Maine Maternal, Infant and Early Childhood Home Visiting (MIECHV) Needs Assessment Update

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INTRODUCTION

Purpose: Maine's Maternal, Infant and Early Childhood Home Visiting (MIECHV) Statewide Needs Assessment was designed to better understand the strengths and needs of families across the state of Maine. Its purpose is to:

- Identify counties and communities in Maine that would benefit from strengthened and/or expanded home visiting (HV) services;
- Explore how HV programs are meeting the needs of families across Maine;
- Highlight collaborative efforts between partners;
- Help determine future enhancements to the delivery and coordination of HV.

Scope: This needs assessment was funded by the federal Health Resources and Services Administration (HRSA). It focuses primarily on the evidence-based statewide HV program funded through HRSA's MIECHV grant, Maine Families. The other evidence-based HV program in Maine is Early Head Start. Some data from Early Head Start are also included, and information on other home-based services in Maine is included in the narrative.

Based on guidance from HRSA, the needs assessment is designed to:

- Identify counties and communities that include vulnerable and underserved populations;
- Assess the quality and capacity of existing evidence-based HV programs in Maine;
- Assess the capacity for substance use disorder (SUD) treatment and counseling in Maine, with a focus on pregnant and parenting women.

This needs assessment summarizes quantitative and qualitative data from all counties in Maine.

Process: The MIECHV needs assessment was a collaborative effort that involved gathering information from HV staff and participants, maternal and child health (MCH) experts, and health care and substance use providers.

Key indicators that reflect a comprehensive picture of the health and well-being of families in Maine were analyzed using data from national and state-level sources to identify counties that would most benefit from HV services. Town-level data were used to gain a better picture of the diversity within Maine's 16 counties.

Interviews were conducted with HV providers in all 16 counties to learn about the strengths and challenges facing families. We also conducted interviews with SUD treatment staff and providers to learn more about the availability of treatment and counseling options.

Two surveys were conducted to gather input from HV participants. A Maine Families Participants Satisfaction Survey was conducted in Spring 2019. This survey provided us with information on participants' perspectives about how HV was meeting their needs. A survey about MCH priorities was administered at the same time to learn more about the issues that families identify as their largest concerns. This survey informed the Maine's Title V MCH needs assessment, as well as the MIECHV needs assessment.

Maine's MIECHV needs assessment team collaborated with Maine's Shared Community Health Needs Assessment (CHNA) leads and Maine's Title V program to gather additional regional information about health priorities across the state.

Summary: Maine's MIECHV needs assessment used a multi-method approach to identify communities with concentrations of risk and assess the extent to which HV is meeting the needs of those communities. Results from this assessment indicate that the statewide approach to HV services, which has been in place in Maine since 2000, continues to be appropriate. All Maine counties have families that need and benefit from having access to high quality, evidence-based HV services.

About Maine

Maine is the northernmost and largest state in New England and the easternmost state in the United States. Maine's population is growing at a slower rate than most of the U.S. and aging at a faster rate.[1,2]

1.3 million
people live in Maine[1]

About **12,500 babies are born** to Maine residents each year.[3]

Most Maine residents reside in rural towns and small cities. Maine has three metropolitan (metro) areas; Portland-South Portland, Lewiston-Auburn, and Bangor. Collectively, 59% of Maine's population resides in these three metro areas[4] (compared to 79% of U.S. residents who live in metro areas).[5] More than one third (37%) of Maine's population live in the two southernmost counties (Cumberland and York),[4] yet these counties account for only 6% of the state's land area.[6]

The average population density of Maine is 43.1 people per square mile compared to 87.4 people per square mile in the United States.[6] However, the population density of Maine varies dramatically across the state, from 337 people per square mile in Cumberland County where Maine's largest city (Portland) is located, to four people per square mile in Piscataquis County.[6]

Children under 18 years of age comprise 19% of the state's population. Nationally, children under age 18 comprise 22% of the population.[4] In 2018, the median age of women in Maine was 46.6 years.[7] Women aged 15-44 years comprise 17% of Maine's population, compared to 20% nationally.[7]

The number of births in Maine has been declining steadily since 2006. In 2006, 14,151 babies were born to Maine residents; in 2019, there were 11,772 births, a 17% decrease. About 60% of births are to women aged 25-34; 23% are to women under age 25 and 16% are to women 35 years and older. About two-thirds of new mothers in Maine have at least some college education; 61% are married at the time they give birth.[3]

Although Maine's population is predominantly White, the state is gradually becoming more racially diverse. The proportion of the population that is White decreased from 97.3% on the 2000 Census to 95.6% in 2010[8] and to 94.5% as of 2014-2018.[9]

In 2018:

- 91% of Maine births were to White women,
- 4.5% were to Black/African American women;
- 0.8% were to American Indian/Alaska Native women;
- 1.6% were to Asian or Pacific Islander women; and
- 1.8% were to women who identify as more than one race.
- About 2% of were to women of Hispanic ethnicity.[10]

Based on 2014-2018 American Community Survey (ACS) data, 23,061 Mainers identify as American Indian alone or in combination with one or more other races.[9] There are four federally recognized Indian tribes and five tribal communities in Maine today: Aroostook Band of Micmac Indians, Houlton Band of Maliseet Indians, Passamaquoddy Tribe of Indian Township, Passamaquoddy Tribe at Pleasant Point, and Penobscot Indian Nation.[11]

IDENTIFICATION OF COMMUNITIES WITH CONCENTRATIONS OF RISK

A statutory requirement of the MIECHV needs assessment is to identify communities with concentrations of "risk." The purpose of identifying these communities is to better understand their needs to effectively target HV services.

Defining At-Risk Areas

Maine identified at-risk counties and communities using the simplified method defined in the HRSA guidance with modifications. Additional indicators, domains, and sub-county geographic data, where available, were incorporated to provide a more comprehensive assessment of at-risk communities in Maine. Including sub-county geographic data is especially important in Maine where regional differences within counties such as population size, effects of seasonal tourism, and rurality can greatly impact the need for specific services.

Based on HRSA's definitions, a county or community was considered to be "at-risk" if at least half of the indicators within at least two domains had z-scores greater than or equal to one standard deviation higher than the mean of all counties in the state (see box below for more explanation on z-scores). Alternatively, if an indicator is a positive outcome (e.g., infants breastfed at hospital discharge or expected prenatal visits received), a community with that indicator was determined to be at-risk if the z-score was less than or equal to one standard deviation lower than the mean of all counties in Maine. If there were an odd number of indicators for the domain, a conservative approach was taken (e.g., if there were three indicators within a domain, two out of three indicators would be considered at-risk).

Z-score Definition

Z-scores are a way to compare results. A z-score tells you where an indicator's percent or rate lies on a normal distribution curve.

The formula for the z-scores used in the needs assessment was:

$$Z=(x-\mu)/\sigma$$

where:

x=value for a specific county
μ=average of all counties
σ= standard deviation of all counties

A z-score of 1.0 is one standard deviation above the mean; it is higher than average. A z-score of zero is exactly average. A z-score of -1.0 is lower than average.

HRSA provided data for indicators in five domains:

- Low socioeconomic status;
- Adverse perinatal outcomes;
- Child maltreatment;
- Crime; and
- Substance use disorder

Maine added five domains, which reflect Maine's 2020-2025 MCH priorities, priorities of Maine's Shared CHNA, as well as other issues that emerged as important for families on surveys and in stakeholder conversations.

- Access to care;
- Child physical health;
- Disparate populations;
- Mental health; and
- Basic needs.

More information about these domains can be found in the next section. Table 1 provides an overview of the indicators by domain used in the quantitative assessment of risk.

All indicators were analyzed initially at the county level. Based on county-level data, ten counties met the criteria to be considered at-risk. Three counties (Cumberland, Waldo, and York) were at- risk in one domain. Sub-county data (i.e., town-level) were analyzed for counties that were not at risk at the county-level to determine whether there were at-risk areas within those counties.

Indicators with an asterisk in Table 1 were available at the subcounty level. Sub-county data sources included Maine's birth certificate data, ACS (e.g., poverty), and lead screening data from Maine's Lead Poisoning Prevention Program. Sub-county data from the birth certificate were only included if the reliability threshold was met (i.e., a minimum of at least 20 births between 2014 and 2018). For each domain, if one town in the county met the risk threshold, then the county was determined to be "at-risk."

Once sub-county data were incorporated, all counties in Maine met the at-risk criteria. Due to space constraints, only select towns are included in the supplemental Excel spreadsheets (Appendix A). Additional towns met criteria for being at-risk for individual indicators or the entire domain. Sub-county maps of indicators were produced for each county and will be shared with HV staff and other community stakeholder to help inform outreach and programming efforts (see examples in Appendix B).

Data for each indicator by Domain are presented below. **Domain Summary Tables** provide data for counties with z-scores that met the at-risk criteria. These tables also include the **county mean** and a **state estimate** for each indicator. The county mean is the average value of all counties and was used to calculate z-scores. The state estimate is the overall value for Maine. Some Domain sections include graphs to show the range of values on a particular indicator. Graphs are not included for every indicator, but data on every indicator with values for all counties can be found in the excel spreadsheets in Appendix A.

Domain 1: Socioeconomic Status

Methods: The 2017 poverty data provided by HRSA were replaced with updated 2014-2018 data from the ACS to allow for subcounty analyses. The high school dropout indicator provided by HRSA was replaced with the percentage of births to mothers aged 25 and older without a college degree. This indicator was selected because a high percentage of Mainers have graduated from high school, but a college degree is a requirement for many jobs, and sub-county data are available. In 2014-2018, 92% of Maine residents age 25 and over were high school graduates, compared to 88% nationally.[12] Among Maine women, 96% of those age 25-34 years and 96% of Maine women age 35-44 years were high school graduates; both percentages were higher than women in these age groups in the United States (93% and 90%, respectively).[13]

Table 1. Maine MIECHV domains and associated indicators used to determine "at-risk" status.

Domain	Indicator Name
Socioeconomic Status	Poverty*
	Unemployment
	Income inequality*
	*MaineCare births**
	*No college degree among mothers ages 25 and over**
	Children 5 years and younger receiving SNAP
Adverse Perinatal Outcomes	Preterm birth*
	Low birth weight*
	Infant mortality
	Teen births
Substance Use Disorder	Alcohol
	Marijuana
	Illicit drugs
	Pain relievers
	Substance-exposed infants
	*Smoked during pregnancy**
Crime	Crime Reports
	Domestic assaults
Child Maltreatment & Trauma	Child maltreatment
	Adverse Childhood Experiences
Access to Care	*Uninsured children*
	Rate of primary care providers per population
	*Expected prenatal care (80% or more of expected visits)**
Child Physical Health	*Lead screening (0-36 months)**
	*Infants breastfed at discharge**
	Immunization exemption rates, kindergarteners
Disparate Populations	*Births to mothers who were born outside of the U.S.**
	Births to mothers living in rural areas
Mental Health	*Lifetime depression or anxiety, females 18-44 years*
	Rate of mental health providers per population
Basic Needs	*Severe housing problems*
	Food insecurity
	Households without a vehicle
	Students who feel that they matter in their community
	Access to outdoor exercise opportunities

Italics indicate a Maine added indicator; * = data available at sub-county level

Additional indicators added to this domain included: (a) the percentage of births paid for by MaineCare (Medicaid) and (b) the percentage of children 5 years and younger who are receiving Supplemental Nutrition Assistance Program (SNAP) benefits. Both indicators provide additional data on areas of the state where there are higher rates of people needing public assistance.

With these changes, the socioeconomic status domain includes six indicators. To be considered at-risk for this domain, a county or subcounty area needed a z-score ≥ 1.0 on three of the six indicators.

Findings:

Income and Poverty: In 2014-2018, 12.5% of Mainers lived in poverty. Maine's poverty rate ranged from 8% in York County to 19% in Somerset County.

In Piscataquis, Somerset and Washington Counties, almost

1 in 5

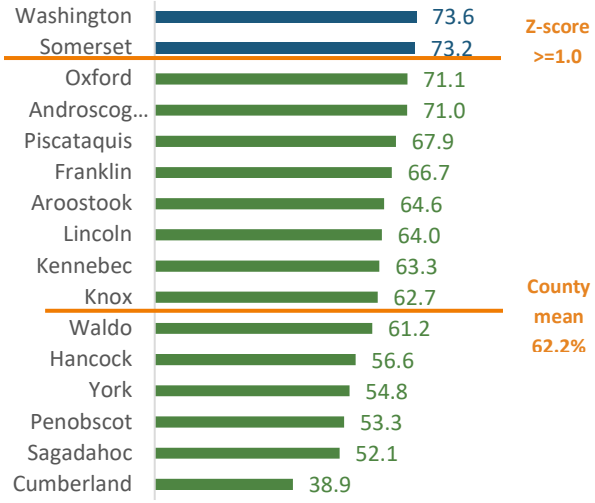
Mainers live in poverty.

The Gini Index gives an assessment of the degree of inequality in the distribution of family income in a county. It ranges from zero to 1.0. If there was perfect "equality," everyone would have the same income (Gini index=1.0); Perfect "inequality" would be characterized as one person having all the income and others having none (Gini index=0). The Gini Index is essentially a measure of how incomes vary relative to members of a population. Maine's Gini Index is 0.44. It ranges from 0.42 in Oxford County to 0.47 in Hancock County. The Gini Index for the U.S. in 2018 was 0.48.[12]

Labor Force and Employment: In 2018, Maine's unemployment rate was 3.2%. Maine's most rural counties had the highest unemployment rates. The unemployment rate in Cumberland County was 2.7% compared to 4.9% in Washington County and 4.8% in Somerset and Aroostook counties.

Educational Attainment: In Maine, 56% of infants born to mothers aged 25 and older did not have a bachelor's degree. This percentage varied significantly across counties. In Cumberland County, 39% of births were to mothers without a college degree; in Washington County, 74% of births were to mothers without a college degree (Figure 1).

