

Overview of the Pregnancy Risk Assessment Monitoring System (PRAMS)

Illinois Maternal Health Task Force Data Use Series

03/30/2023



Welcome!

This presentation was coordinated by the Illinois Maternal Health Task Force- Data to Action Committee and is intended to help maternal health partners learn more about PRAMS.

Please use the chat function to ask questions as they come up; questions will be addressed at the end of the presentation.

Speakers



Eric Hall

Interim PRAMS Director/Data
Manager
Illinois Department of Public Health



Amanda Bennett, PhD, MPH

Senior Maternal and Child
Health Epidemiologist
Illinois Department of Public
Health



Patti Lee King, PhD

Research Assistant Professor
Northwestern University
State Project Director
Illinois Perinatal Quality Collaborative



Ashley Horne, MSPH

Maternal and Infant Health
Epidemiologist
Illinois Department of Public Health



Abby Holicky, MPH

Data Committee Coordinator
I PROMOTE-IL at UIC

Agenda

Introduction to PRAMS

Scope of PRAMS

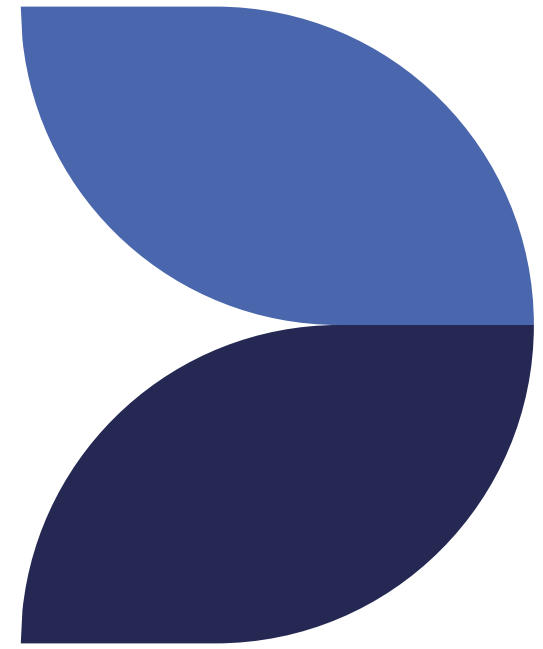
Accessing and Interpreting PRAMS

Using PRAMS in Practice

Questions and Answers



Introduction to PRAMS



What is PRAMS?

- A mail- and phone-based survey of women who recently delivered a live born infant
- A mechanism to gather data on experiences before, during, and after pregnancy that may impact maternal or infant health
- A joint research project between CDC and state/territorial health departments

