State Special Emphasis Report: Instructions for Disseminating Data on Adverse Childhood Experiences using the Behavioral Risk Factor Surveillance System

U.S. Department of Health and Human Services

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control
Division of Violence Prevention

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).
BACKGROUND
Safe, stable, nurturing relationships and environments are essential to children’s health and wellbeing. However, many children don’t have these types of relationships and environments, placing them at risk for adverse childhood experiences (ACEs). While all children are at risk of ACEs, numerous studies have documented inequities in such experiences attributed to the historical, social, and economic environments in which some families live.1

ACEs are preventable, potentially traumatic events that occur in childhood (0-17 years) such as neglect, experiencing or witnessing violence, and having a family member attempt or die by suicide. Also included are aspects of a child’s environment that can undermine their sense of safety, stability, and bonding, such as growing up in a household with substance misuse, mental health problems, or instability.1,2 These examples do not comprise an exhaustive list of childhood adversity, as there are other traumatic experiences that could impact health and wellbeing. ACEs often occur together, can result in toxic stress, and are associated with a wide range of adverse behavioral, health, and social outcomes, including substance misuse, depression, overweight/obesity, lower education and earnings potential, and chronic diseases such as heart disease and cancer.1

However, it is important to remember that ACEs are preventable. A CDC-developed resource, Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence3, can help states and communities use the best available evidence to prevent ACEs in the first place, as well as lessen harms when ACEs do occur. This resource features six strategies drawn from the CDC Technical Packages to Prevent Violence. Preventing ACEs requires using data to inform action; changing the context in which children are being raised through norms change, programs, and policies that are supportive of children and families; and raising awareness and commitment to promote safe, stable, nurturing relationships and environments for all children and their families.

PURPOSE AND AUDIENCE
The purpose of this instruction document is to provide injury researchers and professionals in states, counties, cities, and U.S. territories with resources to create an ACEs Special Emphasis Report. This is a brief, meaningful data report that will inform stakeholders about the burden and wide-ranging health and social consequences of ACEs. The report can highlight the burden of ACEs within communities and increase understanding of the importance of preventing ACEs before they occur. This report can help clinicians, researchers, policymakers, and the public understand how early adversity in childhood can impact health and opportunity across the lifespan.

This document offers a template that is intended to be a flexible and useful tool and therefore may be modified as needed. The figures and text may be changed. Content may be added or deleted, particularly if your state or territory has produced an ACEs document within the past year.

This instruction document is intended for staff preparing an ACEs Special Emphasis Report using data from the Behavioral Risk Factor Surveillance System (BRFSS), including:

- Researchers who routinely analyze injury, surveillance, or other data;
- BRFSS coordinators or other professionals who analyze data from the BRFSS; and
Injury prevention specialists and public health practitioners who do not analyze data directly, but obtain results from the health statistics division of the organization or from web-based data query systems to develop prevention programs.

METHODS

Survey Data

The BRFSS is a health-related telephone survey that collects state data about health-related risk behaviors, chronic health conditions, and use of preventative services from non-institutionalized U.S. residents aged 18 years or older. The BRFSS collects data from individuals in all 50 states, the District of Columbia, and many U.S. territories. Each jurisdiction conducts a core BRFSS module developed annually by CDC. Jurisdictions can also add pre-developed optional modules for specific disease topic areas, and/or questions developed by each jurisdiction to meet their needs. The ACEs module was added by CDC as an optional module from 2009-2011, and many jurisdictions have added the ACEs module as part of state-added questions since 2011. By the end of 2020, all 50 states and the District of Columbia will have gathered data from their jurisdiction using the ACEs module at least once. The BRFSS ACEs module consists of 11 questions adapted from the CDC-Kaiser ACEs Study and assesses exposure to child abuse and household challenges experienced during respondents’ first 18 years of life. Please note that, although neglect is an important ACE, questions assessing exposure to neglect were not added to the BRFSS ACE module questions until 2021 and are not reflected in this report.

Many state BRFSS programs produce annual reports that include information about ACEs. To assist in providing data for this State Special Emphasis Report, you may either use the data located in your annual report or contact your BRFSS coordinator to gain access to state data. You can locate contact information for your BRFSS coordinator at https://www.cdc.gov/brfss/state_info/coordinators.htm.

Completing the ACEs Special Emphasis Report Template

To complete the accompanying Special Emphasis Report template using your jurisdictions’ ACEs module data for a particular year of interest, please follow your jurisdictional procedures for accessing BRFSS data. Once data are obtained and procedures for analysis reviewed, the following steps can be taken to analyze the ACEs Module data to fill in the ACEs Special Emphasis Report template.