Figure 1. Percentage of births to Maine mothers age 25 and older who do not have a bachelor's degree



Maine Center for Disease Control and Prevention, Birth certificate data, 2014-2018.

Income Assistance: In 2019, about 26% of Maine children under the age of 18 lived in households that received SNAP in the previous 12 months. The median household income of SNAP recipients in 2018 was $17,363[14] with an average monthly benefit of $108 per person.[15] The percentage of children receiving SNAP benefits ranged from 15% in Sagadahoc County to 38% in Washington County.

MaineCare is Maine's Medicaid program. In Maine, children and pregnant women are eligible for MaineCare if their income is less than or equal to 200% of the Federal Poverty Level (FPL). Maine implemented Medicaid expansion in January 2019. Between 2014-2018, 41% of births to Maine residents were paid for by MaineCare. The percentage ranged from 28% in Cumberland County to 63% in Washington County.

Table 2: Socioeconomic Status Domain Summary

Counties with z-scores ≥ 1.0			
Population living below 100% FPL		**Income inequality Index (Gini Index)**	
Piscataquis	19.2%	Aroostook	0.46
Somerset	19.3%	Cumberland	0.45
Washington	18.5%	Hancock	0.47
County mean	**13.8%**	Penobscot	0.45
State estimate	**12.5%**	Washington	0.46
		County mean	**0.44**
		State estimate	**0.45**
Unemployment		**Births to mothers ≥25 yrs who do not have a bachelor's degree**	
Aroostook	4.8%	Somerset	73.2%
Somerset	4.8%	Washington	73.6%
Washington	4.9%	**County mean**	**62.2%**
County mean	**3.7%**	**State estimate**	**55.8%**
State estimate	**3.2%**		
Children receiving SNAP		**Births for which MaineCare was the primary payer**	
Androscoggin	34.5%	Somerset	55.2%
Aroostook	33.4%	Washington	61.2%
Washington	37.9%	**County mean**	**44.0%**
County mean	**26.4%**	**State estimate**	**40.9%**
State estimate	**24.0%**		

Summary: In the socio-economic status domain, five counties were identified as higher risk based on z-scores ≥ 1.0 on three or more of the six indicators assessed: **Aroostook, Somerset, and Washington** counties (Table 2). **Hancock** and **Waldo** counties were considered at risk based on sub-county data (Appendix A).

Domain 2: Adverse Perinatal Outcomes

Methods: Preterm birth and low birthweight data provided by HRSA from 2013-2017 were replaced with 2014-2018 Maine data. An indicator on infant mortality was added, because preventing infant mortality is one of Maine's Title V priorities. An indicator on adolescent births (aged 15-19 years) was added to this domain as teen mothers are at higher risk for adverse perinatal outcomes and are a priority population for Maine's HV programs.

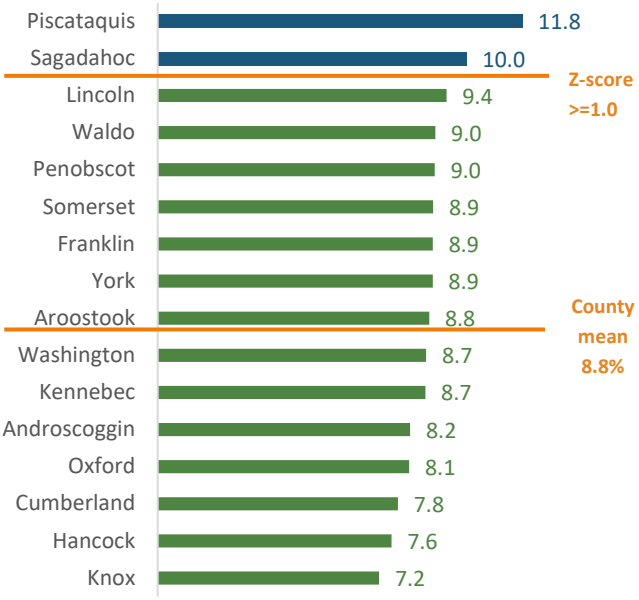
Findings:

Infant Mortality: Between 2014 and 2018, an average of 76 Maine infants died annually. Maine's infant mortality rate (IMR) in 2018 was 5.4 per 1,000 live births. In 2018 Maine had the second highest IMR in New England and ranked 16th highest nationally.[16]

In 2014-2018, Lincoln County had the highest IMR in the state (9.1) and Hancock County had the lowest (3.9). Maine's infant mortality rates in northern, more rural counties are higher than in southern counties.

Birthweight and Preterm Birth: About 8.5% of Maine infants are born preterm, which is lower than the U.S. rate of 10%, but has increased since 2012. Similarly, the percentage of low birthweight infants has also increased in recent years and is currently about 7%. This is lower than the U.S. percentage of 8%.[17]

Figure 2. Percentage of infants born preterm by county



Maine Center for Disease Control and Prevention, Birth certificate data, 2014-2018.

Piscataquis County, Maine's smallest county by population, had the highest rates of low birthweight and preterm births between 2014-2018. Piscataquis and Sagadahoc counties had z-scores greater than 1.0 for preterm birth (Table 3; Figure 2) and Piscataquis and Lincoln counties had z-scores greater than 1.0 for low birth weight (Table 3).

Adolescent Births: Maine's adolescent birth rate has been steadily declining over time, but each year over 400 teens give birth. Maine's birth rate among females aged 15-19 in 2018 was 11.1 per 1,000; the U.S. rate was 17.4 per 1,000.[18] Maine and Rhode Island are tied for the highest rate of teen births in New England.[18] In 2017-2018, teen birth rates ranged from 5.1 per 1,000 in Cumberland County to 26.7 per 1,000 in Somerset County.

Table 3: Adverse Perinatal Outcomes Domain Summary

Counties with z-scores ≥ 1.0			
Preterm birth		**Low birthweight**	
Piscataquis	11.8%	Lincoln	8.9%
Sagadahoc	10.0%	Piscataquis	9.9%
County mean	**8.8%**	**County mean**	**7.5%**
State estimate	**8.5%**	**State estimate**	**7.2%**
Infant mortality (rate per 1,000 births)		**Teen births (15-19) (rate per 1,000 females)**	
Aroostook	8.5	Aroostook	20.3
Lincoln	9.1	Somerset	26.7
Piscataquis	8.7	Washington	19.9
County mean	**6.4**	**County mean**	**14.3**
State rate	**6.0**	**State rate**	**12.0**

Summary: At the county level, **Aroostook, Lincoln, and Piscataquis** counties were considered at-risk on at least two of the four indicators in this domain (Table 3). **All counties had at least one town that would be considered at-risk after incorporating available subcounty data on preterm birth and low birthweight.** Due to space constraints, in Appendix A, we show towns in Cumberland, Hancock, Knox, Sagadahoc, Waldo, and York counties that had at least one town that was at-risk on these indicators.

Domain 3: Substance Use Disorder

Methods: In addition to the four indicators HRSA-provided from the National Survey on Drug Use and Health (NSDUH), indicators on substance-exposed infants and smoking during pregnancy were added. These are issues that emerged as concerns from MCH stakeholders through surveys and interviews.

Findings:

Alcohol use: About 1 in 4 (24.4%) Maine women age 18-44 engaged in binge or chronic drinking in 2016-2017,[19] one of the highest rates in the nation.[20] In 2017, 9.9% of Maine women reported drinking alcohol during the last trimester of pregnancy.[21]

Based on NSDUH, in 2012-2014 more than 1 in 5 Mainers age 12 and older binged drank alcohol at least once in the past month. Maine's binge drinking rate is similar to the U.S. Z-scores in Cumberland, Penobscot, and Piscataquis counties were greater than 1.0 (Table 4).

Marijuana use: Marijuana was legalized in Maine in 2016. Recreational sales are expected to start in 2020. In 2016-2017, 23% of Maine women with a recent birth reported using marijuana in the year prior to their pregnancy, and 1 in 10 reported marijuana use during their pregnancy.[21]

In 2014-2016, about 15% of Mainers age 12 and older used marijuana in the past month. Penobscot and Piscataquis counties had rates of marijuana use with z-scores greater than 1.0 (Table 4).

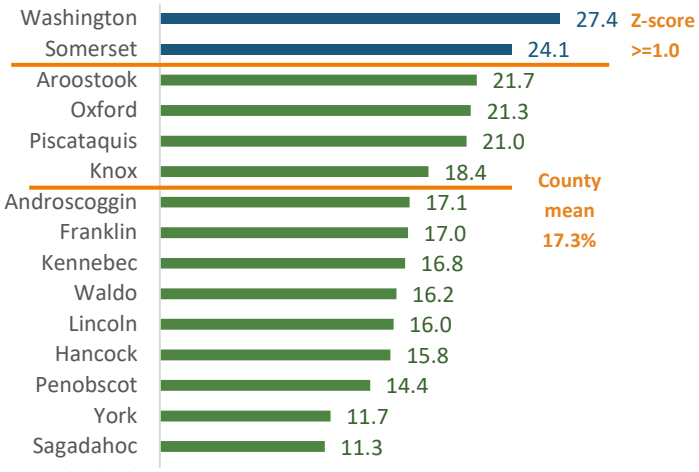
Illicit drug use and misuse of pain medication: In 2012-2014, 3% of Mainers age 12 and older used illicit drugs (excluding marijuana) in the previous month and 4% used pain medication for a non-medical use in the past year. Six Maine counties had z-scores higher than 1.0 for use of illicit drugs and five counties were higher than 1.0 for non-medical use of pain relievers.

Each year, almost 1,000 infants are reported to Maine's Office of Child and Family Services for being substance exposed. In 2018, the rate of substance exposed infant reports was 89 per every 1,000 infants. Penobscot and Washington counties had the highest rates of infants reported as substance exposed.

Tobacco use: Reproductive age women in Maine use tobacco at a higher rate relative to the U.S. In 2016-2017, more than 1 in 5 (20.4%) Maine women age 18-44 were regular smokers, compared to 15.3% of reproductive age women nationally.[22]

Between 2014-2018, 14% of Maine women with a recent birth smoked during their pregnancy. Maine's rate of cigarette smoking during pregnancy in 2018 was the 11th highest in the country.[23] In 2014-2018, Cumberland County had the lowest proportion of women who smoked during pregnancy (6%), but select towns had high rates of smoking during pregnancy. Washington County had the highest (27%; Figure 3).

Figure 3. Percentage of infants whose mother smoked during pregnancy



Maine Center for Disease Control and Prevention, Birth certificate data, 2014-2018.

Table 4: Substance Use Disorder Domain Summary

Counties with z-scores ≥ 1.0

Binge drinking in past month		Marijuana use in past month	
Cumberland	23.3%	Penobscot	16.2%
Penobscot	23.8%	Piscataquis	16.2%
Piscataquis	23.8%	**County mean**	**14.9%**
County mean	**21.4%**	**State estimate**	**14.9%**
State estimate	**21.8%**		
Illicit drug use in past month		**Nonmedical use of pain meds in past year**	
Androscoggin	3.1%	Androscoggin	3.9%
Cumberland	3.1%	Franklin	3.9%
Franklin	3.1%	Oxford	3.9%
Oxford	3.1%	Penobscot	3.8%
Penobscot	3.2%	Piscataquis	3.8%
Piscataquis	3.2%	**County mean**	**3.5%**
County mean	**2.8%**	**State estimate**	**3.6%**
State estimate	**2.9%**		
Substance exposed newborn reports (rate per 1,000 births)		**Smoking during pregnancy**	
Oxford	139.5	Somerset	24.1%
Washington	153.6	Washington	27.4%
County mean	**89.3**	**County mean**	**17.3%**
State rate	**73.5**	**State estimate**	**14.3%**

Summary: Three counties: **Oxford, Penobscot, and Piscataquis**, had z-scores ≥ 1.0 on at least three of six indicators in this domain (Table 4). Incorporating

subcounty data on smoking during pregnancy did not change the number of at-risk counties for this domain.

Domain 4: Crime

Methods: This domain originally had two indicators (a) rate of reported crime and (b) rate of juvenile arrests. We retained the indicator on reported crime rates, but the indicator on juvenile arrest was replaced with Maine data on domestic assaults. Domestic assaults disproportionately affect women and children. Maine Families' family visitors screen regularly for domestic violence and are trained in safety planning and service availability.

Findings:

Crime rate: Maine's overall crime rate for 2016 was 17.7 per 1,000 residents. Maine has one of the lowest crime rates in the United States. Kennebec, Oxford, Penobscot, and Somerset counties had crime rates with z-scores ≥ 1.0.

Domestic assault: Maine's reported domestic assault rate for 2018 was 3.1 per 1,000.[24] Of the 10,773 assaults reported to police in Maine in 2018, 3,699 (34%) occurred between household or family members. Fifty-five percent of these assaults were male assaults on females; 8% were parent assaults on children.[24] Each year, about 2% of Maine women experience violence by a current or former intimate partner - about 9,000 Maine women per year.[19] Franklin and Somerset counties had rates of reported domestic assaults higher than the county mean.

Table 5: Crime Domain Summary

Counties with z-scores ≥ 1.0			
Crime rate per 1,000		**Reported domestic assaults per 1,000**	
Kennebec	19.9	Franklin	3.5
Oxford	21.1	Somerset	4.4
Penobscot	20.4	**County mean**	**2.6**
Somerset	20.4	**State rate**	**3.1**
County mean	**15.8**		
State rate	**17.7**		

Summary: To be considered a county at-risk, a z-score ≥ 1.0 on at least one of the two indicators was required. The five unique counties in Table 5 met the criteria.

Domain 5: Child Maltreatment & Trauma

Methods: Data on high school students who reported 4 or more adverse childhood experiences (ACEs) were incorporated into the childhood maltreatment domain, along with substantiated child maltreatment rates. ACEs are associated with poor health outcomes across the lifespan. Home visiting is designed to encourage positive parenting, which fosters resilience in the presence of ACEs.

