PRAMS Reproducible Report for GA in 2020

Example Report from TIDAL Course - Summer 2025

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## Pregnancy Risk Assessment Monitoring System (PRAMS)

[PRAMS](https://www.cdc.gov/prams/about/index.html) is “an ongoing, site-specific, and population-based surveillance system. PRAMS is designed to identify groups of women and infants at high risk for health problems, to monitor changes in health status, and to measure progress towards goals in improving the health of mothers and infants.”

* You can request access to the data from the [CDC’s PRAMS Portal](https://www.cdc.gov/prams/php/data-research/index.html).
* Here is the link to the PRAMS codebook for [Phase 8 Automated Research File Codebook](https://www.cdc.gov/prams/php/data-research/codebooks-phase-8.html).

For this example report we will be looking at these variables from the PRAMS 8 dataset:

* BF5EVER - Breastfeed ever
* VITAMIN - Multivitamin – # of times /wk
* MAT\_AGE\_PU - Maternal age grouped

Specifically, we will try to replicate the statistics for the [Selected 2016-2022 Maternal and Child Health (MCH) Indicators](https://www.cdc.gov/prams/php/data-research/mch-indicators-by-site.html) for GA from any of the years from 2017-2021 which had metrics reported for GA.

### MCH Indicators for GA between 2017-2021 for “Ever Breastfed”.

Here are the Maternal and Child Health (MCH) Indicators for GA between 2017-2021 for “Ever Breastfed”.

Ever Breastfed

| Year | Unweighted Total Sample | Unweighted Frequency | Weighted % | Lower 95% Confidence Interval | Upper 95% Confidence Interval |
| --- | --- | --- | --- | --- | --- |
| 2017 | 919 | 749 | 85.2 | 81.6 | 88.2 |
| 2018 | 735 | 605 | 83.0 | 79.2 | 86.3 |
| 2019 | 766 | 615 | 79.8 | 75.8 | 83.2 |
| 2020 | 677 | 563 | 81.2 | 77.1 | 84.7 |
| 2021 | 757 | 590 | 79.8 | 75.9 | 83.3 |

### Estimates for “Ever Breastfed” in GA in 2020.

Here are the estimates computed using the survey package and the gtsummary package to make a nicely formatted table.

| **Characteristic** | **Weighted total (N)** | **Weighted Count***1* | **95%CI** |
| --- | --- | --- | --- |
| BF5EVER.f | 115,953 | 94,126 (81%) | 77.1-84.7 |
|     Unknown |  | 1,987 |  |
| *1*n (%) |

### MCH Indicators for GA between 2017-2021 for “Multivitamin use 4+ times a week during the month before pregnancy”.

Here are the Maternal and Child Health (MCH) Indicators for GA between 2017-2021 for “Multivitamin use 4+ times a week during the month before pregnancy”.

Multivitamin use 4+ times a week during the month before pregnancy

| Year | Unweighted Total Sample | Unweighted Frequency | Weighted % | Lower 95% Confidence Interval | Upper 95% Confidence Interval |
| --- | --- | --- | --- | --- | --- |
| 2017 | 953 | 298 | 31.1 | 26.1 | 34.5 |
| 2018 | 766 | 280 | 35.9 | 31.6 | 40.4 |
| 2019 | 783 | 278 | 38.3 | 34.0 | 42.7 |
| 2020 | 690 | 247 | 35.9 | 31.5 | 40.7 |
| 2021 | 781 | 328 | 41.1 | 36.7 | 45.6 |

### Estimates for “Multivitamin use 4+ times a week during the month before pregnancy” in GA in 2020.

Here are the estimates computed using the survey package and the gtsummary package to make a nicely formatted table.

| **Characteristic** | **Weighted total (N)** | **Weighted Count***1* | **95%CI** |
| --- | --- | --- | --- |
| VITAMIN\_4plus.f | 117,577 |  | 31.5-40.7 |
|     3x/week or less |  | 75,314 (64%) |  |
|     4x/week or more |  | 42,264 (36%) |  |
|     Unknown |  | 363 |  |
| *1*n (%) |

### Logistic Regression - Breastfed Ever by Maternal Age and Multivitamin Use

Look at predicting “Ever Breastfed” by multivitamin use and maternal age.

#### Unweighted Model - not adjusted for complex survey sampling weights

| **Characteristic** | **OR***1* | **95% CI***1* | **p-value** |
| --- | --- | --- | --- |
| Maternal age grouped | 1.10 | 1.06, 1.14 | <0.001 |
| VITAMIN\_4plus.f |  |  |  |
|     3x/week or less | — | — |  |
|     4x/week or more | 2.78 | 1.65, 4.93 | <0.001 |
| *1*OR = Odds Ratio, CI = Confidence Interval |

#### Weighted Model - adjusted for complex survey sampling weights

Weighted Model for Ever Breastfed by Age and Multivitamin Use

|  | Beta | SE Beta | Odds Ratio | p-value |
| --- | --- | --- | --- | --- |
| Intercept | -1.4192621 | 0.6957435 | 0.2418924 | 0.0417492 |
| Maternal Age | 0.0933435 | 0.0260497 | 1.0978387 | 0.0003639 |
| Multivitamin 4x/wk or more | 1.1739233 | 0.3343134 | 3.2346582 | 0.0004755 |