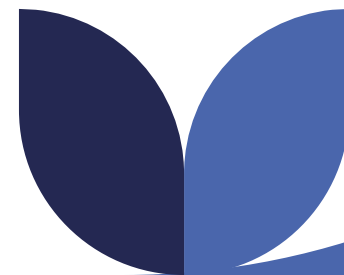


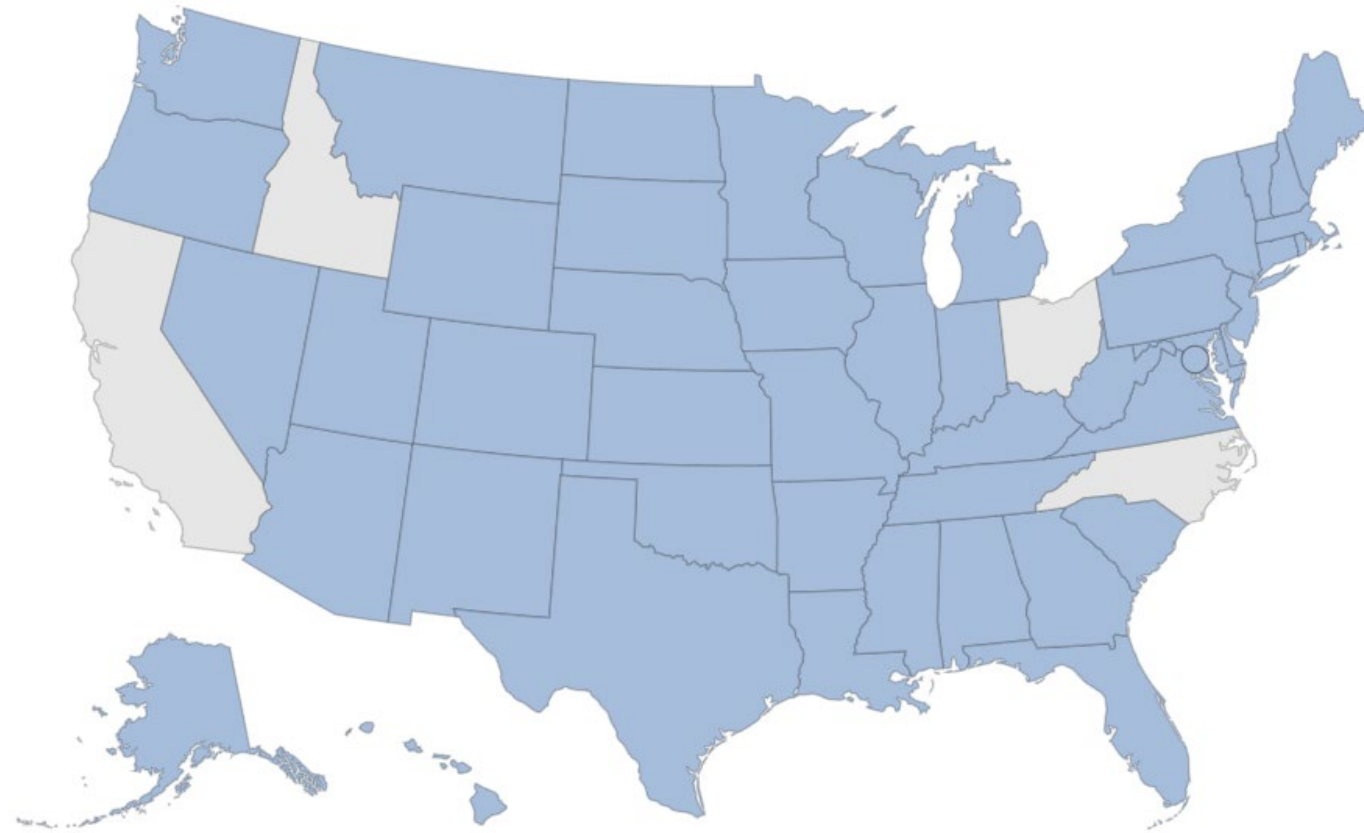
What is the purpose of PRAMS?

From CDC:

“The purpose of PRAMS is to find out why some infants are born healthy and others are not.”

Recent changes to PRAMS demonstrate increasing focus on maternal health experiences and outcomes





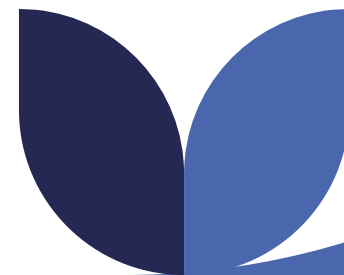
Territories **PR** **MP**

PRAMS currently covers about 81% of the births in the U.S.

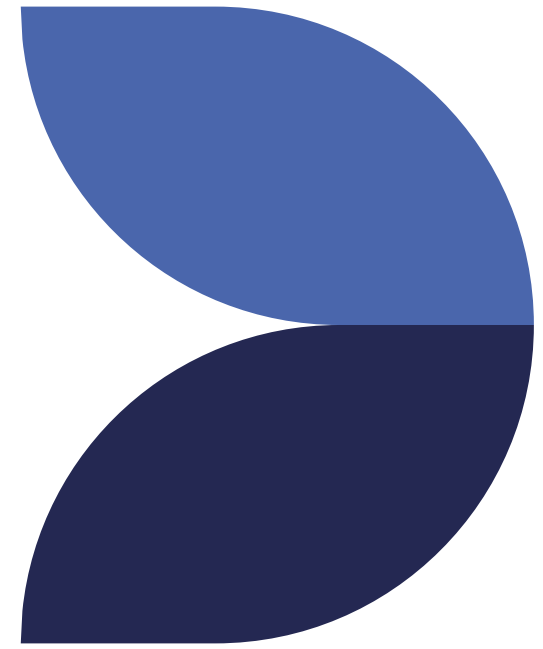


Why is PRAMS important?

- **Monitor changes** in maternal and child health indicators.
- **Enhances maternal/infant information** from birth certificates
- Used to **plan and review maternal and infant health program**
- Findings are **representative of the population** delivering live born infants
- **Allows comparisons** among participating sites



Scope of PRAMS



How is the PRAMS questionnaire designed?

