection)?

- Always    Usually    Sometimes    Rarely    Never

4. Describe the type of tobacco products that are requested during Synar inspections.

a. What type of tobacco products are requested during the inspection?

- Cigarettes  
 Small Cigars  
 Cigarillos  
 Smokeless Tobacco  
 Electronic Cigarettes/Electronic Nicotine Delivery Systems (ENDS)  
 Other

b. Describe the protocol for identifying what types of products and what brands of products are requested during an inspection.

NC's inspection protocol requires that the youth inspector first attempt to purchase cigarettes from a self- service display. If one is not available, then the inspector will request to purchase a single pack of cigarettes. The protocol does not specify the brand of cigarettes to purchase although the survey team typically attempt to purchase tobacco products that are popular with teens (i.e. Marlboro, Newports).

5a. Describe the methods used to recruit, select, and train adult supervisors.

5b. Describe the methods used to recruit, select, and train youth inspectors.

Youth inspectors are generally recruited/selected from schools and civic groups in the community. In order to assure inter-rater reliability, the same instructor trains the youth. The instructions include specific information on the role and responsibilities of the youth, followed by role-play exercises covering various scenarios prepare the youth for the types of questions or responses to expect from merchants and their employees.

6. Are there specific legal or procedural requirements instituted by the state to address the issue of youth inspectors' immunity when conducting inspections?

a. Legal

- Yes    No



*(If Yes, please describe.)*

NCGS 14-313 makes it illegal for a person less than 18 years of age to purchase, acquire or receive tobacco products or cigarette wrapping papers. The two exceptions are if the minor is enlisted by a police or sheriff's department to test compliance or if the minor is working with the NC Department of Health and Human Services to conduct annual, random, unannounced inspections. In both situations prior parental consent is required.

**b. Procedural**

Yes  No

*(If Yes, please describe.)*

**7. Are there specific 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?**

**a. Legal**

Yes  No

*(If Yes, please describe.)*

**b. Procedural**

Yes  No

*(If Yes, please describe.)*

Two adult supervisors must be the same gender of each youth inspector for all overnight Synar Survey inspection trips. Bars, lounges and taverns are not inspected because of safety concerns even though they may be accessible to youth.

**8. Are there any other legal or procedural requirements the state has regarding how inspections are to be conducted (e.g., age of youth inspector, time of inspections, training that must occur)?**

**a. Legal**

Yes  No

*(If Yes, please describe.)*

**b. Procedural**

Yes  No

*(If Yes, please describe.)*

NC protocol states that youth inspectors must be 15-16 years old; however, the state, based on the advisement of CSAP has not hired 15 year olds to participate in the survey. The youth must also pass an age verification test and are trained prior to beginning work with the survey team. Liquor stores are not included due to the fact that they are all state operated and do not sell tobacco products.

# APPENDIX D: LIST SAMPLING FRAME COVERAGE STUDY

(LIST FRAME ONLY)

State: North Carolina  
FFY: 2018

1. Calendar year of the coverage study: N/A

2. a. Unweighted percent coverage found: \_\_\_\_\_%  
b. Weighted percent coverage found: \_\_\_\_\_%  
c. Number of outlets found through canvassing: \_\_\_\_\_  
d. Number of outlets matched on the list frame: \_\_\_\_\_

3. a. Describe how areas were defined. (e.g., census tracts, counties, etc.)

b. Were any areas of the state excluded from sampling?

Yes  No

*If Yes, please explain.*

4. Please answer the following questions about the selection of canvassing areas.

a. Which category below best describes the sample design? (Check only one.)

Census (Go to Question 6.)

**Unstratified statewide sample:**

Simple random sample (Respond to Part b.)

Systematic random sample (Respond to Part b.)

Single-stage cluster sample (Respond to Parts b and d.)

Multistage cluster sample (Respond to Parts b and d.)

**Stratified sample:**

Simple random sample (Respond to Parts b and c.)

Systematic random sample (Respond to Parts b and c.)

Single-stage cluster sample (Respond to Parts b, c, and d.)

Multistage cluster sample (Respond to Parts b, c, and d.)

**Other** (Please describe and respond to Part b.) \_\_\_\_\_

b. Describe the sampling methods.

[Empty text box]

c. Provide a full description of the strata that were created.

[Empty text box]

d. Provide a full description of how clusters were formed.

[Empty text box]

5. Were borders of the selected areas clearly identified at the time of canvassing?

Yes  No

6. Were all sampled areas visited by canvassing teams?

Yes (Go to Question 7.)  No (Respond to Parts a and b.)

a. Was the subset of areas randomly chosen?

Yes  No

b. Describe how the subsample of visited areas was drawn. Include the number of areas sampled and the number of areas canvassed.

[Empty text box]

7. Were field observers provided with a detailed map of the canvassing areas?

Yes  No

*If No, describe the canvassing instructions given to the field observers.*

[Empty text box]

8. Were field observers instructed to find all outlets in the assigned area?

Yes  No

*If No, respond to Question 9.*

*If Yes, describe any instructions given to the field observers to ensure the entire area was canvassed, then go to Question 10.*

[Empty text box]

9. If a full canvassing was not conducted:

a. How many predetermined outlets were to be observed in each area? \_\_\_\_\_

b. What were the starting points for each area? \_\_\_\_\_

c. Were these starting points randomly chosen?

Yes  No

d. Describe the selection of the starting points.

[Empty text box]

- e. Please describe the canvassing instructions given to the field observers, including predetermined routes.

10. Describe the process field observers used to determine if an outlet sold tobacco.

11. Please provide the state's definition of "matches" or "mismatches" to the Synar sampling frame? (i.e., address, business name, business license number, etc).

12. Provide the calculation of the weighted percent coverage (if applicable).