Using Data to Understand Breastfeeding Equity in the California WIC Program

Susan Sabatier, MA and Jen Goldbronn, MAS, RD, CLC
California Department of Public Health
Women, Infants and Children Division

7th Annual California Breastfeeding Summit
Anaheim, CA
January 25, 2017
Outline

• WIC Background
  – How WIC is structured
  – How WIC measures breastfeeding

• WIC Breastfeeding Data
  – Trends between 2012-2016
  – 2016 Breastfeeding Statistics

• MIHA WIC Data 2013-14
  – MIHA WIC Snapshots
  – County and Region WIC Breastfeeding data

• Collaborating with WIC
  – WIC Research Review Process

• WIC Program Updates
California WIC Structure

CDPH WIC Division

83 Local Agencies
~ 575 WIC sites

41 Non-profit Agencies

42 County Agencies
Map of Local WIC Clinics

Legend
- WIC Clinics
Measuring Breastfeeding in WIC

WIC Breastfeeding Measure:
Infant WIC food package is a proxy

- Fully (Exclusive) Breastfeeding
- Mostly Breastfeeding
- Some Breastfeeding
- Formula feeding
“Any” Breastfeeding Defined

Any Breastfeeding

- Partial
  - Some = higher amount formula
- Fully
  - Mostly = small amount formula
  - No formula
Any and Fully Breastfeeding Trends at 3, 6 and 11 Months 2012-2016
Any Breastfeeding at 3, 6 and 11 Months, 2012-2016

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January 2012 through December 2016.
Fully Breastfeeding at 3, 6 and 11 Months, 2012-2016

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January 2012 through December 2016.
Any and Fully Breastfeeding Trends by Race/Ethnicity
2012-2016
California WIC Infants by Racial/Ethnic Group
Annual Monthly Average
January-December 2016

Percentages based on a total average monthly count of 244,915 infants.

- Hispanic: 74.7%
- Non-Hispanic White: 8.8%
- Non-Hispanic African American: 6.1%
- Non-Hispanic Asian: 6.0%
- Other or Not Reported: 0.6%
- Non-Hispanic Multiple Race: 3.8%

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: Report for CY ending December 2016
3 Month Old *Any* Breastfeeding Trends by Race and Ethnicity

**Graph Description:**
- The graph illustrates the percentage of 3-month-old infants receiving any breastfeeding by race and ethnicity from 2012 to 2016.
- The data is sourced from California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January 2012 through December 2016.

**Legend:**
- **Blue Line:** Hispanic
- **Red Line:** Non-Hispanic African Americans
- **Green Line:** Non-Hispanic Asians
- **Purple Line:** Non-Hispanic Whites

**Percentage Data:**
- **Hispanic:**
  - 2012: 44.9%
  - 2013: 45.1%
  - 2014: 47.0%
  - 2015: 46.9%
  - 2016: 48.4%
- **Non-Hispanic African Americans:**
  - 2012: 33.7%
  - 2013: 34.4%
  - 2014: 36.0%
  - 2015: 35.4%
  - 2016: 35.8%
- **Non-Hispanic Asians:**
  - 2012: 41.5%
  - 2013: 44.5%
  - 2014: 45.7%
  - 2015: 45.4%
  - 2016: 45.4%
- **Non-Hispanic Whites:**
  - 2012: 47.9%
  - 2013: 48.7%
  - 2014: 49.8%
  - 2015: 49.7%
  - 2016: 49.5%
3 Month Old *Fully* Breastfeeding Trends by Race and Ethnicity

![Graph showing breastfeeding trends by race and ethnicity from 2012 to 2016.]

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January 2012 through December 2016.
6 Month Old *Any* Breastfeeding Trends by Race and Ethnicity

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January 2012 through December 2016.
Any and Fully Breastfeeding Trends by Ethnicity and Language Preference 2012-2016
California WIC Infants by Ethnicity and Language Preference, Annual Monthly Average January-December 2016

Percentages based on a total average monthly count of 244,915 infants.