Step 1: Select the most recent year of ACEs data available. Include only residents of your jurisdiction.

- **Analytic reminders -- split surveys:** In some instances, jurisdictions may include the ACEs module on a split version of the survey, and not every respondent receives the same survey questions. This means that some respondents may have not received the ACEs module.

  *It is important to only include respondents who received the ACEs module in calculating ACEs prevalence and percent distributions. Please contact your jurisdictions’ BRFSS coordinator to identify which version(s) of the survey(s) administered included the ACEs module.*

- **Analytic reminders – missing data:** Even among respondents who received the ACEs module, there may be missing data on individual ACEs items or other items needed for analysis (e.g., sex). Consider the level of missing data in your jurisdiction, and please consult with your state-
specific BRFSS user guide and resources available on [CDC’s website](https://www.cdc.gov/brfss) to consider your approach to missing data.

- **Analytic reminders -- weighting data:** Weighting data adjusts for the sampling strategy, non-response bias, and geographic coverage. Weighting data adjusts the number of respondents that participated in the survey to reflect population estimates for each geographic region (in this case, the state population).

  *Selecting the appropriate final weight is critical to obtaining accurate results; therefore, please consult the state-specific BRFSS user guide for assistance in selecting the correct final weighting variable. Other information about how to weight data using the BRFSS can be found on [CDC’s website](https://www.cdc.gov/brfss).*

Use of the appropriate final weight (e.g., in BRFSS, _LLCPWT) in any analysis utilizing these data is necessary if users are to make generalizations from the sample to the population. This weight along with the sample stratification variable, _STSTR, and the respondent’s unique identifier, _PSU, should be used in analyses.

Below is an example SAS code that can be used to calculate percentages:

```sas
proc surveyfreq data=[dataset name];
  table [variable of interest];
  weight _llcpwt;
  strata _ststr;
  cluster _psu;
  run;
```

**Step 2:** Calculate the overall ACEs score to populate the data in Figure 1 of the Report, as well as data in the first two sentences of the second section of the Report (“ACEs are Common”).

- The ACEs module includes questions that measure eight specific adversities (child physical abuse; child emotional abuse; child sexual abuse; parent experienced intimate partner violence or was treated violently; household substance misuse; household mental illness; family member incarceration; parental separation or divorce) that may have occurred during childhood.

- Responses to each question are dichotomized to “yes/no” based on whether respondents were ever or never exposed to this adversity before age 18. For example, a “Yes”, “Once”, or “More Than Once” response to a question is designated as being exposed to the adversity. You may have to recode the data from the original response options to those listed below.

- Two adversities are measured using more than one question. Household substance misuse is measured using 2 items (questions #2-3), and child sexual abuse is measured using 3 items (questions #9-11). An affirmative exposure response to either of the 2 or 3 items, respectively, is scored as exposed to household substance misuse or child sexual abuse.
Each specific ACE, and the items associated with each ACE, are detailed below:

<table>
<thead>
<tr>
<th>Specific ACE</th>
<th>Item Content</th>
<th>Exposed (recode = 1)</th>
<th>Not Exposed (recode = 0)</th>
<th>Missing values (set to missing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Mental Illness</td>
<td>Did you live with anyone who was depressed, mentally ill, or suicidal?</td>
<td>Yes</td>
<td>No</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Household Substance Misuse</td>
<td>Did you live with anyone who was a problem drinker or alcoholic?</td>
<td>Yes</td>
<td>No</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Household Substance Misuse</td>
<td>Did you live with anyone who used illegal street drugs or who abused prescription medications?</td>
<td>Yes</td>
<td>No</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Family Member Incarceration</td>
<td>Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?</td>
<td>Yes</td>
<td>No</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Parental Separation or Divorce</td>
<td>Were your parents separated or divorced?</td>
<td>Yes</td>
<td>No, Parents not Married</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Parent Treated Violently</td>
<td>How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?</td>
<td>Once, More than Once</td>
<td>Never</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Child Physical Abuse</td>
<td>Not including spanking (before age 18), how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?</td>
<td>Once, More than Once</td>
<td>Never</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Child Emotional Abuse</td>
<td>How often did a parent or adult in your home ever swear at you, insult you, or put you down?</td>
<td>Once, More than Once</td>
<td>Never</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Child Sexual Abuse</td>
<td>How often did anyone at least 5 years older than you or an adult ever touch you sexually?</td>
<td>Once, More than Once</td>
<td>Never</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Child Sexual Abuse</td>
<td>How often did anyone at least 5 years older than you or an adult try to make you touch them sexually?</td>
<td>Once, More than Once</td>
<td>Never</td>
<td>DK/NS, Refused, Missing</td>
</tr>
<tr>
<td>Child Sexual Abuse</td>
<td>How often did anyone at least 5 years older than you or an adult force you to have sex?</td>
<td>Once, More than Once</td>
<td>Never</td>
<td>DK/NS, Refused, Missing</td>
</tr>
</tbody>
</table>

DK = Do Not Know; NS = Not Sure.