Findings:

Child maltreatment: In 2016, 11,613 children received an investigation for child maltreatment in Maine, identifying 3,446 victims of child maltreatment (13.3 per 1,000). Nationally, the child maltreatment rate was 9.1 per 1,000.[25] Thirty percent of child maltreatment victims were under age three. Child maltreatment rates were highest in Kennebec and Somerset and lowest in Cumberland County.

ACEs: In 2019, more than 1 in 5 (21%) Maine high school students experienced four or more ACEs. Lincoln, Waldo and Somerset counties had the highest percent of students reporting four or more ACEs.

Table 6: Child Maltreatment and Trauma Domain Summary

Counties with z-scores ≥ 1.0			
Child maltreatment rate per 1,000		**High school students with four or more ACEs**	
Kennebec	22.3	Lincoln	26.4%
Somerset	26.0	Somerset	27.0%
County mean	**13.8**	Waldo	31.9%
State rate	**13.3**	**County mean**	**22.4%**
		State estimate	**21.3%**

Summary: To be considered at-risk in this domain, a z-score ≥ 1.0 on at least one of the two indicators was required. Four counties met the criteria: **Lincoln, Somerset, Waldo and Kennebec** (Table 6).

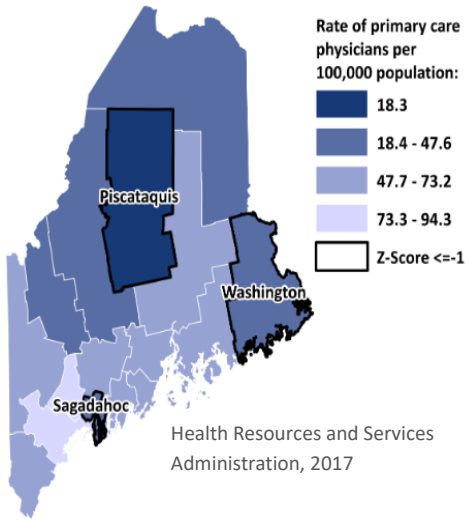
Domain 6: Access to Care

Methods: Access to care was added as a domain because it was identified as an MCH block grant priority for women's health and helping families access insurance and health care is a key role of family visitors. Accessing care, whether it's for a physical, mental health, or substance use issue is critical for improving prenatal and postpartum maternal, infant, and childhood health outcomes. In this domain we included four indicators: (a) rate of primary care providers per population; (b) percent of children without health insurance; (c) percent of women who received more than 80% of their expected prenatal care visits; and (d) percent of adults who report that they were unable to obtain health care or had to delay care due to costs.

Findings:

Primary care providers: Overall, Maine has 67 primary care providers per 100,000 people. In more urban counties, there are more than 85 providers per 100,000 people; in more rural counties there are less than 45 providers per 100,000 people. Piscataquis County, Maine's only frontier county (defined as a population density of fewer than six people per square mile), has only 18 primary care providers per 100,000 people. Washington County, which has the second lowest population density in the state, has only 33 providers per 100,000 people (Figure 4).
One in four Maine children (25%) have public health insurance only; 66% have private health insurance only, and 5% are uninsured. Maine's rates of children who are uninsured are highest in Hancock, Lincoln, and Piscataquis counties.

Figure 4. Rate of primary care physicians per 100,000 population

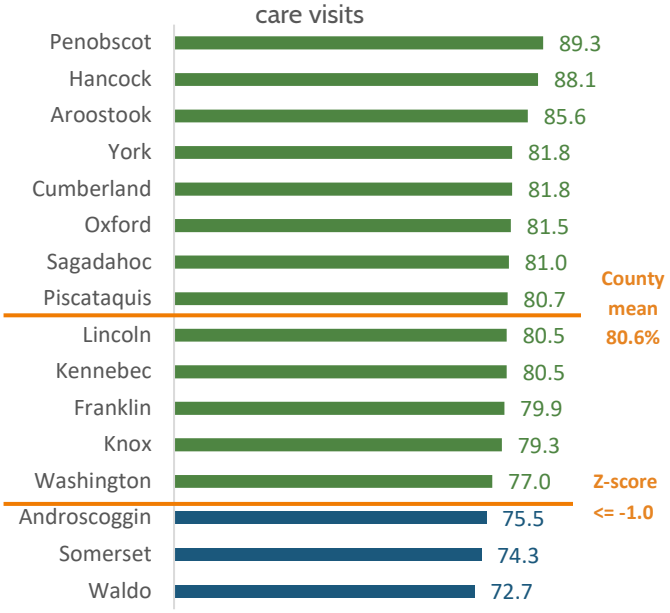


Health Resources and Services Administration, 2017

Cost barriers to care: Even among those with health insurance, cost barriers to care limit access to health care for many Mainers. About 1 in 10 Mainers report that they were unable to obtain or had to delay necessary medical care due to cost during the previous 12 months. This percentage was highest for those living in Aroostook and Androscoggin counties.

Prenatal care: Maine has 26 birthing hospitals, most of which are small community hospitals. Since 1998, seven hospitals have ceased providing obstetric services, limiting access to birthing facilities in some of Maine's most rural counties. These closures could impact access to prenatal care, as well as maternal morbidity and maternal mortality.[26] Between 2014-2018, about 4 out of 5 Maine women (82%) women received more than 80% of their expected prenatal care visits. However, in some counties only 75% of women received adequate prenatal care. The lowest rates were in Androscoggin, Somerset, and Waldo Counties (Figure 5). When town-level data were included, Sagadahoc County had towns in which the z-score was less than 1.0.

Figure 5. Percentage of women who receive more than 80% of their expected prenatal care visits



Maine Center for Disease Control and Prevention, Birth certificate data, 2014-2018.

Table 7: Access to Care Domain Summary

Children without health insurance		Cost barrier to care	
Counties with z-scores ≥1.0			
Hancock	10.9%	Androscoggin	14.5%
Lincoln	9.1%	Aroostook	13.5%
Piscataquis	11.8%	**County mean**	**10.5%**
County mean	**6.7%**	**State estimate**	**10.3%**
State estimate	**5.7%**		
Rate of primary care providers per 100,000 population		**Women who received more than 80% of expected prenatal care**	
Counties with z-scores ≤ -1.0*			
Piscataquis	18.3	Androscoggin	75.5%
Sagadahoc	36.3	Somerset	74.3%
Washington	33.0	Waldo	72.7%
County mean	**56.7**	**County mean**	**80.6%**
State rate	**67.3**	**State estimate**	**81.5%**

*For these two indicators, a z-score ≤ 1.0 was considered at-risk because a higher percentage on these measures is better

Summary: There are four indicators in the access to care domain. Two counties, **Androscoggin and Piscataquis**, scored as at-risk on at least two of the indicators (Table 7). When town-level data on percentage of expected prenatal visits received were included **Sagadahoc County** was determined to also be at-risk.

Domain 7: Child Physical Health

Methods: The Child Physical Health domain was added because it emerged as one of Maine's 2020-2025 MCH priorities and the indicators selected reflect focus areas of MFHV. Indicators in this new domain are related to topics that family visitors regularly address during home visits.

- **Breastfeeding at hospital discharge:** All Maine Families programs have staff members who are certified lactation counselors (CLCs) to assist women with breastfeeding.
- **Lead poisoning screening:** Family visitors were trained on Maine's new universal lead screening law and how to collect lead dust from homes by Maine's Lead Poisoning Prevention Program.
- **Immunization exemption rates for kindergarteners:** Immunization exemption rates are increasing nationally and in Maine.[27] Identifying regional differences in immunization rates informs vaccination education efforts. Family visitors have access to Maine's IMMPACT immunization data system to see whether a child is up-to-date on vaccinations.

Findings:

Breastfeeding: In 2018, 9 in 10 Maine infants (89.5%) were breastfeeding at discharge following delivery. Breastfeeding rates at hospital discharge between 2014-2018 were highest for mothers residing in Knox and Sagadahoc counties and lowest for those residing in Aroostook and Washington counties.

Lead Poisoning: Lead poisoning in Maine is primarily caused by exposure to dust from lead paint in older homes.[28] Children between the ages of nine months and three years are at greatest risk of becoming poisoned by lead.[28] In 2017, three percent of Maine children tested were lead poisoned – 392 children. A major initiative of Maine's Lead Poisoning Prevention Program is to increase the percentage of children screened for lead poisoning. Between 2014-2018, 28.8% of children aged 0-36 months were screened for lead poisoning. Rates of lead screening ranged from 16.3% in Sagadahoc County to 51.4% in Washington County. The lowest screening rates were in Cumberland, Sagadahoc, Piscataquis, Lincoln, and Knox counties.

Immunization Exemptions: In 2015-2016, Maine's immunization rate for the 4:3:1:3:3:1:4 full vaccination series at 35 months was 77.3%. The U.S. rate was 75.0%. One of Maine's challenges is immunization exemptions for incoming kindergarten children. Between 2015-2016 and 2018-2019, vaccine exemptions for Maine students entering kindergarten increased from 4.5% to 6.2%. The U.S. rate in 2018-2019 was 2.5%. Most Maine exemptions are non-medical. Maine passed a law in 2019, which goes into effect September 1, 2021, that will no longer permit non-medical exemptions. Exemptions are highest in Hancock, Knox, and Lincoln counties.

Table 8: Child Physical Health Domain Summary

Breastfeeding at hospital discharge		Lead poisoning screening	
Counties with z-scores ≤ -1.0*			
Aroostook	73.6%	Lincoln	18.0%
Washington	71.9%	Sagadahoc	16.3%
County mean	**84.6%**	**County mean**	**29.7%**
State estimate	**85.0%**	**State estimate**	**28.8%**
Kindergarten Immunization exemptions			
Counties with z-scores ≥ 1.0			
Hancock	9.8%	Lincoln	10.2%
Knox	10.9%	**County mean**	6.7%
		State estimate	6.2%

*For these two indicators, a z-score ≤ 1.0 was considered at-risk because a higher percentage is better.

Summary: Using county-level data only, a single county, **Lincoln**, was at risk on two out of three indicators in this Domain. (Table 8). Incorporating subcounty data identified **Knox, Waldo and York** counties as also at-risk in this domain.

Domain 8: Disparate Populations

Methods: There are certain populations that are more vulnerable to health disparities based on issues such as access to care, language barriers, and structural racism. We wanted to be sure to capture these populations in the needs assessment, because for certain HV agencies, providing services for diverse populations requires additional resources (e.g., interpreters). The indicators we included were: (a) percent of births to women born outside of the U.S.

and (b) percent of mothers giving birth who live in a rural area.

Maine has a growing immigrant population who may need extra assistance accessing services due to cultural differences or language barriers. For the past two decades, an increasing number of individuals and families from East and Central Africa, Southeast Asia and the Middle East have settled in Maine. Many of these families arrived in Maine as primary refugees, and a growing number have arrived in Maine as secondary migrants.[29]

Portland, Maine's largest city, welcomed an unprecedented number of asylum-seekers, primarily from Central Africa in 2019. City and state government, as well as local non-profit and for-profits organized a massive effort to feed, clothe and house over 600 asylees using private and public spaces for temporary as well as permanent housing.

In general, Maine is considered a rural state, but some portions of the state are extremely rural which creates unique challenges for transportation, food access, access to medical care, education, and employment.

Findings:

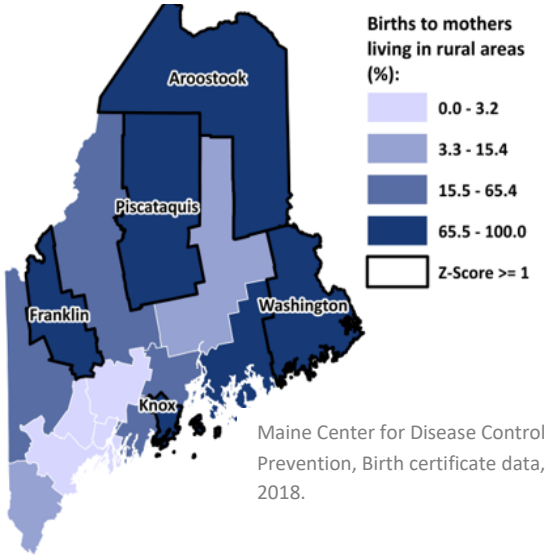
Births to mothers who are not from the U.S.: Between 2014-2018, about 8% of Maine infants had mothers who were born outside of the United States. The percent of births to women who are foreign-born increased 80% between 2000 and 2017. Births to women who were born in a country other than the U.S. accounted for 15% and 16% of births in Androscoggin and Cumberland counties respectively.

Births to mothers in rural areas: About 1 in 4 births in Maine are to those living in small or isolated rural areas. In four counties (Aroostook, Franklin, Knox, and Washington), 100% of births are to women living in isolated or small rural areas.

Table 9: Disparate Population Domain Summary

Counties with z-scores ≥ 1.0			
Births to mothers who are foreign-born (%)		**Births in isolated/small rural areas (%)**	
Androscoggin	14.6%	Aroostook	100%
Cumberland	16.4%	Franklin	100%
County mean	**5.3%**	Knox	100%
State estimate	**8.1%**	Piscataquis	93.9%
		Washington	100%
		County mean	**52.3%**
		State estimate	**27.1%**

Figure 6. Percentage of births to women living in small or isolated rural areas



Maine Center for Disease Control and Prevention, Birth certificate data, 2014-2018.

Summary: This domain and its indicators were included because immigrant families and families living in rural areas are populations served by Maine's home visiting programs that may require additional resources (e.g., driving time, interpreters, translated products) and we wanted to be able to capture these needs. There were two indicators in this domain. Using the criteria of being as having a z-score ≥ 1.0 for one in two, **seven counties** are considered at-risk based on county-level data (Table 9). York County was at-risk using town-level data (Appendix A).

