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Perinatal/Infant Health
Population Domain Overview – Quantitative Data Indicators
Working Document – Intermediate Product

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This working document was prepared initially as part of the ongoing process of the 2025 Title V Maternal and Child Health (MCH) Needs Assessment. It was intended as an intermediate product for use during a meeting of the Needs Assessment Advisory Committee and invited guests for the following planning purposes:

1. To give a broad overview of the perinatal population and infants in Hawaii based on secondary (already available publicly), quantitative (numbers-based) data,
2. To support efforts to "narrow" the amount of quantitative data that will be presented to larger audiences, and
3. To guide planning for next steps in collecting new data (including qualitative, words-based information from focus groups, listening sessions, interviews) to supplement what is already available to tell a more comprehensive story.

The data presented in this document are to help participants find and prioritize gaps in knowledge that are important to fill during the 2025 Title V MCH Needs Assessment process to more fully understand the health and well-being of the perinatal and infant populations in Hawaii, including disparities (differences) in outcome by sociodemographic characteristics. When reviewing, please note any information you feel is missing or incomplete, including topics, geographic areas, or subgroups of people who are not fully or accurately reflected in the numbers. Also, consider which of these indicators you believe are critical or essential for monitoring the status of this population domain and for guiding the work of programs that serve them.

NOTE: This is not a final product! Additional information will be gathered and more concise summary products will be prepared later in the needs assessment process.

I.   Data Sources, Indicator Selections, Methodology, and Limitations

A.   Data Sources

These data are compiled from the Hawaiʻi Health Data Warehouse, Hawaiʻi Health Matters website, and resources provided by the federal Maternal and Child Health Bureau (MCHB) as supports to state and jurisdictional Title V MCH programs. These sites gather the data from national and state surveys and other sources, such as the American Community Survey (ACS); National Survey of Children's Health (NSCH); Pregnancy Risk Assessment Monitoring System (PRAMS); Youth Risk Behavior Surveillance System (YRBSS); Behavioral Risk Factor Surveillance System (BRFSS); and the Hawaii State Department of Human Services, Vital Statistics (NVSS).

B.   Indicator Selection for Inclusion

All performance and outcome measures that the MCHB requires state and jurisdictional Title V MCH programs to report were included in this review. Additional quantitative indicators from previous needs assessment processes and social determinants of health were included.

C.   Methodology

Data resources provided by the MCHB were supplemented with source data from the Hawai'i Health Data Warehouse and Hawai'i Health Matters to allow for disaggregation by important sociodemographic factors, including relevant Hawaii race/ethnicity categories and county, to better identify disparities in outcomes.

Quantitative data were reviewed in a two-step process and then presented in both synthesized and detailed formats in this document.

Step 1. Trends
- Presented most recently available year of data as indicator value.
- Compared Hawaii value with U.S. overall value to identify whether Hawaii value is higher (and better or worse), lower (and better or worse), or about the same as U.S. overall value.
- Reported state trends over time when available (at least 4 data points) to identify whether Hawaii values are trending higher (and better or worse), trending lower (and better or worse), or are about the same over the time period.
- Noted whether trends are statistically significant; also presented non-statistically significant trends as they are important to monitor related to overall progress and identification of disparities.
- Reported Hawaii vs. U.S. overall comparisons and state trends over time based on analyses presented on Hawai'i Health Matters website or in resources provided by the MCHB.

Step 2: Disparities
- Accessed MCHB-required indicators in their original data sources from the Hawai'i Health Data Warehouse (except the National Survey of Children's Health, which is unavailable in the Hawai'i Health Data Warehouse) so that Hawaii race/ethnicity categories and county could be considered.
- Accessed additional indicators that were included in the review from the Hawai'i Health Data Warehouse.
- Stratified (disaggregated) data by sociodemographic characteristics (Hawaii race/ethnicity, Hispanic origin, poverty level, gender, and sexual orientation or gender minority) and county to identify disparities (when available).
- Identified disparities primarily based on analyses presented on Hawai'i Health Matters website.
- Compared confidence intervals between sociodemographic subgroup values to identify disparities if the Hawai'i Health Matters website did not present analyses.
- Combined multiple years of data when sample sizes were small or data were listed as unstable (when possible).