- Hispanic, Prefers Spanish: 25.9%
- Non-Hispanic, Prefers English: 22.2%
- Hispanic, Prefers English: 48.6%
- Other: 3.3%

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: Report for CY ending December 2016
3 Month Old *Any* Breastfeeding Trends by Ethnicity & Language Preference

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January 2012 through December 2016.
3 Month Old *Fully* Breastfeeding Trends by Ethnicity & Language Preference

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section; MPCF Files January 2012 through December 2016.
6 Month Old *Any* Breastfeeding Trends by Ethnicity & Language Preference

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January 2012 through December 2016.
Breastfeeding Data by Feeding Choice
Monthly Annual Average
2016
WIC Breastfeeding Rates by Infant Age and Feeding Choice, 2016

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January through December 2016
WIC Breastfeeding Rates by Age of Mother, 2016

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January through December 2016
WIC Breastfeeding Rates by Urban/Rural Residence, 2016

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January through December 2016
Any Breastfeeding at 3 months

Annual State Average: 52.3%

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January through December 2016
Any Breastfeeding at 6 months

Annual State Average: 41.5%

Source: California Department of Public Health; Women, Infants & Children Division; Data Analysis, Research & Evaluation Section: MPCF Files January through December 2016
WIC MIHA Snapshots 2013-14
Release of Statistical MIHA Products for WIC Program

- MIHA Data Snapshots, 2013-2014 for the WIC Program, key indicators of maternal and infant health:
  - Statewide by WIC status (WIC participant, eligible nonparticipant, not eligible)
  - Statewide prenatal WIC participants by race/ethnicity, income, age, prenatal health insurance, education, total live births, level of neighborhood poverty, geographic area (urban, rural/frontier)
  - County prenatal WIC participants compared to State prenatal WIC participants, 35 counties
The Maternal and Infant Health Assessment (MIHA) is an annual population based survey of women with a recent live birth with a sample size of n=13,963 in 2013-14. Percentages and 95% confidence intervals are weighted to represent all women with a live birth from 2013 through 2014 in California.
# Statewide Prenatal WIC Participants: Indicators by Race/Ethnicity

**MIHA Data Snapshot, Prenatal WIC Participants by Race/Ethnicity, 2013-2014**

**Maternal and Infant Health Assessment (MIHA) Survey**

<table>
<thead>
<tr>
<th>Health Status before Pregnancy</th>
<th>California</th>
<th>Hispanic</th>
<th>Black</th>
<th>White</th>
<th>Asian/Pacific Islander</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>259,300</td>
<td>181,600</td>
<td>19,700</td>
<td>35,000</td>
<td>18,800</td>
</tr>
<tr>
<td>In good to excellent health</td>
<td>88.7</td>
<td>87.6</td>
<td>86.9</td>
<td>92.3</td>
<td>93.7</td>
</tr>
<tr>
<td>Chronic conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes†</td>
<td>3.2</td>
<td>3.0</td>
<td>2.7</td>
<td>1.0</td>
<td>7.9†</td>
</tr>
<tr>
<td>Hypertension†</td>
<td>2.5</td>
<td>1.8</td>
<td>6.7</td>
<td>2.4</td>
<td>3.5†</td>
</tr>
<tr>
<td>Asthma†</td>
<td>8.4</td>
<td>6.2</td>
<td>19.0</td>
<td>15.7</td>
<td>3.7†</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nutrition and Weight</th>
<th>California</th>
<th>Hispanic</th>
<th>Black</th>
<th>White</th>
<th>Asian/Pacific Islander</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily folic acid use, month before pregnancy</td>
<td>22.9</td>
<td>21.9</td>
<td>21.1</td>
<td>21.8</td>
<td>34.9</td>
</tr>
<tr>
<td>Overweight before pregnancy</td>
<td>28.5</td>
<td>30.3</td>
<td>25.6</td>
<td>26.7</td>
<td>15.3</td>
</tr>
<tr>
<td>Obese before pregnancy</td>
<td>25.6</td>
<td>30.8</td>
<td>27.8</td>
<td>22.2</td>
<td>10.5</td>
</tr>
<tr>
<td>Inadequate weight gain during pregnancy</td>
<td>20.8</td>
<td>22.3</td>
<td>16.0</td>
<td>11.1</td>
<td>31.6</td>
</tr>
<tr>
<td>Excessive weight gain during pregnancy</td>
<td>39.0</td>
<td>35.8</td>
<td>50.2</td>
<td>51.0</td>
<td>30.3</td>
</tr>
<tr>
<td>Food insecurity during pregnancy</td>
<td>25.5</td>
<td>25.7</td>
<td>24.9</td>
<td>29.7</td>
<td>18.6</td>
</tr>
</tbody>
</table>

The Maternal and Infant Health Assessment (MIHA) is an annual population based survey of women with a recent live birth with a sample size of n=13,963 in 2013-14. Percentages and 95% confidence intervals are weighted to represent all women with a live birth from 2013 through 2014 in California.
County Prenatal WIC Participants Compared to State Prenatal WIC Average

The Maternal and Infant Health Assessment (MIHA) is an annual population based survey of women with a recent live birth with a sample size of n=13,963 in 2013-14. Percentages and 95% confidence intervals are weighted to represent all women with a live birth from 2013 through 2014 in California.