Domain 9: Mental Health

Methods: A domain on mental health was added because it emerged as a Title V priority for 2015-2020 and a statewide priority from Maine's Shared CHNA. It also emerged as a key issue in interviews with Maine Families and Early Head Start staff and on our surveys.

Many new parents struggle with mental health challenges and need support. Family visitors are required to screen for depression and can link families to health care or support groups. Indicators included in this domain are: (a) lifetime depression among women ages 18-44 years and (b) the rate of mental health providers per population. The latter was included because provider availability is a key component of mental health treatment access.

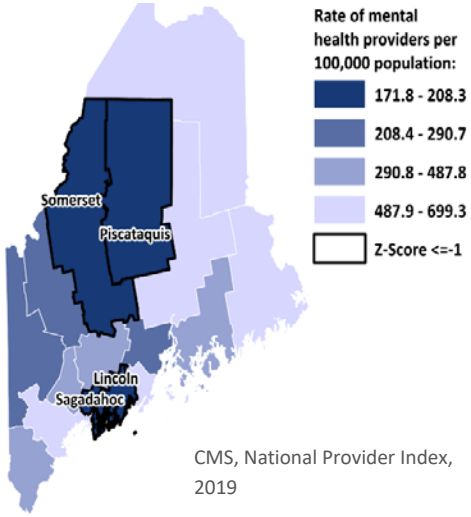
Findings:

Depression and anxiety: About half (46%) of Maine women of reproductive age have current depressive

symptoms or have ever been diagnosed with depression or anxiety. The percentage was greater than 50% in Androscoggin, Piscataquis and Sagadahoc Counties.

Mental health providers: Somerset, Piscataquis, Sagadahoc and Lincoln counties have the lowest availability of mental health providers per population (Figure 7).

Figure 7. Rate of mental health providers per 100,000 population



CMS, National Provider Index, 2019

Table 10: Mental Health Domain Summary

Counties with z-scores ≥ 1.0		Counties with z-scores ≤ -1.0	
Women 18-44 ever diagnosed with depression or anxiety		**Rate of mental health providers per population**	
Androscoggin	53.3%	Lincoln	206.6
Piscataquis	52.1%	Piscataquis	208.3
Sagadahoc	53.6%	Sagadahoc	207.5
County mean	**46.7%**	Somerset	171.8
State estimate	**46.8%**	**County mean**	**388.7**
		State rate	**476.2**

Summary: There were two indicators in the mental health domain. Using the criteria of being at-risk as having a z-score ≥ 1.0 for at least one of the two, five counties are considered at-risk based on county-level data. No subcounty data are available for this domain.

Domain 10: Basic Needs

Methods: In conversations with HV program staff and MCH stakeholders, as well as in surveys with HV participants, housing, food insecurity, transportation, and community support emerged as key factors influencing family health and well-being. These are often called "social determinants of health," but since some social determinants of health are captured in other domains, we named this domain, "basic needs." For many families, lack of stable housing and/or food for their families makes it difficult for them to take care of themselves or their children in a healthy way.

We included the following indicators in this domain.

- Percentage of households with severe housing problems (i.e., overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing);
- Percentage of the population that is food insecure, which is defined as a lack of access to enough food or uncertain availability of food;
- Percentage of households without a vehicle;
- Percentage of high school students who report feeling like they matter to their community
- Percentage of the population with adequate access to locations for physical activity, which represents the percent of the population living in census blocks with adequate access to at least one location for physical activity, which may include a park or recreational facility.

Findings:

Severe housing problems: About 15% of Maine households have at least one severe housing problem; the prevalence ranges from 13.2% in Franklin County to 16.3% in Hancock and Somerset Counties.

Food insecurity: Food insecurity is defined as being unable to provide adequate food for one or more household members due to a lack of resources. In 2015-2017, 14.4% of Maine's population was food insecure compared to 12.3% of the U.S. population.[76] Maine's food insecurity rate was 10th highest in the U.S. and the highest in New England.[76] In 2017, food insecurity rates by county ranged from 11.3% in York County to 15.4% in Aroostook County. Food insecurity rates are even higher among children; about 1 in 4 Maine children are food insecure.[76]

Households without a vehicle: Transportation is challenging for many in Maine. Maine has limited public transportation and the large, rural nature of the state makes it difficult to get anywhere without a vehicle. About 2.3% Mainers live in households without a vehicle.

Community connectedness: Many parents feel isolated from others and disconnected, but is important to keep them connected to others in their

community for support. We did not have a community connectedness measure for adults, but Maine high school students report on their perception of belonging to their community on a biennial youth health survey. In Maine, 57% of high school students reported feeling like they matter in their community. In Piscataquis, Somerset, and Waldo counties, less than 50% reported feeling like they matter in their community.

Access to physical activity locations: It is important for parents to be able to take their children to outdoor areas or recreational facilities for exercise and to meet others. Areas such as parks can play an important role in keeping parents and their children physically and mentally healthy. In Maine, about 70% of the population has access to outdoor opportunities. However, in Franklin, Knox and Oxford counties, less than 50% have access to exercise facilities or parks.

Table 11: Basic Needs Domain Summary

Counties with z-scores ≥ 1.0			
Households with severe housing problems		**Food insecurity rate**	
Hancock	16.3%	Aroostook	15.4%
Knox	15.8%	Piscataquis	14.8%
Oxford	15.9%	Somerset	15.0%
Somerset	16.3%	Washington	15.1%
County mean	**14.8%**	**County mean**	**13.4%**
State estimate	**15.0%**	**State estimate**	**8.1%**
Households without a vehicle			
Androscoggin	2.9%	Washington	2.8%
Aroostook	2.8%	**County mean**	**2.1%**
		State estimate	**2.3%**
Counties with z-scores ≤ -1.0			
High school students who feel like they matter in their community		**Access to exercise opportunities**	
Piscataquis	46.8%	Franklin	46.8%
Somerset	49.9%	Knox	44.8%
Waldo	50.0%	Oxford	41.0%
County mean	**54.9%**	**County mean**	**61.9%**
State estimate	**56.6%**	**State estimate**	**70.0%**

Summary: There were five indicators in this domain. Only Somerset County met the criteria as being at risk on three out of the five indicators in this domain (Table 11)

SUMMARY: IDENTIFYING "AT-RISK" COMMUNITIES WITH CONCENTRATIONS OF RISK

To identify counties with communities at risk, Maine's MIECHV needs assessment team identified a set of domains and indicators that reflect challenges for families across Maine. The domains and indicators were selected based on feedback from maternal and child health experts, community members, Maine Families participants, and Maine Families staff and align with HRSA's home visiting statutory requirements, as well as priorities of Maine's Title V program and Maine's Shared CHNA.

After analyzing each indicator by county, counties that met HRSA's criteria for being "at-risk" were identified. We then delved deeper into the data to examine sub-county areas to determine if there were concentrations of risk within counties that were not originally deemed to be at-risk.

Based on our analyses, all of Maine's 16 counties are at-risk; they all include areas with concentrations of risk (Table 12).

Table 13 has the z-scores for all indicators (n=36) by county. Five counties in Maine have z-scores greater than 1.0 on 25% or more of the indicators. These counties are Androscoggin, Aroostook, Piscataquis, Somerset, and Washington Counties. For more information on sub-county z-scores, see the excel files in Appendix A and/or subcounty maps (examples can be found in Appendix B). The spreadsheets in Appendix A also have data for each indicator by county.

Maine's MIECHV funding is used to fund the Maine Families home visiting program. Maine Families uses the evidence-based Parents as Teachers model to provide home visiting services in all 16 of Maine's counties. Based on the MIECHV needs assessment analyses, it is justifiable for Maine's MIECHV funds to continue to provide home visiting services in Maine statewide. The needs assessment analyses confirm that there are families across the state of Maine who can benefit from home visiting services.

Table 12. Counties identified as at-risk (using HRSA's modified method for determining risk) by domain using county and sub-county data

County Name	Socioeconomic Status	Adverse Perinatal Outcomes*	Substance Use Disorder	Crime	Child Maltreatment & Trauma	Access to Care	Child Health	Disparate Populations	Mental Health	Basic Needs	Number of Domains at-risk
Androscoggin						C		C	C		3
Aroostook	C	C						C			3
Cumberland		SC	SC					C			3
Franklin				C				C			2
Hancock	SC	SC									2
Kennebec				C	C						2
Knox		SC					SC	C			3
Lincoln		C			C		C		C		4
Oxford			C	C							2
Penobscot			C	C							2
Piscataquis		C	C			C		C	C		5
Sagadahoc		SC				SC			C		3
Somerset	C			C	C				C	C	5
Waldo	SC	SC			C		SC				4
Washington	C							C			2
York		SC					SC	SC			3

"C" means identified as at-risk based on county data. "SC" means identified as at-risk based on supplemental subcounty data.

*Although we identified all counties as being at-risk on this domain using sub-county data (preterm birth and low birthweight), we only included subcounty data in our risk calculations for counties not already designated as at-risk based on county data alone. For detailed sub-county data for every county, maps are available.

Table 13. Z-scores by county.

Indicator	Androscoggin	Aroostook	Cumberland	Franklin	Hancock	Kennebec	Knox	Lincoln	Oxford	Penobscot	Piscataquis	Sagadahoc	Somerset	Waldo	Washington	York
Poverty	-0.2	1.0	-1.2	-0.5	-0.7	-0.1	-0.8	-0.5	0.6	0.5	1.5	-1.1	1.6	0.0	1.3	-1.5
Unemployment	-0.6	1.6	-1.4	0.4	0.1	-0.7	-0.7	-0.6	0.4	0.1	0.7	-1.4	1.6	-0.3	1.7	-1.0
Income Inequality 5 Yr	-1.5	2.0	1.4	-0.9	2.5	-0.3	-0.6	0.7	-2.5	1.4	1.0	-1.5	0.4	0.3	2.1	-0.7
MaineCare Births	0.7	0.7	-2.0	0.7	-0.4	-0.3	0.3	-0.3	0.5	-0.3	0.6	-1.5	0.9	0.0	1.8	-1.5
No college degree among mothers ages 25+	0.9	0.3	-2.5	0.5	-0.6	0.1	0.1	0.2	1.0	-1.0	0.6	-1.1	1.2	-0.1	1.2	-0.8
Children receiving SNAP	1.2	1.0	-1.4	0.5	-0.8	-0.1	-0.9	-0.7	0.7	0.0	0.7	-1.6	0.8	0.3	1.6	-1.2
Preterm Birth Rate - ME	-0.5	0.0	-0.9	0.1	-1.1	-0.1	-1.5	0.5	-0.6	0.2	2.7	1.1	0.1	0.2	-0.1	0.1
Low Birth Rate - ME	0.7	-0.6	-1.0	0.9	-0.4	-0.8	-1.0	1.6	-0.7	0.0	2.7	-0.4	-0.4	0.2	0.2	-0.8
Infant mortality rate	-1.1	1.4	-0.7	0.1	-1.7	-0.4	-0.2	1.8	-1.5	0.4	1.5	0.2	0.3	-0.4	0.3	-0.4
Teen Births - 2 Yr	0.4	1.1	-1.7	-0.6	-0.7	-0.2	0.1	0.0	0.6	-0.7	-0.2	-1.2	2.3	0.5	1.1	-0.8
Alcohol	0.3	-0.6	1.5	0.3	-0.4	0.2	-1.1	-1.1	0.3	1.8	1.8	-1.1	0.2	-1.1	-0.4	-0.8
Marijuana 2016	0.5	-0.2	1.0	0.5	0.5	-0.2	-1.1	-1.1	0.5	1.6	1.6	-1.1	-0.2	-1.1	0.5	-1.7
Illicit Drugs	1.1	-0.6	1.2	1.1	-0.4	-0.6	-0.8	-0.8	1.1	1.3	1.3	-0.8	-0.6	-0.8	-0.4	-1.4
Pain Relievers	1.2	-0.5	0.0	1.2	-0.3	0.3	-1.4	-1.4	1.2	1.1	1.1	-1.4	0.3	-1.4	-0.3	0.0
Substance-exposed infants	0.7	0.8	-1.5	-1.1	-0.7	-0.7	0.7	-0.1	1.3	-0.2	-0.3	-1.0	1.0	0.8	1.7	-1.3
Smoked During Pregnancy	0.0	0.8	-2.1	-0.1	-0.3	-0.1	0.2	-0.3	0.8	-0.6	0.7	-1.2	1.3	-0.2	1.9	-1.1
Crime Reports	0.7	-0.6	1.0	-1.0	-0.4	1.1	-0.9	-0.6	1.4	1.3	-1.1	-1.0	1.2	-1.3	-0.6	0.6
Domestic assaults	0.9	0.5	-0.6	1.0	-0.9	0.9	-0.8	-0.3	-0.5	0.6	-1.0	-1.1	2.1	-1.2	-0.3	0.7
Child Maltreatment	0.0	-0.3	-1.4	0.0	-0.4	1.7	0.0	-0.2	-0.8	0.3	-0.6	-1.3	2.4	-0.2	1.0	-0.2
Adverse Childhood Experiences	0.0	-1.0	-1.3	0.2	-0.8	0.0	-0.5	1.1	0.6	0.1	-0.7	-0.1	1.2	2.6	-1.0	-0.4
Uninsured Children	-0.9	-0.8	-1.1	-0.3	1.8	-1.0	-0.2	1.0	-1.0	0.0	2.2	-0.7	-0.2	0.6	0.6	-0.2
Rate of primary care physicians per 100,000	1.5	-0.6	1.9	-0.5	0.4	0.9	0.3	0.2	0.0	0.1	-2.0	-1.1	-0.8	0.4	-1.2	0.3
Cost Barriers to Care	1.9	1.4	-0.9	-0.5	0.3	0.1	-0.6	-0.7	0.8	0.5	0.0	-1.8	-1.4	0.6	0.8	-0.8
Expected Prenatal Care	-1.1	1.1	0.3	-0.2	1.7	0.0	-0.3	0.0	0.2	1.9	0.0	0.1	-1.4	-1.8	-0.8	0.3
Lead Screening (0-36 months)	0.7	0.2	-0.9	1.7	-0.2	0.0	-1.0	-1.1	0.9	0.0	-1.0	-1.3	0.4	-0.7	2.1	0.2
Infants Breastfed at Discharge	0.1	-2.0	0.4	0.8	0.4	0.8	1.1	0.8	-0.2	-0.1	-0.2	1.0	-0.8	0.4	-2.4	0.1
Immunization exemption rates, kindergarten	-0.1	-1.4	-0.4	0.9	1.4	-0.7	1.9	1.6	0.6	-0.3	-0.1	-0.1	-0.6	-0.6	-1.5	-0.4
Births to mothers who are foreign-born	2.2	0.3	2.6	-0.7	0.0	-0.4	-0.4	-0.5	-0.7	0.1	-0.5	-0.6	-0.8	-0.6	-0.1	0.1
Births to mothers living in rural areas	-1.2	1.2	-1.3	1.2	0.7	-1.3	1.2	0.2	0.3	-0.9	1.0	-1.3	0.2	-0.1	1.2	-1.0
Lifetime depression or anxiety, females 18-44	1.3	0.3	-0.8	-0.5	-2.5	-0.2	-0.6	-0.7	0.0	0.9	1.1	1.4	0.6	-0.4	0.7	-0.4
Rate of mental health providers per 100,000	0.6	1.0	1.9	-0.6	0.0	0.6	0.8	-1.1	-0.8	0.9	-1.1	-1.1	-1.3	-0.8	1.1	0.1
Severe Housing Problems	0.0	-1.3	0.8	-1.8	1.6	-0.4	1.1	0.2	1.3	0.1	-0.5	-0.6	1.6	0.0	-1.4	0.1
Food Insecurity rate	0.6	1.5	-0.9	-0.5	-0.4	0.1	-0.8	-1.0	0.0	0.8	1.1	-1.2	1.2	-0.3	1.3	-1.6
Households without a Vehicle	1.3	1.2	0.8	-0.3	0.8	0.7	0.2	-1.8	-1.3	0.3	-1.5	-0.7	-1.2	0.8	1.2	-0.3
Students who feel that they matter in their community	-0.7	-0.4	1.4	0.0	0.9	-0.2	2.2	0.1	-0.2	0.0	-1.8	0.2	-1.1	-1.2	0.4	0.3
Access to Outdoor Exercise Opportunities	1.5	-0.4	1.5	-1.0	0.5	1.0	-1.1	-0.3	-1.4	0.1	-0.9	1.3	-0.2	-0.8	-0.7	1.1
Total number of indicators with z-scores denoting high risk	**8.0**	**10.0**	**4.0**	**5.0**	**4.0**	**2.0**	**4.0**	**7.0**	**6.0**	**6.0**	**15.0**	**4.0**	**14.0**	**3.0**	**14.0**	**0.0**