D.   Limitations of the Data and Analyses Caveats

While these data sources and sites provide an overview of the health of Hawaii's population, there are limitations to these data, which in turn limit the capacity for analysis. There are also important caveats to note about data analyses and reporting.

- Data are only as good as the source.
    - Values are based on national surveys and are limited by how the questions are worded, how they are asked, who responds, etc.
- Stratifiers were limited for some data and data sources.
    - Hawaii race/ethnicity and county were not available for all indicators.
- Sample size was small for some indicators, sociodemographic subgroups, and counties.
    - Some values were suppressed if they did not meet National Center for Health Statistics privacy standards and/or reliability standards.
    - Confidence intervals were often large, even when data were listed as "stable."
- All reported data, analyses, and syntheses should be interpreted with caution.
    - The data limitations may mask disparities that are actually present and/or may suggest disparities exist when they actually may not.
    - Numbers alone do not tell a full story – individual and group experiences should guide interpretation.

II.   Population at a Glance

A.   Population Estimates

There were 15,570 births in 2022, which is the fewest number of births in the past 22 years.[1] The crude birth rate in Hawaii in 2022 was 10.8 births per 1000 persons, which is lower compared to the nation. This value is decreasing over time, most notably since 2008. Birth rates are significantly higher for the following racial groups: AIAN (17.1), Black/African American (16.0), Chinese (12.7), Other Asian (17.4), Native Hawaiian (14.0), and Other Pacific Islanders (25.1). Birth rates are significantly lower for the following racial groups: Japanese (5.9) and Other races (1.7).[2] The fertility rate was consistent in 2022 at 58.9 births per 1000 women ages 15-44. In 2022, Kauai County had the highest rate at 63.1 per 1000, while Maui County had the lowest rate at 55.6 per 1000.[3]

B.   Economic Well-Being

Most young children ages 5 and under in Hawaii have health insurance coverage (93.7%).[4] In 2021-22, 15.6% of children ages 5 and under were living in households below the federal poverty level. While this is lower compared to the nation (18.9%), these measures may not account for Hawaii's higher cost of living.[5]

III.   Perinatal/Infant Health Data at a Glance

A four-quadrant graphic is used to "sort" indicators to support synthesis and review. This reduces the "overwhelmingness" of the data and provides a high-level summary for planning purposes. The quadrants are oriented as follows:

- **Upper left quadrant**: Positive trends (HI vs. U.S. and/or HI over time), no disparities observable based on available data [*NOTE*: This does not necessarily mean that no disparities exist.]
- **Upper right quadrant**: Positive trends (HI vs. U.S. and/or HI over time), but disparities observable in available data
- **Lower left quadrant**: Negative trends (HI vs. U.S. and/or HI over time), no disparities observable based on available data [*NOTE*: This does not necessarily mean that no disparities exist.]
- **Lower right quadrant**: Negative trends (HI vs. U.S. and/or HI over time), and disparities observable in available data

A two-quadrant graphic is also provided to identify indicators where trends are non-directional and for those with insufficient data to assess trends. The quadrants are oriented as follows:

- **Upper quadrant**: Similar trends (HI vs. U.S. and/or HI over time)
- **Lower quadrant**: Insufficient data to examine trends (HI vs. U.S. and/or HI over time

Numbers for the indicators in the graphics correspond to the detailed data tables in Section IV. An asterisk (*) is used to identify statistically significant trends in the four-quadrant graphic. A hashtag (#) is used in the two-quadrant graphic to identify indicators that have disparities observable in the available data.