- Every 5-7 years, PRAMS questionnaire is revised – marking a new version or “phase”
- CDC selects “core” questions that are required for inclusion in all states
- States select up to ~25 questions from “standard” list for additional questions
 - CDC develops standard question list (~300 options)
- States may develop their own “state-specific” questions, but must pilot test them prior to adding to survey



PRAMS “Phases”

- Approximately every 5 years, PRAMS questionnaire is revised – marking a new version or “phase”

Phase	Timeframe
1	Fall 1988 – Summer 1990
2	Fall 1990 – Summer 1995
3	Fall 1995-1999
4	2000-2001
4 Mini-revision	2002-2003
5	2004-2008
6	2009-2011
7	2012-2015
8	2016-2022
9	2023-TBD



PRAMS Core Questionnaire Topics

General Core Topics

Preconception healthcare
Prenatal care
Postpartum visits
Postpartum depression symptoms
Insurance at different times
Tobacco Use
Alcohol Use
Pregnancy intention
Postpartum contraception
Breastfeeding
Infant sleep practices

Additional Phase 9 Core Topics

- Disability
- Postpartum warning signs education
- Postpartum anxiety symptoms
- Transportation
- Food insecurity
- “Stressful Life Events” series
- Racism & discrimination
- E-cigarettes/vaping



PRAMS “Supplements”

Topic	Year	# of PRAMS Sites
COVID-19 experiences	2020	34
Disability	2019 – 2020	25
Prescription Opioid use	2019	32
Marijuana & prescription drug use	2017	10
Zika	2016 – 2017	22
History of Breast & Ovarian Cancer	2016 – 2020	4
E-cigarette use	2015	2
H1N1 Influenza & Seasonal Influenza	2009	30

To address emerging issues, CDC develops supplemental questionnaires outside of routine “phase” revisions

<https://www.cdc.gov/prams/questionnaires-supplemental.html>



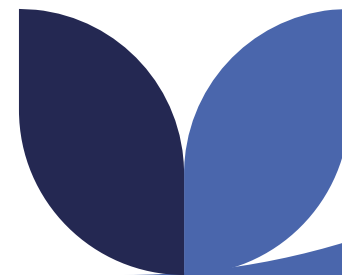
How are PRAMS participants selected?

- States randomly sample **birth certificates** in monthly “batches”
- Illinois Sample =
 - ~178 birth certificates sampled monthly
 - ~1,284 total survey responses annually
- Address from birth certificate used for mail phase
- Phone numbers:
 - Obtained from I-CARE (Illinois Comprehensive Automated Immunization Registry Exchange)
 - If not in I-CARE, then searched in Cornerstone (DHS data system)



How does PRAMS contact participants?

- Pre-letter
- Mail 1st Questionnaire packet 2-4 months after delivery
- “Tickler” (7-10 days after 1st questionnaire packet)
- 2nd Questionnaire packet (7-14 days later)
- 3rd Questionnaire packet (7-14 days later)
- **Phone phase** begins after woman has not responded to three mailed surveys
- Data collection closes 94 days after pre-letter sent
- Rewards/Incentives provided by some states
 - *Illinois gives \$25 diaper gift card to respondents*



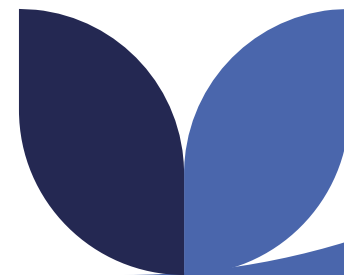
PIDS

PRAMS

Integrated

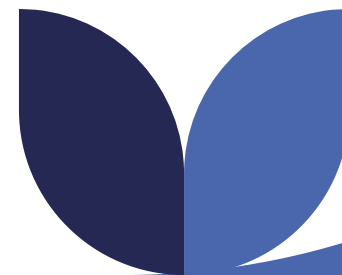
Data-collection

System



How well does PRAMS reach selected participants?

- CDC requires minimum response rate of 50%
- Illinois' current response rate ~56.7% compared to the national rate of ~50%
- Illinois strategies to reach participants and obtain response
 - Survey mailings are colorful and use IDPH logo
 - WIC partnership to get updated addresses and phone numbers
 - Up to 15 calls before respondent is considered lost to follow-up
 - Illinois diaper gift card rewards
 - Partnered with City of Chicago Health Department to add an outreach letter with pre-letter and tickler



How often are PRAMS data released?