EXISTING HOME VISITING PROGRAMS IN MAINE

Home visiting is a critical tool that Maine has utilized to aid in preventing child maltreatment and supporting improved outcomes for pregnant women, infants, toddlers, and their families. Maine is fortunate to have early childhood home visitation services available in all 16 counties of the state.

In this section, we highlight five programs providing home-based services in Maine (Table 14). The three widespread home visiting services are: **Maine Families; Early Head Start Home-based; and Public Health Nursing.** Two additional programs target specific service areas and populations: **Passages** and **Attachment and Biobehavioral Catch-Up.**

Information on these programs was obtained through interviews with program leads and reviews of program needs assessments and reports.

Maine's home-based programs for young families make every effort to work collaboratively within their community and state infrastructures to provide appropriate services to the target populations. Without exception, each of the five programs described in this Needs Assessment uses a strengths-based approach to work with their populations. Each program also recognizes the importance of connecting with early intervention and special education systems as natural partners in identifying and addressing concerns for young children. All five programs also acknowledge the importance of mental health support and services, particularly in relation to encouraging healthy caregiver and child attachments.

Maine Families

Maine Families Home Visiting Program (MFHV) is the evidence-based home visiting program funded through Maine's MIECHV grant. Since 2000, MFHV has provided universal home visiting to eligible families in every county of the state. The program serves pregnant women and families with children up to age three. MFHV is comprised of professionals delivering services from 11 local implementing agencies (LIA) and is administered by the Maine Center for Disease Control and Prevention's MCH Program.

The program employs well-educated professionals who conduct visits in family homes at the frequency and intensity that works for each household. The family visitors follow the evidence-based Parents as Teachers (PAT) model. The goal of PAT is to provide parents with child development knowledge and parenting support, provide early detection of developmental delays and health issues, prevent child maltreatment, and increase children's school readiness. The PAT model includes one-on-one home visits, monthly group meetings, developmental screenings, and linkages and connections for families to needed resources. Family visitors conduct home visits using structured visit plans and guided planning tools. The PAT model recommends bi-monthly or monthly home visits based on families' needs, but some families receive visits more frequently if needed. Each family visitor must hold a bachelor's degree in Early Childhood or a related field. They

Table 14. Programs offering home-based services to families in Maine

Program	Service Area	MIECHV approved Evidence-based home visiting model	Funding source
Maine Families	Statewide (16 of 16 counties)	Parents as Teachers	MIECHV/State funds
Early Head Start	10 of 16 counties	Early Head Start	USDA
Maine Public Health Nursing	Statewide (16 of 16 counties)	Not applicable	State General Funds/Maternal and Child Health Block Grant
Passages	8 of 16 counties	Not applicable	Multiple sources (grants, philanthropy)
Attachment and Biobehavioral Catch-up	2 of 16 counties	Modified ABC	One-year grant funded

receive training in PAT, Infant Mental Health, the Touchpoints Approach, Healthy Moms, Happy Babies (an intimate partner violence training for home visitors), and they complete a Core Maine Families orientation. This foundation provides the family visitors with the skills needed to support families in difficult situations and work toward positive outcomes for both caregiver and child.

The goals of MFHV include:

- Nurturing families and their relationships
- Promoting positive and effective parenting
- Encouraging healthy living, considering all aspects of development
- Providing guidance in creating positive and creative learning environments
- Protecting children from violence, abuse and neglect
- Protecting children from preventable illness and injury
- Providing a connection to the community and needed resources
- Encouraging family self-sufficiency

While the program can be molded to the needs of each county, the MFHV Standards of Practice, ensure consistency across agencies.

The program uses a statewide, web-based data system to track the work with families as well as demographic and family information.

Early Head Start Home-Based

While most Head Start and Early Head Start (EHS) programming in Maine consists of center-based care and education, as of March 2020, 10 counties offer HV services funded by the Federal Office of Head Start, and State contributions. Home-based services are not available in Hancock, Knox, Penobscot, Piscataquis, Washington and York counties.

According to a 2017 statewide Head Start Report produced by the University of New Hampshire Carsey School of Public Health, enrollment priority is given to families living in poverty, though each site maintains waitlists for services using a formulaic selection process which considers demographic and other factors influencing a family's situation.[30] Families who are not income-eligible may qualify for services if they are homeless or receive other public assistance such as TANF or SSI.[30]

EHS home-based services are delivered to families expecting a baby and/or those with children from birth through age three through weekly, 90-minute sessions in the family's home to support child development and to nurture the parent-child relationship. Twice per month, the program offers opportunities for parents and children to come together as a group for learning, discussion and social activity. Programs reported using Parents as Teachers (PAT) and Partners for a Healthy Baby models. Regardless of the chosen curricula, all EHS home visiting programs must follow Federal Performance Standards.[31]

EHS home visitors are trained in the Head Start philosophy and program expectations through pre-service and in-service opportunities with the goal of assuring staff have the knowledge and tools they need to work with vulnerable children and families. The 2017 Maine Head Start Report showed that 65% of home visitors held at least a bachelor's degree. The current national standard for EHS home visitors is they "have a minimum of a home-based Child Development Associate credential or comparable credential, or equivalent coursework as part of an associate's or bachelor's degree."[29]

By completing the required Family Partnership Agreement, a family's goals are clearly articulated and relate to the program intentions of:

- Meeting the basic needs of every child
- Promoting positive and effective parenting and attachments
- Supporting all areas of growth and development
- Early identification of special needs and risk factors
- Ensuring children have access to ongoing preventive health care and services
- Ensuring families have access to mental health services
- Encouraging active parent involvement in all aspects of the program

Each site reports program data such as, enrollment information, curricula and assessment tools used, staff qualifications, and family information to a Regional Head Start Office, which in turn provides technical support.

Of the seven EHS programs interviewed, six reported on-going waiting lists and that they are

required to maintain one since any open slots are to be filled within 30 days.

Public Health Nursing

Public Health Nursing (PHN) is a statewide program that has served Maine since 1920. It is funded by State General Funds and the federal Maternal and Child Health Title V Block Grant. Currently there are 28 field nurses that work with women, infants, and children with an identified health need. All staff are required to be registered nurses and have a solid foundation of knowledge in child development and current public health issues. The program prioritizes not only the special health needs of the target population, but also outcomes related to child maltreatment, infant mortality, low birthweight, and overall health status of young children.

PHN's curriculum is based on the nursing model, in which nurses look carefully at the needs of each individual client. Documentation for each client is maintained in an electronic medical record, where staff can assess the client's initial problem and track subsequent interventions, as well as measure client outcomes related to knowledge, behavior, and health status. The most common MCH-related topics addressed include child health, parenting, and postpartum care, though the targeted goals and outcomes can be a combination of these and are unique to each individual.

The home visiting services provided by PHNs address:

- Child growth and development, and identification or support of special health needs
- Pregnancy, postpartum, and breastfeeding support
- Newborn and infant assessment
- Safe Sleep education
- Lead poisoning management and other toxic environmental concerns
- Communicable diseases and tuberculosis testing and treatment

During 2019, PHN provided 641 prenatal home visits (21%) and 2,471 postpartum home visits (79%), for a total of 3,112 visits (Table 15).

Table 15. Maine Public Health Nursing visits by county

2019 Visits	Postpartum	Prenatal	Total
Androscoggin	226	37	263
Aroostook	284	39	323
Cumberland	225	27	252
Franklin	50	11	61
Hancock	154	58	212
Kennebec	339	99	438
Knox	152	43	195
Lincoln	56	4	60
Oxford	138	33	171
Penobscot	240	46	286
Piscataquis	67	25	92
Sagadahoc	88	13	101
Somerset	143	100	243
Waldo	111	13	124
Washington	40	10	50
York	158	83	241
Total	**2,471**	**641**	**3,112**

Maine Public Health Nursing Program, Maine CDC

Passages Program

Passages started in 1994 in Knox County and has since expanded to Androscoggin, Cumberland, Lincoln, Sagadahoc, Waldo, Washington and York counties. Passages is a home-based high school degree program designed for pregnant and parenting adolescent boys and girls ages 14-20 years old. This program, supported by a combination of funds from school districts (Department of Education), grants, and philanthropic contributions, serves parents who wish to finish high school and continue parenting simultaneously.

Passages employs seven (full-time equivalent) teachers who are certified educators and experienced professionals who have the ability to work with compassion and knowledge of resources and systems in the community. The program's curriculum addresses three components in working with teen parents: academics, parenting, and life skills, delivered through weekly home visits and online support with the students. There are 24 core skills covered, and individual student objectives are created with consideration of the student's current performance and skill level in those 24 areas. In addition to one-on-one meetings

with their teacher, students are required to complete ten hours of community service each year, participate in five workshops offered at the school (transportation and childcare are provided), and must complete a final Passages project. The program served 62 families in 2019 and graduates 10-18 annually. The program works closely with Maine Families, Department of Health and Human Services, Child Development Services, local food pantries, and homeless coalitions to meet the needs of students and their families.

Attachment and Biobehavioral Catch-Up

In May 2019, MaineGeneral Health's Edmund N. Ervin Pediatric Center (EEPC) received a one-year grant from the John T. Gorman Foundation to implement a modified version of the evidence-based Attachment and Biobehavorial Catch-up model (mABC). The goal of the project was to identify mothers whose children may be at risk for insecure attachment and/or toxic stress and help them build strong and healthy relationships with their children.

mABC serves mothers starting in the sixth month of pregnancy and provides 10 sessions of intensive home-based parent coaching with the intent of helping parents with attachment-related issues prior to the birth of their child. Evidence of the ABC model's effectiveness and the absence of similar services in MaineGeneral's catchment area, coupled with the increased use of opioids among pregnant women, and the increasing number of babies born drug-affected in the region, contributed to EEPC's decision to pursue this model.

Current patients of the Maine Dartmouth Family Practice located in Waterville, Maine are prioritized for the program. mABC's target population is expectant mothers with a history of one or more of the following risk factors: substance use disorder, a mental health diagnosis, involvement with the child welfare system, and/or other factors that might affect parenting. Many potential clients live in rural areas and a majority reside in lower socioeconomic households. All involvement with mABC services is voluntary.

mABC planned to serve at least 40 clients within the first 12 months. To date, 26 individuals are participating in the program. The initiative was paused with the onset of COVID-19 allowing for only three individuals to graduate. Early results reveal that parents are paying more attention to their child, have focused, more verbal and positive interactions with the child, and exhibit greater eye contact in a manner that reminds the child they are there and care for them.

The EEPC plans to continue its work in Kennebec and Somerset counties over the next two years with plans to expand to other areas of the state in their third year, using funds built into a recent grant award from the National Child Traumatic Stress Network.

CAPACITY OF CURRENT HOME VISITING PROGRAMS

MFHV has 11 LIAs serving Maine's 16 counties. Table 16 summarizes the counties served by each of Maine's LIAs, the number of families being served at the point in time (October 31, 2019) and the number of slots they are contracted to serve at a minimum.

