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## **MCH Innovations Database** Practice Summary & Implementation Guidance

# Alaska Childhood Understanding Behaviors Survey (CUBS)

Alaska CUBS is an ongoing three year follow-up survey to the PRAMS survey. The CUBS program collects, analyzes, and disseminates population-based data about the health and early childhood experiences of young children in Alaska.



## Location

Alaska



## Topic Area

Health Equity



## Setting

Community



## Population Focus

Child Health



## NPM

NPM 6: Developmental Screening



## Date Added

April 2020

## Contact Information

Margaret Young, Alaska Division of Public Health, Section of Women's, Children's, and Family Health, (907) 269-5657, [margaret.young@alaska.gov](mailto:margaret.young@alaska.gov)

# Section 1: Practice Summary

## PRACTICE DESCRIPTION

The Childhood Understanding Behaviors Survey (CUBS) is a three-year follow up to the PRAMS survey that asks questions about the health, behaviors, and experiences of mothers and young children in Alaska. CUBS data are shared with local and state agencies to evaluate and steer various childhood health initiatives, including Title V and Healthy Alaskans 2030.

A gap in population-based data about young children in Alaska led to the implementation of a follow-up survey to PRAMS respondents by a CSTE/CDC Applied Epidemiologist at the Alaska Division of Public Health in 2006. The follow-up survey was modeled on follow up surveys to PRAMS that at the time were being conducted in Oklahoma, Rhode Island, and Oregon. CUBS has been ongoing as a three-year follow-up since 2008 and collects data on child-focused topics and items specific to maternal and family experiences.

The target population for data collection is women living in Alaska who have participated in the PRAMS survey and who have a 3-year-old child. Intended beneficiaries of the data are Alaska families. Target audiences for the data and results include public health programs, health care providers, policy makers, and advocates.

## CORE COMPONENTS & PRACTICE ACTIVITIES

The CUBS implementation protocol is a modified PRAMS protocol. PRAMS is an established surveillance project designed and sponsored by the CDC that has been well-documented by experts to be an effective method for collecting population-based data on pregnancy and infants. CUBS data are weighted back to the original birth population using the same methodology used by PRAMS. By re-interviewing mothers who completed a PRAMS survey, CUBS is able to evaluate those factors present at birth or early life that increase risk for later adverse childhood outcomes. Although the CUBS process has not been peer-reviewed, Alaska as well as a few other PRAMS follow-up states have published results of studies using our surveys in peer-reviewed journals.

The goal of CUBS is to provide data related to the health and well-being of Alaskan 3-year-olds. This goal is accomplished through the following objectives:

- Collecting high quality data regarding the health status and care of Alaskan children at three years of age



- Performing data analyses to advance the understanding of how health systems, individual behaviors and family practices contribute to health outcomes during early childhood.
- Translating analytic results into practical information for planning and evaluating public health interventions and policies and promoting standards for early childhood healthcare
- Sharing findings with child health stakeholders, including health care providers, educators, and parents

## Core Components & Practice Activities

Core Component	Activities	Operational Details
Sample Identification and Cleaning	<ul style="list-style-type: none"> <li>• Export respondent list from PIDS (PRAMS database)</li> <li>• Drop from follow-up women who responded on PRAMS that their infant had died or was not living with them.</li> <li>• Match with death certificates</li> <li>• Clean addresses and remove out-of-state residents</li> </ul>	<ul style="list-style-type: none"> <li>• A query was created in the PRAMS database to export respondent data, including mode of PRAMS response, final good address and phone number, and their responses to two PRAMS survey questions (see next step).</li> <li>• The list is reviewed and women who responded on PRAMS that their infant had died or was not living with them are dropped from CUBS follow-up.</li> <li>• PRAMS respondents are also matched with death certificate data from the prior 3 years to identify any records where the child died after the mother responded to PRAMS. These records are marked as “deceased” but still included in CUBS follow-up.</li> <li>• Address data cleaning is conducted by searching a variety of state databases for updated addresses. Any new out of state residents are also removed from follow-up.</li> </ul>
Data Collection (Survey)	Mail survey packets and call mothers asking for their participation	<ul style="list-style-type: none"> <li>• The mail phase lasts about one month. The mail phase consists of a preletter and up to two survey packet mailings. During phone phase (one more month), women who do not respond by mail are called and invited to participate over the phone. CUBS mails thank you gifts to mothers that complete the survey.</li> <li>• For over 10 years, CUBS has used an MS Access database to manage operations. In 2020, CUBS will be transitioning to a custom .Net application.</li> </ul>