- **Annually**
 - based on year of birth cohort
- **Most recent data file is usually lagging ~2 years**
 - 2021 data file is latest data available for Illinois
- ***Why the delay?!?!?!?***
 - CDC needs final annual birth certificate file to weight dataset (usually finalized ~1 year after *end* of calendar year)



What are the **limitations** of PRAMS?

Representativeness

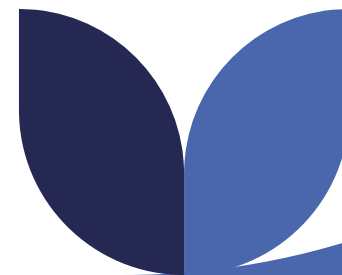
- **Not all states participate: true national estimates not possible**
- **Data are representative only at STATE-level**
 - CDC policy: based on sampling design and weighting
 - Analysis for smaller geographies may be possible if jurisdiction works with CDC statistician to verify representativeness
- **Does not include fetal deaths, spontaneous abortions, or induced abortions**
 - Representative only of live births
 - Not representative of all pregnancies
- **PRAMS cannot study rare outcomes** (e.g., infant mortality)



What are the **limitations** of PRAMS?

Accuracy & Timeliness

- **Retrospective, self-reported data**
 - Recall bias
 - Reporting biases (e.g., social desirability)
- **Time frame for data collection limited**
 - Cannot look at outcomes beyond 3-4 months postpartum
- **Lag time for data availability ~2 years**



What are the strengths of PRAMS?

- Representative data
- Consistent data
- Flexible data
- Unique data
- Self-Reported data
- Actionable data



Accessing and Interpreting PRAMS



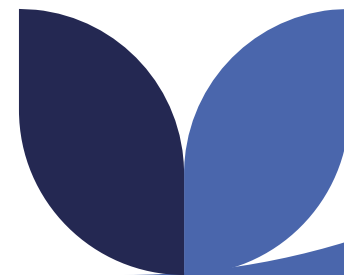
How do I access PRAMS data?

Illinois PRAMS

- <https://dph.illinois.gov/data-statistics/pregnancy-risk-assessment-monitoring-system.html>

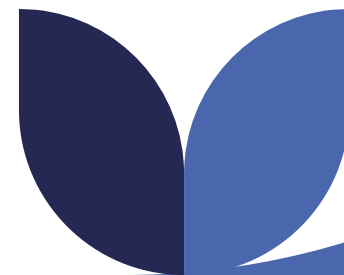
CDC PRAMS

- State-by-state pre-prepared data tables:
<https://www.cdc.gov/prams/prams-data/selected-mch-indicators.html>
- Requesting research data files:
<https://www.cdc.gov/prams/prams-data/researchers.htm>



How do I interpret PRAMS data?

- Weighted prevalence
 - **Weighted**: Adjusts the sample to match the whole population
 - **Prevalence**: Proportion of the population who have a specific characteristic or outcome in a given time period
- Considered an estimate due to the survey design
 - **Confidence Intervals**: show how reliable the estimate is
- Population: “women with a recent live birth”, “new mothers”, “postpartum women”, “postpartum individuals”



Interpretation Example

“In Illinois, 13.1% (11.5-15.4) of women with a recent live birth had depression in the three months before becoming pregnant.”



Live Tutorial

<https://dph.illinois.gov/data-statistics/pregnancy-risk-assessment-monitoring-system.html>



Other Use Considerations

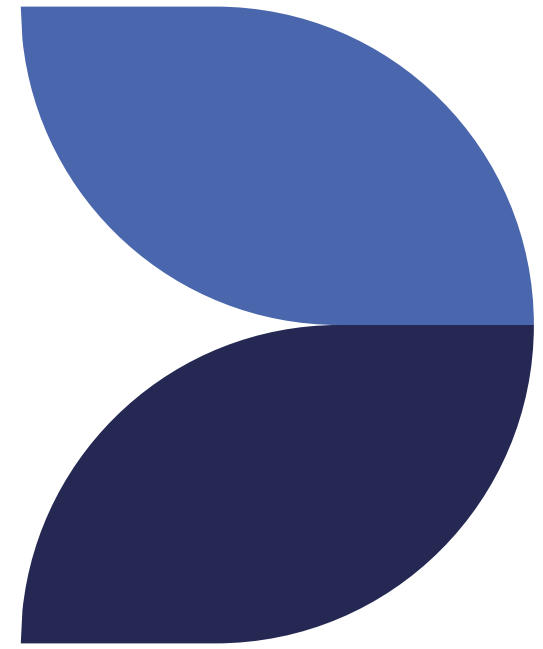
How do I cite PRAMS?