- Responses to the eight types of ACEs are summed to create a total ACE score with values ranging from zero (i.e., the respondent did not experience any of the types of ACEs measured) to eight (i.e., the respondent experienced all of the types of ACEs measured). The domains of household substance misuse and child sexual abuse should each only be counted once.

- A categorical variable can be constructed corresponding to the overall number of ACEs each respondent reported experiencing: 0, 1, 2, 3, and 4 or more ACEs.

**Step 3:** Calculate the percentages for each of the eight types of specific ACEs for Figure 2, as well as data at the end of the first paragraph of the second section of the Report (“ACEs are Common”).

- To calculate the percentage for each type of ACE, the numerator should be equal to the total number of people who indicated exposure to the ACE. The percentages for household substance misuse and child sexual abuse should be based on affirmative exposure to the two and three items, respectively, that measure each specific ACE.
• The total number of respondents who received the ACEs items should be the denominator. Consider the level of missing data in your jurisdiction, and please consult with your state-specific BRFSS user guide and resources available on CDC’s website to consider your approach to missing data.

ACEs Prevention Strategies

The wide-ranging health, social, and economic consequences of ACEs underscore the importance of preventing ACEs before they happen. In the Prevention Strategies section of the Special Emphasis Report (under the second page, under the subheading: “But ACEs are Preventable”), consider tailoring the information covered to the approaches being used to prevent ACEs in your jurisdiction. If your jurisdiction has a Child Abuse & Neglect Prevention program, involve staff from that program in developing the ACEs Prevention Strategies section. If your state does not have a designated program or person to address ACEs, please contact your injury prevention program director. A CDC resource, Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence, can help states and communities use the best available evidence to prevent ACEs from happening in the first place, as well as lessen harms when ACEs do occur.

APPENDICES

We have included three appendices following these instructions to provide additional information.

• Appendix 1 includes the item instructions, and response options prior to any recoding, for the ACEs Module in the BRFSS.
• Appendix 2 shows the first page of the accompanying ACEs Special Emphasis Report for the BRFSS data.
• Appendix 3 provides additional instructions for formatting the template in Microsoft Word.

REFERENCES

APPENDIX A: BRFSS ACEs Module (2009-2020)

Prologue: I'd like to ask you some questions about events that happened during your childhood. This is a sensitive topic and some people may feel uncomfortable with these questions. At the end of this section, I will give you a phone number for an organization that can provide information and referral for these issues. Please keep in mind that you can ask me to skip any question you do not want to answer. All questions refer to the time period before you were 18 years of age. Now, looking back before you were 18 years of age---.

1) Did you live with anyone who was depressed, mentally ill, or suicidal?

2) Did you live with anyone who was a problem drinker or alcoholic?

3) Did you live with anyone who used illegal street drugs or who abused prescription medications?

4) Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?

5) Were your parents separated or divorced?

6) How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?

7) Not including spanking (before age 18), how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?

8) How often did a parent or adult in your home ever swear at you, insult you, or put you down?

9) How often did anyone at least 5 years older than you or an adult ever touch you sexually?

10) How often did anyone at least 5 years older than you or an adult try to make you touch them sexually?

11) How often did anyone at least 5 years older than you or an adult force you to have sex?

Response Options:

<table>
<thead>
<tr>
<th>Questions 1-4</th>
<th>Question 5</th>
<th>Questions 6-11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1=Yes</td>
<td>1=Yes</td>
<td>1=Never</td>
</tr>
<tr>
<td>2=No</td>
<td>2=No</td>
<td>2=Once</td>
</tr>
<tr>
<td>7=DK/NS</td>
<td>7=DK/NS</td>
<td>3=More than once</td>
</tr>
<tr>
<td>9=Refused</td>
<td>8=Parents not married</td>
<td>7=DK/NS</td>
</tr>
<tr>
<td></td>
<td>9=Refused</td>
<td>9=Refused</td>
</tr>
</tbody>
</table>
APPENDIX B:

Special Emphasis Report: Adverse Childhood Experiences Template

This is a screenshot of the beginning of the first page of the template. The template is found in an accompanying file.

What Are Adverse Childhood Experiences (ACEs)?