Positive trends (HI vs. US and/or HI over time), no disparities observable based on available data *NOTE: This does not necessarily mean that no disparities exist.* 1. Infant mortality 3. Neonatal mortality 11. Breastfeeding initiation 13. Breastfeeding exclusively through 6 months	Positive trends (HI vs. US and/or HI over time), but disparities observable in available data 5. Preterm-related mortality 8. Preterm birth 12. Infants breastfeed at 8 weeks* 14. Safe sleep – infant placed on back
Negative trends (HI vs. US and/or HI over time), no disparities observable based on available data *NOTE: This does not necessarily mean that no disparities exist.* 2. Perinatal mortality 6. SUID mortality 10. Neonatal abstinence syndrome	Negative trends (HI vs. US and/or HI over time), and disparities observable in available data 7. Low birth weight 9. Early term birth 15. Safe sleep – separate approved sleep surface 16. Safe sleep – no soft bedding * = trends are statistically significant

Synthesis: In general, the perinatal and infant populations in Hawaii fare well on most indicators when compared to the nation and in state trends over time. However, outcomes are not equal for all infants across the 16 indicators reviewed. While 8 had positive outcomes compared to the nation or in state trends over time, 4 of those had disparities observable in available data. Further, 7 indicators had outcomes that were worse compared to the nation or in state trends over time, and 4 of those also had disparities observable in available data. (See graphic above.)

There was one additional indicators that had trends similar to the nation and/or over time, and it had disparities observable in available data. (See graphic below.)

Similar trends (HI vs. US and/or HI over time)
4. Post neonatal mortality#
Insufficient data to examine trends (HI vs. US and HI over time)
None
= Disparities observable in available data

Disparities, when present, were most frequently worse outcomes for individuals with lower incomes and for specific race/ethnic groups (especially Native Hawaiian, Other Pacific Islander, Filipino), and maternal age.

IV.   Detailed Perinatal/Infant Health Data

Detailed information for each included indicator of perinatal/infant health is presented following the format of the Hawai'i Health Matters website. This includes icons, color-coding, and descriptions according to the key presented below. In addition to trend comparisons, disparities noted in available data are also included, with descriptions of whether the observed values represent "better" or outcomes in a more desirable direction for the subgroup versus "worse" or outcomes in a less desirable direction. This is important to note because for some indicators "better" performance would be shown by a higher value (for example, percentage reporting good or better health status), while for others a higher value would suggest "worse" performance (for example, percentage overweight or obese). Data notes are included to provide context when data or subgroup data were unavailable or limited. Indicators marked with a double asterisk (**) in the tables are those required by the MCHB for all Title V MCH programs.

Trend Comparison Key

Icon	Description
Positive Trends	
	Higher and better
	Lower and better
	Increasing significantly, better
	Increasing, not significantly, better
	Decreasing significantly, better
	Decreasing, not significantly, better
No Difference	
	No difference
Negative Trends	
	Higher and worse
	Lower and worse
	Increasing significantly, worse
	Increasing, not significantly, worse
	Decreasing significantly, worse
	Decreasing, not significantly, worse

A.   Perinatal/Infant Health Indicators

1.   Morbidity and Mortality

	Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
					Better Outcome	Worse Outcome	Data Notes
1	Infant mortality** (NVSS, 2019-2021)	4.5 per 1,000	⬇	↘	None in available data.		Most races suppressed. Kauai suppressed.
2	Perinatal mortality** (NVSS, 2018-2020)	5.2 per 1,000	⬇	↗	None in available data.		No race or county data available.
3	Neonatal mortality** (NVSS, 2021)	3.2 per 1,000	⬇	↘	None in available data.		No racial or county data other than Oahu.
4	Post neonatal mortality** (NVSS, 2018-2020)	2 per 100,000	=	=	None in available data.	Maternal age <20 years: 6.4	No racial or county data available.
5	Preterm-related mortality** (NVSS, 2018-2020)	145.7 per 100,000	⬇	↘	None in available data.	Other public insurance: 346.3	No racial or county data available.
6	SUID mortality** (NVSS, 2020-2022)	0.6 per 1,000	⬇	↗	None in available data.		No racial or county data available.

** Indicator reported to Maternal and Child Health Bureau by all state and jurisdictional Title V Maternal and Child Health programs.

2.   Contributing Medical Factors

	Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
					Better Outcome	Worse Outcome	Data Notes
7	Low birth weight** (NVSS, 2022)	8.4%	⬇	↗	Hawaii: 6.3% Kauai: 4.8% Maui: 5.5% White: 5.8%	Filipino: 12.6%	Some races suppressed.
8	Preterm birth** (NVSS, 2022)	9.8%	⬇	↘	White: 6.7% Hawaii: 7.9% Kauai: 5.2% Maui: 5.1%	Native Hawaiian: 11.9% Filipino: 11.7% Oahu: 11.1%	Some races suppressed.

	Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
					Better Outcome	**Worse Outcome**	**Data Notes**
9	Early term birth** (NVSS, 2021)	29.0%	⬆	↗	Other Public Insurance: 26.4% Uninsured: 11.3%	Less than high school: 32.2%	No race or county data available.
10	Neonatal abstinence** syndrome (HCUP-SID, 2018-2020)	1.4 per 1,000	⬇	↗	None in available data.		Most data are suppressed. No racial or county data available.

** Indicator reported to Maternal and Child Health Bureau by all state and jurisdictional Title V Maternal and Child Health programs.

B. Perinatal/Infant Prevention and Health Behavior Indicators

1. Breastfeeding

	Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
					Better Outcome	**Worse Outcome**	**Data Notes**
11	Breastfeeding – initiation** (NIS, 2020)	89.2%	⬆	↗	None in available data.		No racial or county data available.
12	Infants still breastfeeding at 8 weeks (PRAMS, 2021)	80.9%	⬆	↗	Japanese: 98.1%	OPI: 61.5%	Some races suppressed.
13	Breastfeeding – exclusively through 6 months** (NIS, 2021)	26.6%	⬆	↗	None in available data.		No racial or county data available.

** Indicator reported to Maternal and Child Health Bureau by all state and jurisdictional Title V Maternal and Child Health programs.

2. Safe Sleep

	Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
					Better Outcome	**Worse Outcome**	**Data Notes**
14	Safe sleep – infant placed on back** (PRAMS, 2021)	83.0%	⬆	↗	Japanese: 92.0% White: 92.2% 186%+ poverty level: 90.0%	OPI: 56.0% 0-130% poverty level: 71.4%	None.

	Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
					Better Outcome	Worse Outcome	Data Notes
15	Safe sleep – separate approved sleep surface** (PRAMS, 2021)	27.7%	▼	↘		Uninsured: 6.7%	No racial or county data available.
16	Safe sleep – no soft bedding** (PRAMS, 2021)	52%	▼	↗	Maternal age 30-34 years: 62.7%	Medicaid: 41.1% Unmarried: 47.3	No racial or county data available.

** Indicator reported to Maternal and Child Health Bureau by all state and jurisdictional Title V Maternal and Child Health programs.

C. Social Determinants of Health Indicators

Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
				Better Outcome	Worse Outcome	Data Notes
Income						
Median household income (ACS, 2018-2022)	$94,814	▲	↗	Asian: $100,945	AIAN: $61,225 Black/African American: $80,207 Hispanic: $83,781 Native Hawaiian/ OPI: $77,146 Other: $79,084	Only race/ethnicity subgroups available.
Employment						
Unemployed workers in civilian labor force (U.S. Bureau of Labor Statistics, January 2024)	3.1%	▼	↗	NOT AVAILABLE		No subgroups available.

Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
				Better Outcome	Worse Outcome	Data Notes
Education						
People 25+ with a HS diploma or higher (ACS, 2018-2022)	92.7%	⬆	📈	Age: 25-34 years: 95.6% 35-44 years: 95.0% 45-64 years: 93.4%	Age: 65 and older: 88.2%	No differences between gender and race/ethnicity.
People 25+ with a Bachelor's degree or higher (ACS, 2018-2022)	34.7%	⬆	📈	Age: 35-44 years: 39.8% Females: 36.4% Asian: 36.2% White/non-Hispanic: 46.9%	Age: 65 and older: 32.6% Males: 33.0% Native Hawaiian/ OPI: 13.2% Two or More Races: 28.0% Other: 29.9%	Age 25-65+, gender, and race/ethnicity subgroups available.
Poverty						
People living below federal poverty level (ACS, 2018-2022)	9.6%	⬆	📉	Age: 25-44 years: 8.8% 45-64: 8.2% 65-74 years: 8.2% 75 years and over: 8.1% Asian: 6.4%	Age: under 6 years: 12.4% 6-11 years: 12.6% 12-17 years: 12.1% 18-24 years: 12.9% AIAN: 20.6% Hispanic: 12.1%	All ages, gender, and race/ethnicity subgroups available.