		<ul style="list-style-type: none"> <li>• CUBS is planning to pilot an online survey option in 2020. Operational details for this are still being worked out.</li> </ul>
Quality Assurance	<ul style="list-style-type: none"> <li>• 10% spot checks on mailouts,</li> <li>• 10% data entry verification,</li> <li>• 10% phone monitoring,</li> <li>• Batch closeout</li> </ul>	<ul style="list-style-type: none"> <li>• CUBS quality assurance operations follow the CDC PRAMS protocol</li> <li>• At the end of each batch, records are checked for completeness and accuracy of final status.</li> </ul>
Data Analysis and Sharing	<ul style="list-style-type: none"> <li>• Statistically weight data on an annual basis</li> <li>• Analyze data to evaluate for trends between years, between and within group differences, and other relevant information.</li> <li>• Share data online in a query-based system, publish reports, and respond to data requests</li> </ul>	<ul style="list-style-type: none"> <li>• CUBS has a contract with a statistician who weights the data on an annual basis. The end-of-year data file is securely sent to the statistician once a year.</li> <li>• Analyses of the weighted dataset are conducted in statistical software, accounting for the complex sampling methods.</li> <li>• Results are shared in a variety of formats, including online query-based systems and data sheets, Epidemiology Bulletins and MCH Data Books, and peer-reviewed journal articles.</li> <li>• Partners and stakeholders can request aggregate data using an online data request form. Researchers can request a full data set by submitting a signed Data Utilization Agreement and a study protocol.</li> </ul>
Survey Revision	<ul style="list-style-type: none"> <li>• Gather input on an ongoing basis regarding questions to be modified, removed, or added.</li> <li>• Revise questionnaire every 3-5 years</li> </ul>	<ul style="list-style-type: none"> <li>• For every survey revision the CUBS program evaluates the response rates for individual questions to determine whether any have more than 10% missing. "Other" responses are evaluated to look for inconsistencies in how respondents are interpreting the questions.</li> <li>• Meet with Steering Committee and gather input from other stakeholders on data gaps and emerging needs.</li> <li>• Review other child health surveys to get ideas of question topics and wording.</li> <li>• Pre-test new questions both in person and over the phone by working with WIC, public health nursing, libraries, and other partners.</li> </ul>



## HEALTH EQUITY

CUBS results can be stratified by maternal race as reported on the birth certificate. Alaska PRAMS oversamples Alaska Native births to ensure adequate response from that population so that results can be shared without limitations. For other racial groups, multiple years of results may be combined to ensure an adequate number of respondents.

CUBS results stratified by race are regularly requested by the Alaska Native Epidemiology Center to further share in fact sheets and reports for their stakeholder organizations and communities.

The CUBS questionnaire was revised in 2020 (Phase 6) to better collect protective factors that may be relevant to non-White cultures, including how often the 3-year-old child does activities such as “hike, pick berries, fish, go sledding, or other outside activities” and “dance, move to music, or clap to a rhythm.” Also, for questions about barriers to health care and child care, a new option, “I couldn’t find a provider who speaks my family’s language or shares my family’s culture” was added. To pilot measuring health inequities related to climate change, a question was added that asks if the child has ever experienced “a very strong earthquake or large storm, flood, wildfire, or other scary natural event.”

## EVIDENCE OF EFFECTIVENESS

At the time, this handout is being prepared, Alaska CUBS has over 10 years of weighted data that are available for analysis (2008-2018, representing Alaska births during 2005-2015). The average unweighted response rate (among eligible participants) during these years was 57%, with 74% of respondents completing the survey by mail. Results from 2012-2017 are all searchable in the [CUBS query module](#) of the Alaska Indicator Based Information System (AK IBIS) online. Static data sheets with statewide results from 2008-2015 are posted on the [CUBS website](#). A list of Epidemiology Bulletins and other CUBS program publications using CUBS data is also available [online](#).

CUBS data have also been used by a variety of other programs in the Alaska Division of Public Health to monitor outcomes and evaluate progress, including the Section of Chronic Disease Prevention and Health Promotions Physical Activity and Nutrition (PAN) program. The PAN program uses CUBS to monitor child BMI at the statewide level and used the CUBS sugar-sweetened beverage consumption data to design a [targeted intervention](#) to reduce consumption of these drinks among the early childhood population. CUBS data have been used in statewide and regional needs assessments, including a recent early childhood scan conducted for Alaska’s Early Childhood Comprehensive Systems program.