As of October 31, 2019, MFHV statewide was exceeding contracted requirements for number of families enrolled (Table 16). Staff vacancies were the main reason some agencies were not at their expected capacity. Many agencies had waitlists during the past year due to the demand for HV services. During the past year, 45.5% of MFHV agencies reported having a waitlist for a period of two to three weeks while training new staff; 54.5% had ongoing waitlists. Several LIA directors reported that they did not have the capacity (financial or human) to reduce or eliminate their waitlist.

Table 16. Local agencies implementing the Maine Families Home Visiting Program			
Local Implementing Agency	**County(ies) served**	**Families currently served as of October 31, 2019**	**Targeted family slots for 2019**
The Opportunity Alliance	Cumberland	137	141
Community Concepts	Androscoggin, Oxford	125	132
Aroostook Council for Healthy Families	Aroostook	86	96
Maine Family Planning	Hancock	62	56
Franklin County Children's Task Force	Franklin	107	98
Kennebec Valley Community Action	Kennebec, Somerset	123	113
Parent Program of Mid Coast Maine	Knox, Lincoln, Sagadahoc	97	85
Penquis Community Action Program	Penobscot, Piscataquis	123	147
University of Maine Cooperative Extension	Waldo	29	36
Down East Community Hospital	Washington	99	81
Southern Maine Health Care	York	162	120
Total		1,150	1,105

In 2019, Maine Families Home Visiting conducted

20,766 visits,

serving

2,011 households.

This included (Table 17):

- 442 pregnant women
- 1,572 female caregivers
- 554 male caregivers
- 2,065 children

The number of participants served by MFHV by county of residence is provided in Table 17. Although pregnant women make up about 10% of total participants served (Figure 8), 22% of the households served in 2019 included a pregnant woman. Pregnant women served in 2019 by county ranged from 5% to 37% (Figure 9).

Figure 8. Enrollees in Maine Families, 2019

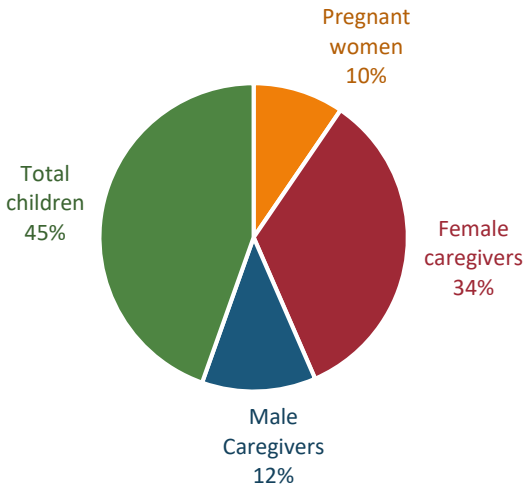
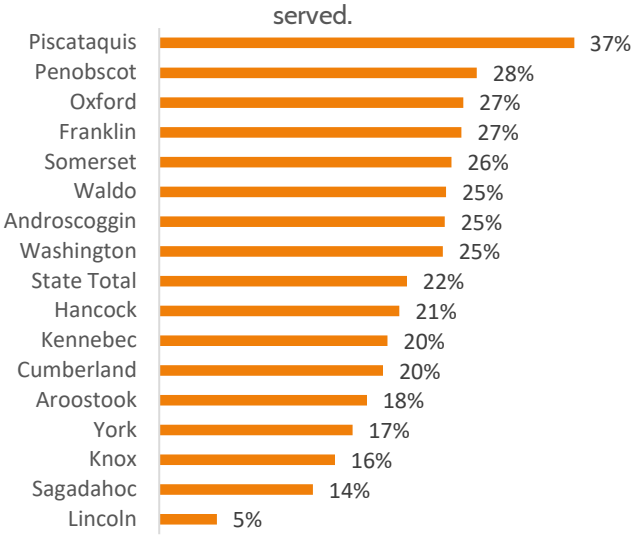


Figure 9. Maine Families enrollment includes pregnant women in 22% of households served.



Maine Families ERIN Data System, 2019

Table 17. Participants enrolled in Maine Families Home Visiting by county in 2019 (local implementing agencies often serve more than one county)

	Pregnant women	Female caregivers	Male Caregivers	Total children	Infants	Children 1-3 yrs	Total individuals served	Households	Number of visits	Visits per household
Androscoggin	37	107	46	148	51	97	338	146	1,857	12.7
Aroostook	28	126	34	153	68	85	341	152	1,666	11.0
Cumberland	57	230	76	303	144	159	666	287	2,697	9.4
Franklin	37	104	55	142	43	99	338	138	1,940	14.1
Hancock	26	96	43	124	51	73	289	122	950	7.8
Kennebec	31	122	55	165	55	110	373	153	1,710	11.2
Knox	12	64	8	83	36	47	167	77	745	9.7
Lincoln	2	34	12	39	12	27	87	39	354	9.1
Oxford	24	66	19	85	43	42	194	89	975	11.0
Penobscot	60	153	50	207	71	136	470	213	2,119	9.9
Piscataquis	7	12	2	20	7	13	41	19	166	8.7
Sagadahoc	6	37	7	44	20	24	94	44	467	10.6
Somerset	21	61	19	79	32	47	180	81	712	8.8
Waldo	14	42	9	54	21	33	119	55	513	9.3
Washington	38	113	21	163	54	109	335	151	1,372	9.1
York	42	205	98	256	107	149	601	245	2,523	10.3
State Total	**442**	**1,572**	**554**	**2,065**	**815**	**1,250**	**4,633**	**2,011**	**20,766**	**10.3**

Maine has eight Head Start programs that offer home visiting through Early Head Start. These programs serve 10 of 16 Maine counties. Table 18 below shows the number of available slots for Early Head Start home-based services as reported by Program Directors when interviewed in February and March of 2020.

Table 18. Early Head Start Home-Based Slots by Agency

Agency	County Served	Available home-based Slots	Number of participants served (2017-2018)*
Aroostook County Action Program	Aroostook	24	106
Community Concepts	Oxford, Franklin	108	258
Kennebec Valley Community Action Program	Northern Kennebec, Somerset	26	76
Midcoast Maine Community Action	Sagadahoc, Lincoln, portion of Cumberland (Greater Brunswick)	42	98
The Opportunity Alliance	Cumberland	52	116
Promise Early Education Center	Androscoggin	30	85
Southern Kennebec Child Development Corporation	Southern Kennebec	40**	127
Waldo County Community Action Partners	Waldo	12	70

*Includes those enrolled in EHS home-based and center-based care from EHS Grantee Service Profiles: https://eclkc.ohs.acf.hhs.gov/federal-monitoring/report/grantee-service-profiles
** Reported by State EHS State Collaborative Director

QUALITY OF CURRENT HOME VISITING PROGRAMS

For this section, we focus solely on MFHV, as home visitation is not the primary focus of Maine's Head Start programs (home visitation is only 1.5% of Head Start enrollees). Two other home visiting programs (PHN and Passages) are not considered evidence-based by HRSA. mABC recently started in Maine. Future assessments will include more information on this program

MFHV monitors program quality on an ongoing basis by:

1. Maintaining and annually updating a Standards of Practice document to encourage consistency in practice across LIAs.
2. Implementing an annual participant satisfaction survey.
3. Documenting all visits, including screenings and referrals in the web-based Electronic Records Information Network (ERIN) data system.
4. Ensuring a process is in place for families to file grievances.
5. Conducting annual site visits to demonstrate compliance with PAT policies and Essential Requirements, as well as MFHV Standards of Practice.
6. Participating in PAT's quality endorsement process and submitting annual performance reports to PAT to verify that Essential Requirements are being met.
7. Documenting staff qualifications and training in the Maine Roads to Quality Database.

In this section we use data from the MFHV ERIN data system, MFHV's annual participant satisfaction survey, and interviews with program directors to examine HV quality using the following guiding questions:

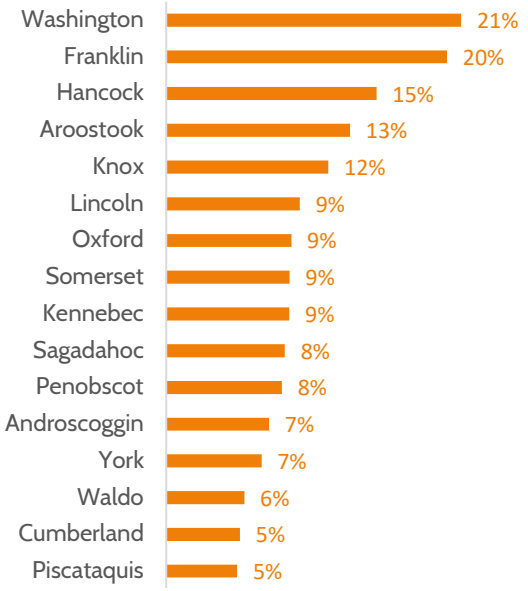
- **Enrollment and reach:** How effective is HV at connecting with and enrolling families in need?
- **Engagement**: Do families who enroll remain engaged in the program?
- **Staffing:** What are staff qualifications? How are staff trained and supported to provide HV services? What are challenges to maintaining staff?
- **Outcomes:** How well is HV meeting the needs of families?
- **Measurement:** What are the strengths and limitations of MFHV service utilization and outcome data?

ENROLLMENT AND REACH

Enrollment in MFHV is open to any prenatal family and families with infants up to three months of age (six months for adolescents). There are no income requirements.

By linking birth certificates to MFHV data, we know that **8.4% of 2018 births to Maine residents were enrolled in MFHV.** The percent of births enrolled in the program varied significantly by county. In two of Maine's more rural counties, about 1 in every 5 infants are enrolled in home visiting (Figure 10).

Figure 10. About 1 in 12 infants in Maine are enrolled in Maine Families Home Visiting.



Linked birth-certificate and MF home visiting data, Maine Center for Disease Control and Prevention, 2018

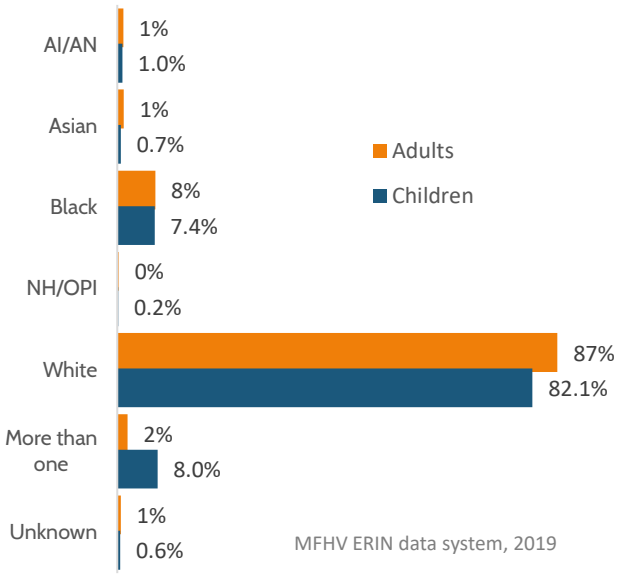
In the next section we describe the diverse populations enrolled in MFHV and how MFHV programs are engaging with these groups.

How well is Maine Families reaching....

Racially and ethnically diverse populations: Families served by MFHV are more diverse than Maine's population in general. About 87% of adults enrolled in Maine Families are White; 8% are Black/African American; 4% are Hispanic. Among children, 82% of those enrolled are White; 7% are Black/African American; 8% are more than one race; 4% are Hispanic (Appendix C, Table 1; Figure 11).

Maine's Wabanaki Tribal reservations are located in Aroostook, Penobscot, and Washington counties.

Figure 11. Almost 1 in 5 children enrolled in Maine Families are children of color.



Maine does not have Tribal-specific home visiting programs. Tribal members can be served by any of the existing Maine Families LIAs. The percent of American Indian adults served by MFHV in counties with reservations is about the same or slightly higher than the estimated percentage of American Indians living in Aroostook and Washington Counties, but lower in Penobscot county (Table 19). Many Mainers who are American Indian also identify as more than one race, which makes it difficult to accurately assess how well they are being reached by MFHV.

To reach tribal populations, one agency has attended health fairs on the reservations and has partnered with other agencies located on the reservation, such as WIC. Agencies in these counties acknowledge they could do more to engage Maine's tribal population in home visiting.

Table 19. Enrollment of Native Americans in MFHV in counties with Tribal Reservations

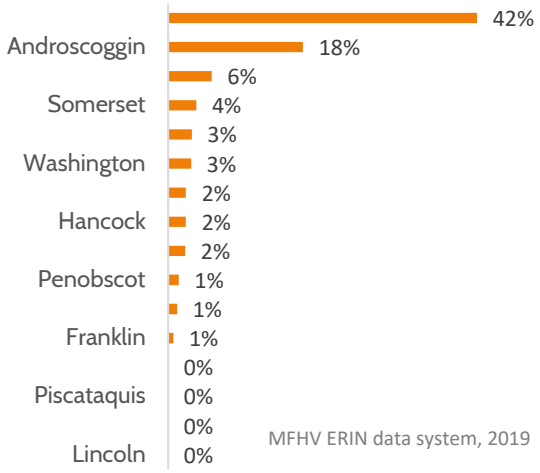
	Percent of American Indians in County	Percent of adults served by MFHV who are American Indian
Aroostook	1.9%	2.1%
Penobscot	1.3%	0.4%
Washington	5.3%	7.6%

U.S. Census Bureau population estimates, 2018; MFHV ERIN data system

The "New Mainer" population of recent immigrants and refugees to Maine is primarily concentrated in two of Maine's metropolitan areas, Portland and Lewiston/Auburn, which are located in Cumberland and Androscoggin counties respectively.