| | | | | Native Hawaiian/ OPI: 18.2% | | |

Indicator	Value	Comparison to U.S.	State Trend	Disparity description		
				Better Outcome	**Worse Outcome**	**Data Notes**
Below Asset Limited, Income Constrained, Employed (ALICE) threshold households (below federal poverty level + ALICE), 2022	44.0%	NOT AVAILABLE		25-44 Years: 46.0% 45-64 Years: 41.0% Married-Parent Household with Children: 30.0% Asian: 40.0% Two or More Races: 43.0% White: 43.0% Honolulu: 41.0% Kauai: 46.0%	Under age 25: 73.0% Single-Female-Headed Household with Children: 79.0% Single-Male-Headed Household with Children: 67.0% AIAN: 62.0% Black: 51.0% Hispanic: 51.0% Native Hawaiian/ Pacific Islander: 57.0% Maui: 49.0% Hawaii: 50.0%	Subgroups as presented in "ALICE in the Crosscurrents, 2024 update" except for county, which was accessed from https://www.unitedforalice.org/state-overview/Hawai%E2%80%98i
Households with cash public assistance income (ACS, 2018-2022)	4.0%			NOT AVAILABLE		No subgroups available.
Housing						
Renters spending 30% or more of household income on rent (ACS, 2018-2022)	55.8%			Age: 35-64 years: 49.9%	Age: 15-24 years: 75.5% 25-34 years: 60.7% 65 years and over: 59.1%	Age 15-65+ years available.

Indicator	Value	Comparison to U.S.	State Trend	Disparity description		Data Notes
				Better Outcome	Worse Outcome	
High housing burden (ACS, 2016-2020)	39.0%	▲ (red)	↘ (green)	NOT AVAILABLE		No subgroups available.
Severe housing problems (County Health Rankings, 2016-2020)	25.7%	▲ (red)	↘ (green)	NOT AVAILABLE		No subgroups available.
Homelessness rate (HI State Department of Human Resources, 2023)	43.2 per 10,000	▲ (red)	↘ (green)	NOT AVAILABLE		No subgroups available.
Food Security						
Food Environment Index (County Health Rankings, 2024)	7.4 (range = 0-10)	▼ (red)	↗ (green)	NOT AVAILABLE		No subgroups available.
Households that are food insecure (Food Security Supplement to the Current Population Survey, 2019-2021)	9.0%	▼ (green)	↘ (green)	NOT AVAILABLE		No subgroups available.
Access to Exercise						
Access to exercise opportunities (County Health Rankings, 2024)	91.7%	▲ (green)	↘ (red)	NOT AVAILABLE		No subgroups available.
Special Populations (No positive or negative designations applied to comparisons or state trends)						
Adults with a disability (BRFSS, 2022)	24.1%	Lower	Increasing significantly	Age: 25-34 years: 15.7% 35-44 years: 14.9% Bachelor's degree or higher: 17.5% Employed: 15.4%	Age: 65-74 years: 33.3% 75 years and over: 45.6% 9th-12th grade, no diploma: 40.7% 0-130% of FPL: 33.2% AIAN: 38.4%	All ages, education level, employment status, federal poverty level, race/ethnicity, sex, and sexual orientation subgroups available.

				Native Hawaiian: 28.8% Identifies as LGBQ: 34.5%
			186+% poverty level: 19.0%	

Indicator	Value	Comparison to U.S.	State Trend	Disparity description		Data Notes
				Better Outcome	**Worse Outcome**	
Population age 5+ with language other than English spoken at home (ACS, 2018-2022)	25.7%	Higher	Increasing, not significantly	NOT AVAILABLE		No subgroups available.
Sexual minority adults (BRFSS, 2022)	6.1%	NOT AVAILABLE	Increasing significantly	*"Better" and "worse" performance is not applicable in this indicator; however, disparities are recognized in certain subgroups.* Age: 18-24 years: 20.4% 45-54 years: 3.4% 65-74 years: 3.2% 75 years and over: 2.4% 0-130% poverty level: 9.9% Japanese: 2.4%		All ages, education level, employment status, federal poverty level, race/ethnicity, gender, and sexual orientations available.

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