Illinois Department of Public Health, Division of Health Data and Policy. (2022). *2020 Illinois PRAMS Annual Report*. Retrieved from https://dph.illinois.gov/content/dam/soi/en/web/idph/publications/idph/data-and-statistics/prams/2020/2020-Illinois-PRAMS-Detailed-Data-Tables_5-12-2022.pdf

***CDC and IDPH are always interested in how PRAMS data are being used by partners.
Please consider reaching out to Eric if you have a data to action story to share!***



Data to Action Examples



Example 1

Organization: University of Illinois at Chicago, Center for Research on Women and Gender

Use: Needs assessment

Topic: Experiencing homelessness

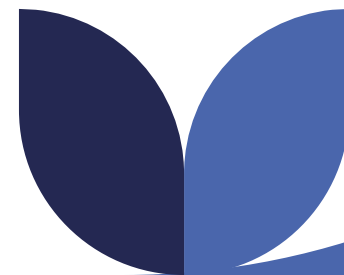


Example 2

Organization: Illinois Department of Public Health and other state agencies

Use: Public awareness campaign

Topic: Safe infant sleep



Illinois Safe Sleep Support Campaign

Illinois Safe Sleep Support is a cross-agency campaign for families in Illinois to:

- learn about the safest ways for their babies to sleep
- get answers to their sleep safety questions
- get access to items they need to keep their babies safe

4 ways to keep your baby safe while they sleep

MAKE SURE THEY ARE:

- 1 ALONE**
Babies should sleep alone—no blankets, toys, bumpers, stuffed animals or other people
- 2 ON THEIR BACK**
Always place your baby on their back, not their side or stomach, to sleep
- 3 IN A CRIB**
Use a bassinet or crib with a flat, firm surface and tight-fitted sheet for sleep
- 4 IN A SMOKE FREE PLACE**
Nobody should smoke around your baby or in the room where they sleep

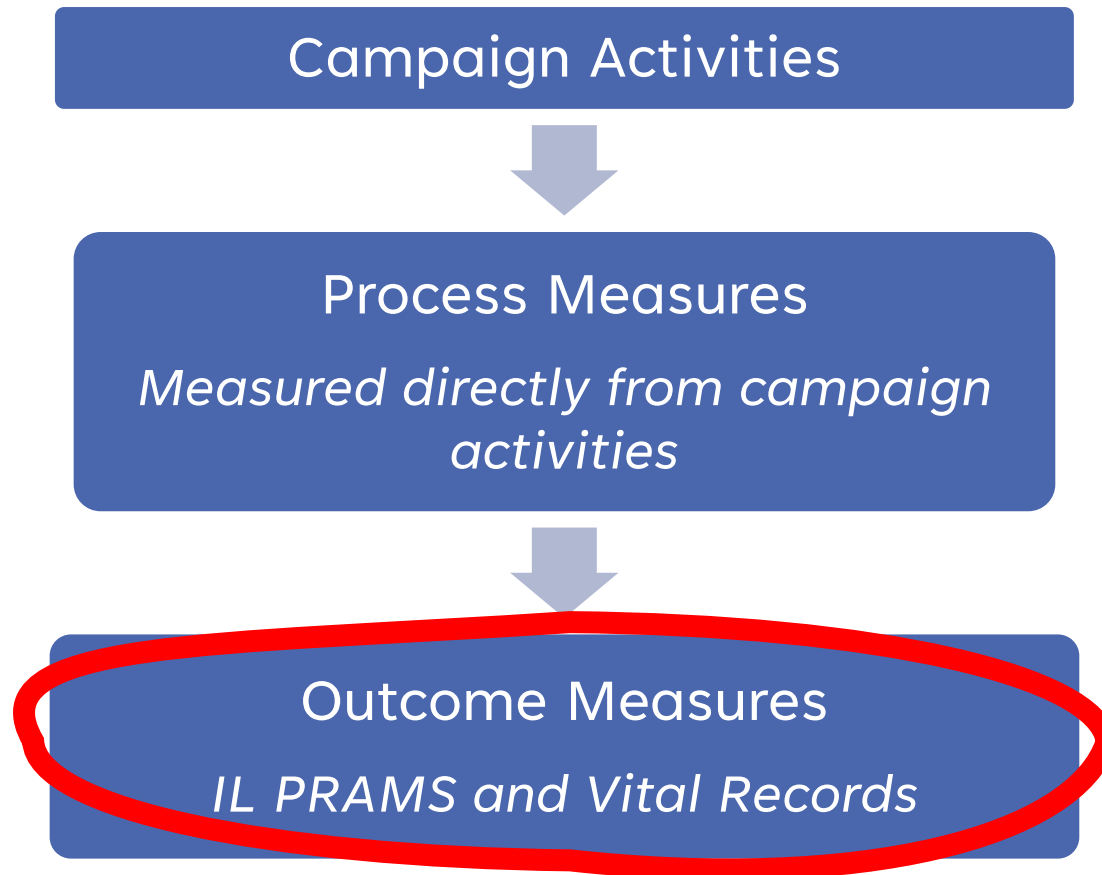
• To learn about how to safely use swaddles and sleep sacks, go to our website.