ACEs are potentially traumatic events that occur in childhood (0 - 17 years), such as experiencing violence, abuse or neglect, witnessing violence in the home or community, or having a family member attempt or die by suicide. Also included are aspects of a child’s environment that can undermine their sense of safety, stability, and bonding, such as growing up in a household with substance misuse, mental health problems, or instability due to parental separation or household members being in jail or prison.*

But ACEs are preventable. Safe, stable, nurturing relationships and environments are essential to children’s health and well-being. However, many children do not have these types of relationships and environments, placing them at risk for ACEs.

*These examples do not comprise an exhaustive list of childhood adversity, as there are other traumatic experiences that could impact health and well-being.

ACEs Are Common.

In <State Name>, XXX% of adults have experienced at least one ACE, and one in <insert number> have experienced four or more ACEs. Among <State> men, XXX% experienced four or more ACEs compared to XXX% of women. The most common ACE experienced by adults in <State> during childhood was <emotional abuse> with XX.X% of adults indicating that a <parent or adult> swore, insulted, or put them down before the age of 18. The next most common ACEs that adults
APPENDIX C: Instructions for Using the Special Emphasis Report: Adverse Childhood Experiences Template

The template is a tool to help states publish and disseminate state-specific data on ACEs collected retrospectively using the BRFSS. The template is intended to be flexible, allowing users to change or add figures, text, and pages appropriately, depending on the needs and interests of the state.

The template is provided in Microsoft Word 2016. The template can be used with previous versions of Microsoft Word, but may need adjustments in formatting or to be saved as a compatible file type (.doc). Save the completed document as a PDF for easier printing and electronic distribution. Please follow the guidelines below for easy use and to ensure consistent design.

Entering Data for Charts/Graphs in Microsoft Word 2016

Editing the Header

- To access the Header, double-click on the <State Name> text.
- Enter your state’s name in the highlighted section and remove highlighting and “< >” characters.
- Keep the font and formatting consistent to avoid major shifts in spacing and layout. The state name portion of the header should be Avenir Next Cyr W04 Regular Font, Size 22.
- To ensure consistent design, keep only the two lines of text in the Header.

Editing the Text

- Insert your state’s name in whenever you see <State Name> or <State> in the text. Remove highlighting and “< >” characters.
  - <State> should be replaced in Figure 1 and Figure 2 headings.
  - <State> or <State Name> occurs four times in the text under “ACEs Are Common.”
  - Replace <State> after the prevention strategies the jurisdiction the data were from.
  - The state health department name and logo should be replaced on pages 1 and 2.
- Insert the year(s) from the BRFSS data that you are reporting on wherever you see <Data Year>. The year(s) should reflect when the BRFSS data were collected, not the year when the report is generated. Remove highlighting and “< >” characters.
  - <Data Year> should be replaced in Figure 1 and Figure 2 headings.
  - Replace <Year> after the prevention strategies to indicate the BRFSS data source year.
- For Figure 1, edit each pie chart. The pie charts in the template have “dummy” data that should be replaced with data from your BRFSS jurisdiction using the instructions in the template, above.
  - For each chart, click on the Design tab> Edit Data.
  - Edit the underlying data so that the percentages for each pie chart match the percentages for your BRFSS data.
  - Check that all percentage text is still aligned and visible within each pie wedge; if not, click on the individual text box for each percentage and move the box as needed.
For Figure 2, edit the percentages below each ACE icon.
  o Replace XX.X% below each icon with the corresponding weighted percentage from your jurisdictions’ BRFSS data. Remove highlighting.

In the “ACEs Are Common” Section, edit the results to align with your BRFSS data.
  o Replace XX.X% with the relevant percentage from the BRFSS data for your jurisdiction. Remove highlighting. Replace <insert number> with the estimate (e.g., “one in six”; “one in five”) for the number of people who have experienced four or more ACEs.
  o Replace the text for the most common types of ACEs experienced with those that are most common based on your BRFSS data. Remove highlighting and “< >” characters.

In the “But ACEs are Preventable” Section, edit the prevention strategies if need to align with the prevention strategies being employed in your jurisdiction. Add additional information about these strategies if of interest to you.

Design Layout and Colors
To ensure consistency in design and layout across all reports, please do not change the color palette (including header color), font, or placement of the graphics and texts.
All font for the template is Avenir Next Cyr W04 Demi. The font size depends on the placement of the text. General headers are size 14 font and the main text is size 10 font. For the Figures, headers are size 9 font, while the inside text of the Figure (with the data) is size 8 font.

Clearance
The template has been cleared by the Centers for Disease Control and Prevention. Before distribution manually or electronically, obtain appropriate clearance from your state health department and, if needed, injury prevention program. This includes applicable clearance of content and use of logos.