**MIHA Data Snapshot, Prenatal WIC Participants Alameda County, 2013-2014**

Maternal and Infant Health Assessment (MIHA) Survey

<table>
<thead>
<tr>
<th>Health Status Before Pregnancy</th>
<th>Alameda County Prenatal WIC Participants</th>
<th>California Prenatal WIC Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>95% CI</td>
</tr>
<tr>
<td>In good to excellent health</td>
<td>93.2</td>
<td>90.2 - 96.2</td>
</tr>
<tr>
<td>Chronic conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes†</td>
<td>2.6</td>
<td>0.5 - 4.6</td>
</tr>
<tr>
<td>Hypertension†</td>
<td>2.3</td>
<td>0.3 - 4.2</td>
</tr>
<tr>
<td>Asthma†</td>
<td>8.7</td>
<td>4.2 - 13.3</td>
</tr>
</tbody>
</table>

**Nutrition and Weight**

<table>
<thead>
<tr>
<th></th>
<th>Alameda County Prenatal WIC Participants</th>
<th>California Prenatal WIC Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily folic acid use, month before pregnancy</td>
<td>30.1</td>
<td>22.4 - 37.8</td>
</tr>
<tr>
<td>Overweight before pregnancy</td>
<td>30.1</td>
<td>22.1 - 38.1</td>
</tr>
<tr>
<td>Obese before pregnancy</td>
<td>24.5</td>
<td>17.2 - 31.7</td>
</tr>
<tr>
<td>Inadequate weight gain during pregnancy</td>
<td>28.0</td>
<td>19.3 - 36.6</td>
</tr>
<tr>
<td>Excessive weight gain during pregnancy</td>
<td>37.5</td>
<td>28.6 - 46.4</td>
</tr>
<tr>
<td>Food insecurity during pregnancy</td>
<td>26.2</td>
<td>19.4 - 33.0</td>
</tr>
</tbody>
</table>

**Intimate Partner Violence (IPV) and Depressive Symptoms**

<table>
<thead>
<tr>
<th></th>
<th>Alameda County Prenatal WIC Participants</th>
<th>California Prenatal WIC Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical or psychological IPV during pregnancy</td>
<td>7.3</td>
<td>4.0 - 10.6</td>
</tr>
<tr>
<td>Prenatal depressive symptoms</td>
<td>21.4</td>
<td>14.5 - 28.4</td>
</tr>
<tr>
<td>Postpartum depressive symptoms</td>
<td>12.9</td>
<td>7.2 - 18.6</td>
</tr>
</tbody>
</table>
Exclusive Breastfeeding at 3 months postpartum among Prenatal WIC Participants, for 35 counties, MIHA 2013-2014

The Maternal and Infant Health Assessment (MIHA) is an annual population based survey of women with a recent live birth with a sample size of n=13,963 in 2013-14. Percentages and 95% confidence intervals are weighted to represent all women with a live birth from 2013 through 2014 in California.
Collaborating with WIC: Conducting Research in WIC
Criteria Used to Evaluate Research

1. Study benefits the WIC participant or WIC Program
2. Study safeguards participant dignity, autonomy, confidentiality and privacy.
3. Time, space or other requested local agency resources are clearly described and acceptable.
4. Review and approval processes are clearly understood including intellectual property rights for any products/publications.
5. Proposal is methodologically sound such that results can be measured and are meaningful.
WIC Research Review Process

• Contact your local agency (LA) WIC director.
• If supported by the LA, a brief synopsis of the research will be submitted to the State for review.
• If State supports the study, researchers will complete a research concept form which provides more detailed information about the study.
• If concept is approved, research will need to be approved by CDPH’s IRB committee.
Introducing...

breastfeeding performance measures!
WIC Program Updates

Picture Source: United States Breastfeeding Committee
WIC Program Updates

Consistent, evidence-based breastfeeding messages
WIC Program Updates

Number of Regional Breastfeeding Liaisons (RBLs) has doubled!
Questions??

Susan Sabatier, Data Analysis, Research and Evaluation Chief, at Susan.Sabatier@cdph.ca.gov

Jen Goldbronn, WIC State Breastfeeding Coordinator, at Jen.Goldbronn@cdph.ca.gov

Pat Gradziel, Research Specialist, at Pat.Gradziel@cpdh.ca.gov