The MFHV programs in these counties have made a concerted effort to engage with this population. **In Androscoggin County in 2019, about 20% of families served were Black or African American; in Cumberland County, 40% of families served were Black or African American.** In Cumberland and Androscoggin counties, 42% and 18% of enrolled families speak a language other than English as their primary language, respectively (Figure 12). The most common other languages spoken are Portuguese, French, and Arabic.

Figure 12. Percentage of children enrolled in MFHV who live in homes in which the primary language is not English



Agencies working with New Mainers, including asylum seekers, contract for interpreter services. The MFHV program purchased translated developmental screening forms and MFHV has translated other materials, such as participation agreements, releases for referrals, and recruitment materials.

Although some MFHV LIAs are actively engaging with recent immigrants and refugees, MFHV program directors note that many New Mainers may be fearful about the paperwork requirement. Program directors believe some New Mainers are concerned about how the information will be used. Concern was expressed that the PAT model is not culturally sensitive enough and does not allow programs to be culturally adaptive and flexible. In addition, MFHV's required staff qualifications and credentials can make it difficult to employ individuals from diverse communities. Many New Mainers do not have a college degree when they arrive in Maine.

Families with low socio-economic status: A large percentage of families enrolled in MFHV live in extreme poverty. In 2019, over 65% of families enrolled in MFHV lived at less than 200% of the federal poverty level (FPL); 40% live at less than 100% of the FPL. Three of every four (75%) caregivers enrolled in MFHV had a high school diploma or less; 9% did not complete high school. Half were employed at least part-time (Appendix C, Table 2). About 4% (n=97) of families were homeless.

About half of adults enrolled in MFHV in 2019 were insured by MaineCare; 7% were uninsured. Among children, 69% were insured by MaineCare; 2% were uninsured (Appendix C, Table 2).

Families experiencing significant and generational poverty may also experience unstable housing conditions and have prior negative experiences with publicly funded social support programs. MF program directors cited both issues as barriers to connecting with low-resource families. Families experiencing persistent poverty may move around between family and friends and insecurities about their living situation can be a factor in their declining services.

Teen parents: Engaging pregnant and parenting teens is a priority population for MFHV. Adolescent parents can enroll in MFHV until their child turns six months of age. **In 2019, MFHV served 79 female caregivers or pregnant women under the age of 20.** There were 33 pregnant teens, 46 female caregivers under age 20, and 11 male caregivers under age 20. In Maine, there were 422 births to teens aged 10-19 in 2018.

MFHV program directors indicated that enrolling adolescents into home visiting can be challenging because, developmentally, they are focused on individuation, independence, and peer relationships. According to some program directors, "they are not interested in hearing about it [parenting]" from adults.

Families with substance exposed infants: In Maine, as well as in most of the United States, an increasing number of infants are exposed to harmful substances in utero. The percentage of newborns reported to Maine's Office of Child and Family Services (OCFS) as substance exposed increased over 460% between 2006 and 2016. Maine's rates have started to decline, but in 2018 about 900 infants were reported for substance exposure, and this is likely an underestimate of the problem. In interviews, almost all MFHV program managers reported that they are serving a substantial number of families with substance exposed infants (SEI).

Based on findings from a recent MIECHV evaluation project, between 2014-2018 about

1 in 4 (24%) infants reported as SEI enrolled in MFHV

compared to 7% of infants not reported as SEI. Of SEI enrolled in MFHV, 27% enrolled prenatally and 73% enrolled postpartum.

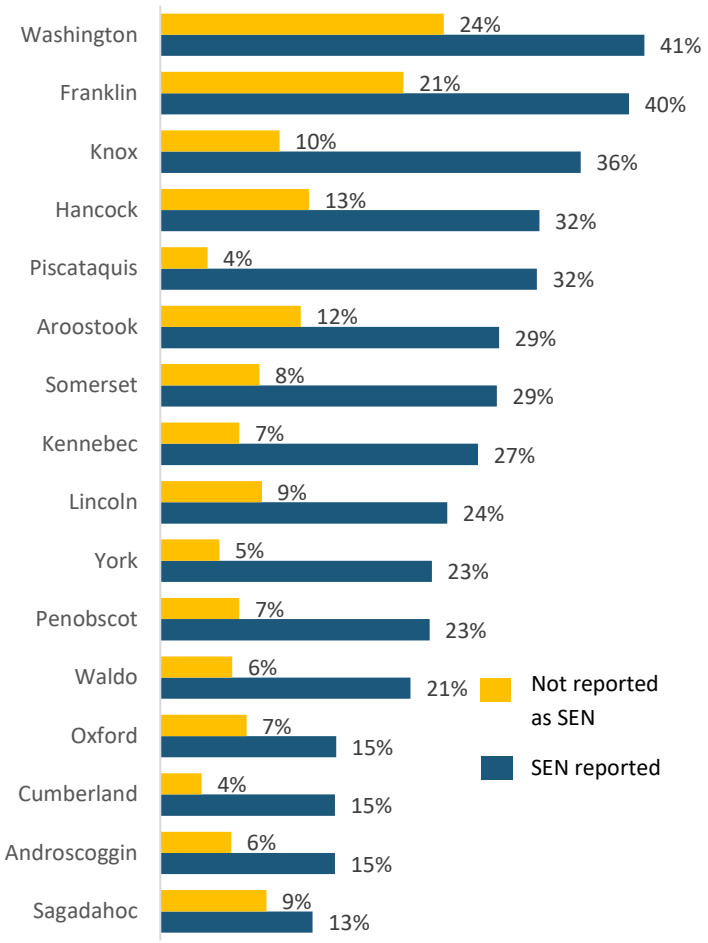
In 2018, 1,142 infants reported as substance exposed were served by MFHV.

There was variation by county of residence at birth in the percentage of SEI reported to OCFS who enrolled in MFHV. County enrollments of reported SEIs ranged from 13% to 41%. In every county, Maine Families agencies had more success enrolling families with SEI reported to OCFS than families without a SEI report. Many of the agencies in Maine's most rural counties, such as Washington, Piscataquis, Aroostook and Somerset were very successful enrolling a high percentage of SEIs born in their county (Figure 13).

What are some challenges to enrolling families in home visiting?

(a) Lack of knowledge about the program: Program Directors expressed concern that families are not accessing services because parents are not aware of them. Directors attributed this, in part, to selective provider referrals. Hospitals may be referring only those they perceive need parenting support or are high-risk.

Figure 13. Infants with SEN reports and those without SEN reports enrolled in Maine Families by county.

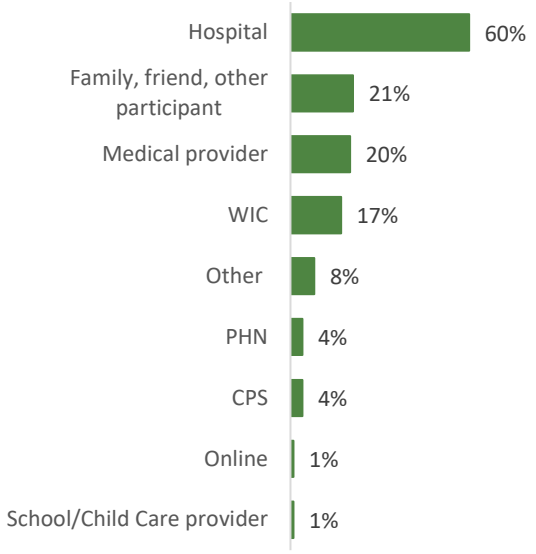


Linked infants with SEI reports and MFHV ERIN data system, 2014-2018

Referrals come to home visiting programs primarily through the CradleMe referral system. This centralized referral system is administered by Maine's Public Health Nursing Program and allows providers to request several maternal child health services on one form. These services include Public Health Nursing, WIC, and MFHV. The CradleME referral system was implemented statewide in 2017. Since the launch, there has been some confusion around the change in referral processes; providers were accustomed to making referrals directly to their local agency. Maine Families has seen a decrease in referrals since the launch of CradleME. Individual outreach to hospitals was initiated in 2019 to increase CradleME referrals.

When MFHV participants were asked in 2019 where they learned of the program, over 60% reported that they learned about the program from the hospital where they gave birth (Figure 14). Other key sources of referrals include family or friends, other medical providers, and WIC.

Figure 14. How participants heard about Maine Families, 2019



Maine Families Participant Survey, 2019

(b) Lack of understanding about program's purpose: Many families are not aware that Maine Families Home Visiting is a universal program that is available to all families. They believe it is only for higher need families or they think there are income requirements.

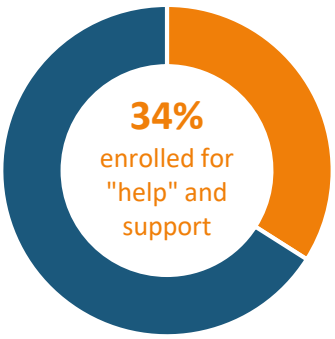
Program Directors feel there is hesitancy on the part of families with more social and economic resources to accept services yet "they still may experience postpartum depression and need our services." This reluctance is due, in part, to families themselves feeling the program is only meant for higher risk families.

Lack of understanding about the purpose of the program could also explain why about 1 in 3 program managers reported that fear of being reported to child protective services dissuades many from enrolling. Other factors include: lack of trust, particularly among those families experiencing mental health and substance misuse, not wanting a family visitor in the home or living with someone who did not want a family visitor in the home, family complexity – history of trauma related to generational poverty, substance use or mental health, and lack of knowledge about the service.

One MF participant wrote on her survey, "*Make it more "socially" acceptable and embraced. I think people are afraid it's someone coming into their home to "inspect" and "report" anything they notice during their visit. Or that it's solely for single moms, or young parents, or those financially struggling, etc."*

(c) Timing of enrollment: Some families do not realize they need the program until their infants are older than the three-month enrollment cut-off or they are not aware of the program until their infant is too old to enroll. Several agency directors indicated that the enrollment criteria make it difficult to enroll many families who may benefit from home visiting services.

Why do participants enroll? Maine Families participants were asked on the 2020 MFHV Participant Survey why they chose to enroll in the program; 356 participants responded to this question. The responses fell into four main themes: (a) a desire for support, (b) want of knowledge and information, (c) trepidation being a first time parent, and (d) word-of-mouth (percentages are not mutually exclusive; quotes are examples from Maine Families participants' written responses):

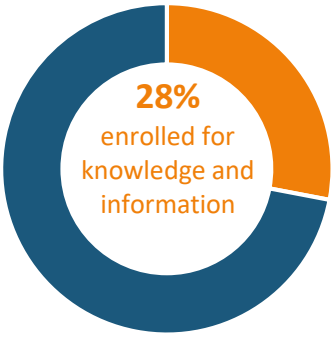


1 in 3 parents expressed the need for emotional support, breastfeeding support, and general help with parenting.

"I decided to get support in raising our daughter. Having the support and tools to help has been so rewarding in our lives."

"We are new parents and do not have any family members that live near us and with my situation with my depression, we were encouraged to enroll in hopes for having support. Which they have done and we are so grateful for them."

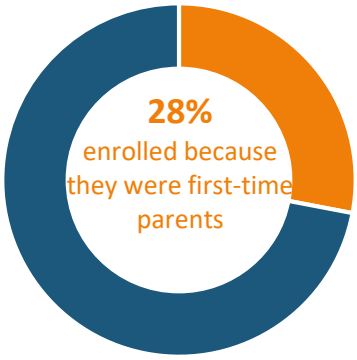
"As first time parents we wanted all the support we could get. We're also not from Maine originally so we don't have an extensive support network established here as most of our family is still in our home state."



More than 1 in 4 parents were especially interested in having **information on child development** and **community resources.**

"I wanted reassurance through my first pregnancy. I was 17 when I first found out I was pregnant. I was very nervous, and scared. Having someone come in to help me make sure I was on track with my pregnancy and then someone to help me make sure my children were on track after each of them were born."

"To have help in learning about my baby's development and get ideas for activities in helping her."

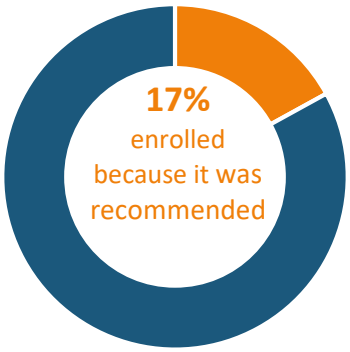


About 1 in 4 mentioned they enrolled, at least in part, because they were **first-time parents.**

"Because I'm a new mom and having someone there to answer my question when needed helps in a lot of ways."

"I was a first time mom... Mostly, I wanted professional guidance in my journey."

"I was a new mom scared to death and needing someone to help guide me."



1 in 6 participants said that the program was recommended to them by **NICU providers, family members, hospital staff, healthcare providers, or Child Protective Services.**

"I've only ever heard rave reviews and wanted to be a part of it too!"

"The hospital explained how helpful it was and that it was a free resource."

"My sister encouraged me to sign up because of all the help she received, especially as a first time Mom. If it wasn't for her worker she might not have known about her child's condition."

"I was very lonely during my pregnancy. And was clueless on how to be a first time mom. I was looking for extra support for myself and my child. And was recommended to join Maine families by a home health nurse and by WIC which I was utilizing at the time."

FAMILY ENGAGEMENT

Participants in Maine Families generally have a home visit once a week or once every other week. Families can stay enrolled in Maine Families until their child reaches three years of age.

Following guidance from the Parents as Teachers model, MFHV completion is defined as 18 months of enrollment. Of participants were enrolled as of January 1, 2019, by December 2019, 14% completed the program; 65% were continuing services, and 20% stopped services before completing the program.