Two measures from CUBS, annual well child visit and daily consumption of sugar-sweetened beverages, were selected after a [rigorous process](#) to be included as statewide [Healthy Alaskans 2030 indicators](#). CUBS data are used to supplement existing child health indicators tracked at the state level and are provided to healthcare and educational professionals to improve service delivery.



## Section 2: Implementation Guidance

### STAKEHOLDER EMPOWERMENT & COLLABORATION

The CUBS Steering Committee is composed of health care providers, public health practitioners and researchers, representatives from the Alaska Native Health Consortium, and child-care providers. The Steering Committee meets every 1-2 years and more frequently during times of survey revisions.

CUBS is located in Alaska's Title V agency and collaborates closely with Title V. Title V provides the majority of funding for CUBS.

### REPLICATION

Since its inception in 2006, the CUBS program has been contacted by numerous other states requesting information about how to start a PRAMS follow-up survey. Since CUBS began, at least two other states, Missouri, and New Mexico, have started a similar program. CUBS is regularly in contact with other PRAMS follow-up states to share lessons learned and information about operations.

### INTERNAL CAPACITY

CUBS program staff are closely integrated with Alaska's PRAMS program staff. Staff for both programs are described below.

- PRAMS Coordinator (trained MPH-level epidemiologist) – does all PRAMS analyses, grant management, supervision of PRAMS data manager and Survey Operations Manager, collaborates with stakeholders who use PRAMS data. 100% PRAMS
- CUBS Coordinator (trained MPH-level epidemiologist) – does all CUBS analyses and supervision of CUBS data manager, makes final decisions on survey revisions and other big picture process decisions for CUBS. 15% CUBS.
- Survey Operations Manager – conducts Quality Assurance, monitoring and verification for both surveys, process evaluation, oversees daily operations. Provides some oversight over data managers. 100% PRAMS/CUBS
- PRAMS data manager – PRAMS batch import, data cleaning, mail outs, some phone calls. 100% PRAMS
- CUBS data manager – CUBS data cleaning, mail outs, some phone calls. 40% CUBS.



In addition, CUBS contracts out the majority of phone survey operations. These phone operations are supported by a team of four interviewers and a program manager that spend, roughly 5-7 hours a week making and monitoring calls.

All staff that have contact with survey participants complete the four-module CDC PRAMS human subjects training course that is renewed annually. All phone interviewers are trained by the contracted phone interviewer manager and pass 100% monitoring of call attempts and survey completes before they are allowed to make calls on their own. Interviewers meet on a regular basis to discuss issues and solutions regarding the PRAMS and CUBS programs.

## PRACTICE TIMELINE

### Phase: Planning/Pre-Implementation

Activity Description	Time Needed	Responsible Party
Design first CUBS survey questionnaire	6 months ≈7 hours / week	CSTE fellow
Design CUBS protocol (modified PRAMS protocol)	6 months ≈3 hours / week	CSTE fellow

### Phase: Implementation

See staff time as described in Internal Capacity section

### Phase: Sustainability

See staff time as described in Internal Capacity section



## PRACTICE COST

Supplies and postage for CUBS in 2019 totaled approximately \$35,000. This includes cost of part-time staff at the contracted call center but does not include staff time for 1.5 FTEs on the program. In 2019, 1,174 women were eligible for CUBS and 592 returned a survey (330 by mail and 251 over the phone). Costs are therefore about \$29.81 per eligible woman or \$59.12 per response.

Budget			
Activity/Item	Brief Description	Quantity	Total
Postage	Mailing survey packets and rewards to mothers	N/A.	\$3,000
Phone Interviewer Sessions	An independent contractor attempts to reach moms by phone if they do not complete a mail survey	N/A.	\$24,000
Gifts and Incentives	Studies have shown that moms are more likely to respond when they are given small thank you gifts	N/A.	\$6,000
Mail Supplies	Printed Surveys, envelopes, and other materials used in the mailing process	N/A.	\$2,000
Total Amount:			\$35,000

## LESSONS LEARNED

The most time consuming aspect of CUBS is tracking down women whose addresses have changed in the three years since they responded to PRAMS. Also, having a diverse steering committee is important for "marketing" the data so that stakeholders know that it is available.



## NEXT STEPS

Staff members have just revised the current Phase 5 version of the CUBS survey and will be using Phase 6 for data collection starting in 2020 (for 2017 births). In addition, the CUBS team is working with IT services at the State of Alaska to develop a new database that would utilize a HIPAA compliant version of Survey Monkey for data collection to allow mothers to complete the survey.

## RESOURCES PROVIDED

- More information about CUBS can be found on the [CUBS website](#).

## APPENDIX

- N/A.