Illinois Safe Sleep Support
We can save lives by following proven safe sleep practices.
For resources, support and more, go to InfantSafeSleep.illinois.gov



Utilizing PRAMS Data to Evaluate Campaign Impact

PRAMS as a long term **outcome measure**



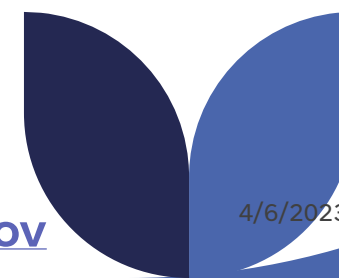
PRAMS in Campaign Evaluation

PRAMS Question	Response Options	Outcome	Definition
In which position do you <i>most often</i> lay your baby down to sleep now?	Back Side Stomach	% of infants put to sleep on their back	Response of “on their back”
In the <i>past 2 weeks</i> , how often has your new baby slept alone in his or her own crib or bed? (Always or Often)	Always Often Sometimes Rarely Never	% of infants put to sleep on a separate safe sleep surface	Response “always” OR “often”



PRAMS in Campaign Evaluation

PRAMS Question	Response Options	Outcome	Definition
How did your new baby usually sleep in the <u>past 2 weeks</u>? (Yes/No to each)	A. In a crib, bassinet, or pack and play	% of infants put to sleep with no loose bedding or objects	Response of No to F OR G
	B. On a twin or larger mattress or bed		
	C. On a couch, sofa, or armchair		
	D. In an infant car seat or swing		
	E. In a sleeping sack or wearable blanket	% of infants put to sleep with no bumper pads	Response of No to H
	F. With a blanket		
	G. With toys, cushions, or pillows, including nursing pillows		
	H. With crib bumper pads (mesh or non-mesh)		



Example 3

Organization: Illinois Perinatal Quality Collaborative

Use: Informing a quality improvement initiative

Topic: Immediate postpartum long-acting reversible contraception



Q & A



To Ask a Question

Chat

Use the chat function to type in your question for the presenters

Raise Your Hand To Ask Your Question Verbally

Click on reactions → raise your hand

Once called upon, unmute your line and ask your questions



Evaluation

We have built in a couple of minutes to complete the evaluation.

https://uic.ca1.qualtrics.com/jfe/form/SV_8jktCyXICNN4nJA



For More Information

Illinois PRAMS homepage:

<https://dph.illinois.gov/data-statistics/pregnancy-risk-assessment-monitoring-system.html>

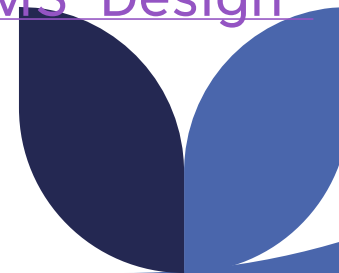
CDC PRAMS homepage:

<https://www.cdc.gov/prams/index.htm>

Paper on PRAMS methodology:

Shulman H, D'Angelo DV, Harrison L, Smith RA, and Warner L (2018 Oct). The Pregnancy Risk Assessment Monitoring System (PRAMS): Overview of Design and Methodology. *American Journal of Public Health, 108*(10): 1305-1313.

<https://www.cdc.gov/prams/pdf/methodology/PRAMS-Design-Methodology-508.pdf>



Thank You!

If you have additional questions, please contact Abby Holicky at holicky2@uic.edu.

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