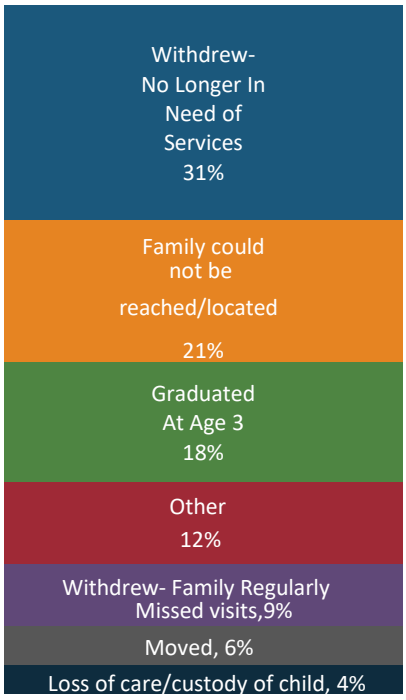
The reasons participants end services before completing the program are varied. In 2019, about 1 in 3 families stopped receiving services because they felt they no longer needed them (Figure 15). Some caregivers return to school or work and don't have time for home visits. For others, it is a planned transition – they feel comfortable and connected

and no longer need support from home visiting. Some families leave the program if their home visitor leaves the program for a new position. For others, having someone come into the home becomes one more life stressor that can be challenging for them to manage. About 1 in 5 families are withdrawn from the program if their family visitor is unable to connect with them after a period of trying. About 1 in 6 children stop participating because they reached age three when program eligibility ends. On the Maine Families Participant Survey, one of the most common responses to the question, "If you could change one thing (or more) about the Maine Families program, what would it be?" is having a longer eligibility period. One participant wrote:

"Have the visits last until the children are 4 or 5. The bond that my daughter that with her home visitor is strong."

Another wrote, "*Support kids up until they start school versus stopping when they're 3."*

Figure 15. Reasons for stopping participation in Maine Families (among families who ended participation in 2019)



STAFFING

MFHV staff are required to have a bachelor's degree in human services or a related field. Supervisors must have a bachelor's degree in human services or a related field and have a minimum of two years of paid experience working with families and young children, along with a minimum of one year of supervisory experience.

In 2019, Maine Families employed 82 home visitors and 24 supervisors (some of whom also serve as home visitors).

As of December 2019, seven of the 11 Maine Families LIAs reported being fully staffed (63.6%). During 2019, 15 staff members resigned their position – this number is typical based on data from the previous three years and represents an 18% turnover rate statewide. Only one supervisor resigned her position in 2019.

The length of vacancies varies by position and area of the state (longer in rural areas), but they generally take from one to 12 months to fill. Program directors shared that MFHV has a very extensive and stringent hiring process. It can take a long time to fill a position; it is becoming increasingly difficult to find qualified applicants, and subsequent training for onboarding can take two to four months. The rigorous education requirements coupled with low wages can make it difficult to hire and retain qualified candidates.

When asked about factors that lead home visitors to leave their positions, the overwhelming response was salary and benefits. In addition, some leave to pursue advanced degrees or professional growth as there are limited opportunities to move into more advanced positions, such as supervision and management, within the program. Others MFHV directors noted the role of burnout in staff turnover. One shared that the work is very challenging and "we ask a lot of staff."

Staff qualifications and training are tracked using the Maine Roads to Quality System. Through this system, State Maine Families staff can ensure that staff have the required job qualifications and have completed the required trainings. MFHV provides staff with extensive training when hired, as well as ongoing training on an annual basis (Table 20).

We asked to what extent agencies employ staff who are experienced in working with diverse populations, such as immigrants, refugees, persons with substance use disorder, or individuals with significant mental health needs. In general, MFHV

directors reported they did not have staff with specific qualifications/credentials in these areas. Three agencies have staff that speak a language other than English. Staff can take advantage of trainings offered by the state MFHV program or seek out other resources depending on the need (i.e., working with families with substance use and teen parents) to increase their competencies in working with diverse populations.

Table 20. Maine Families Home Visiting Trainings for Family Visitors

New Staff Training:

- Maine Families Core Orientation
- Parents As Teachers Foundational and Model trainings
- Touchpoints Individual Level Training
- Infant Mental Health (3 days)

Ongoing Staff Professional Development (visitors):

- 18 hours of professional development annually
- Certified Lactation Counselor training (optional, but common for visitors after 1-2 years of employment)
- Annual 2-day In-service
- Annual Touchpoints booster

Program Managers/Supervisors:

- Core Orientation
- Parents As Teachers Model Implementation training (Foundational Training is strongly recommended)
- Touchpoints Individual Level Training
- Three-day Infant Mental Health Course (or Infant Mental Health Course for college credit)
- Reflective Supervision Practices
- Mentoring by the Maine Families Technical Assistance staff, an experienced Program Manager or a trainer for first year

OUTCOMES: HOW DO PARTICIPANTS FEEL THEY BENEFIT FROM THE PROGRAM?

Each year MFHV administers a survey to gauge participant satisfaction with the MFHV program. It includes questions on participants' perception of their relationship to their family visitor and types of help participants receive.

In 2019, 640 MFHV participants completed the survey. The response rate was about 50%.

99%

of Maine Families participants:

- Report that they **were helped** by the Maine Families home visiting program.
- "Agreed" or "strongly agreed" that they **were satisfied with the services they receive** from Maine Families
- **Would recommend Maine Families** to other families.

MFHV participants report that the program is effective at helping them understand their child's growth and development; feel better about their parenting; keep their child safe; and feel less stressed (Table 21). The program does less well connecting families to other sources of social support. This point was echoed in open-ended responses about changes participants would make to the program. Many participants requested more playgroups, outings, weekend events to connect with other families in their communities.

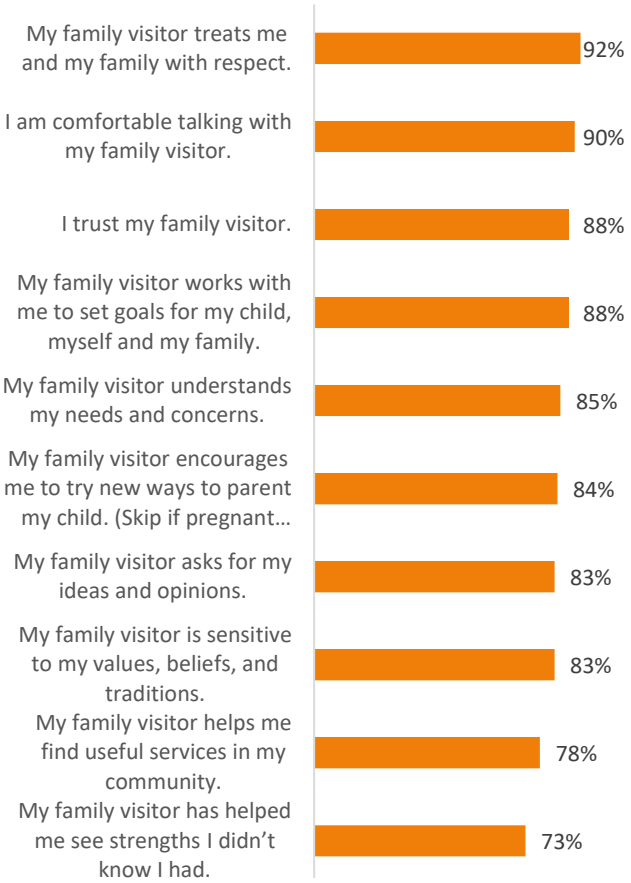
Almost 100% of MFHV participants "agree" or "strongly agree" that they have a trusting relationship with their family visitor. Family visitors are universally reported to listen to families' concerns, treat families with respect, and understand family needs (Figure 16).

Table 21. Percent of MFHV participants who agreed or strongly agreed with how well their family visitor helps them...

Understand my child's growth and development (or prenatal development).	**100%**
Feel better about my parenting.	98%
Know how to keep me and my child(ren) healthy.	98%
Feel less stressed.	92%
Find positive ways to help my child(ren) behave.	98%
Find more support from family or friends.	86%
Know how to make my home safe(r) for my child(ren).	98%
Connect with other families through playgroups, Facebook groups, or family events / gatherings.	82%

Maine Families Participant Survey, 2019

Figure 16. Percentage of MFHV participants who "strongly agree" with each statement



Maine Families Participant Survey, 2019

When asked about how participants used information provided by MFHV in an open-ended question, responses fell primarily into five areas:

1. **Maine Families Home Visiting helps parents understand child development and provides activities for parents to do with their children.**

The information on child development provided by home visitor was most often noted as helping parents better understand and react to their child as she/he/they grows. Parents discussed how they engage with their children through the songs, activities, and strategies for interacting and playing with their children provided by home visitors.

"I learned how to be my child's teacher. We are all our child's first teacher."

"We have used it to see what developmental milestones we can expect."

"The information my visitor gives me at each visit helps inform my expectations of my child (i.e. what is developmentally appropriate at each stage), and it makes me feel better equipped to face challenges and more connected to my daughter to know where she is at developmentally. It also gives me ideas of ways to support her development through play."

2. **Maine Families Home Visiting helps with infant sleep.**

One areas of focus for Maine Families home visiting is ensuring that infants are placed to sleep safely. It was encouraging that many Maine Families caregivers noted on their survey that they received safe sleep support from their family visitor. Several wrote that family visitors helped with a sleep schedule and ensured that they had a safe place for their infant to sleep.

"My neighbor was struggling putting her baby to bed, and I told her that putting your baby in the back is the best position…"

"Safe sleep. We always put her down on her back and make sure nothing is around her."

"She provided a safe sleep playpen."

3. **Family visitors provide key parenting support.**

Many parents reported that their family visitor provided them with encouragement and helped them feel supported, especially during stressful times.

"I was told that I was very resilient and am trying to give that to my children."

"The information she has provided me allowed me to not worry about how I was doing as a parent, that there are other parents out there with the same concerns and who's children are on the same path as mine."

"Although I'm still pregnant with my first child my family visitor has made me feel a lot better about the choices I would like to make for my child in the future."

"I am more comfortable and confident in my parenting and life."

4. **Maine Families Home Visiting helps connect parents to services and the community.**

MFHV participants appreciate the connections to services and other families facilitated by MFHV agencies. Family visitors help families find dentists;

locate public pre-k programs and daycares; complete applications for general assistance, MaineCare, lead abatement, and housing; and provide information about accessing goods (e.g., diapers, car seats, cribs). Many MFHV agencies also help parents connect by hosting playgroups.

"She connected me with some resources I didn't know around me and that was so helpful!"

5. Family visitors promote infant physical health and safety.

On the survey, parents described the support they received from their family visitor related to infant feeding, motor vehicle safety, vaccination, and responding to infant crying. Family visitors support women in breastfeeding, introducing solids, and help parents understand infant nutritional needs. They help families get car seats and provide them information on how to baby- proof their homes.

OUTCOMES: HOW WELL DOES HOME VISITING IDENTIFY AND SUPPORT THE NEEDS OF FAMILIES?

In this section, we review home visiting performance measure data to examine:

- **How well family visitors identify families' needs** by screening for mental health problems, substance use, domestic violence, and developmental delay.
- **How well family visitors support health and well-being in their families** by encouraging preventive health visits, supporting infant nutrition, educating on home safety, and promoting positive parent-child attachment.

MFHV tracks these outcomes through the ERIN web-based data system. The MFHV program is required to submit data on 19 federal performance measures annually. Table 22 summarizes Maine Families program data for FFY19.

Some highlights include:

- **53%** of infants whose mothers enrolled in Maine Families prenatally were **breastfed for at least six months.**
- **85%** of primary caregivers were **screened for postpartum depression.**
- **82%** of children **received their recommended developmental screens** at the appropriate age.
- **89%** of primary caregivers were **screened for intimate partner violence.**

Table 22. Maine MIECHV Performance Measures, FFY2019

Promoting child health and well-being		Fostering child growth and development	
Infants born preterm	11.1%	Child maltreatment investigations	11.3%
Breastfeeding at 6 months	52.8%	Completed parent-child observational assessments	81.3%
Infant safe sleep practices	63.9%	Parents read, tell stories, and/or sing songs with child daily	95.9%
Receipt of last recommended well-child visit	76.9%	MFHV ask parents about concerns related to child's development, behavior or learning	97.9%
Number of ED visits per child	0.05	Receipt of timely services for children who screen positive for developmental delay	99.6%
Identifying family needs		**Encouraging caregiver health and self-sufficiency**	
Screening for depression	84.7%	Receipt of postpartum exam within 8 weeks	81.9%
Completed developmental screenings	82.2%	Tobacco cessation referrals	96.7%
Intimate partner violence screening	89.0%	Progress toward high school completion	22.4%
		Caregiver continuous health insurance for 6 months	97.4%
		Receipt of services for depression among those screened and referred	99.6%
		Receipt of referral for intimate partner violence among those who screen positive	88.9%

Table 23 includes indicators that are directly related to home visiting service delivery by LIA.

In FFY19, 85% of primary caregivers were **screened for depression** within three months of enrollment or birth of their child (range = 77% to 94% across LIAs).

Most LIAs were very successful with **referring caregivers who smoked** at enrollment to assistance. In 8 of 11 agencies, 100% of caregivers who smoked at enrollment were referred for help.

Family visitors complete a tool (PICCOLO) to provide input to families on **parent-child interactions** through observation. In FFY19, this tool was less likely to be completed than other assessments. This measure also varied more widely by LIA than the others (65% to 92%). This may be due to the administration window for this assessment. The PICCOLO is completed after the child reaches 10 months of age and is only administered annually thereafter. Since this assessment is focused on older children, families may leave the program during the reporting period prior to administration of the tool.

In almost all counties, more than 95% of parents were **asked by their family visitor about any behavioral or emotional concerns** they had for their child at every visit.

Statewide, about 89% of primary caregivers were screened for **intimate partner violence**. Across agencies it ranged from 70% to 100%.

Table 23. Selected home visiting performance measures by LIA, FFY19

	Depression screening (%)	Tobacco referrals (%)	Parent-child interaction tool (%)	Parent asked about concerns (%)	Intimate partner violence screening (%)
Statewide	**84.7**	**96.7**	**81.3**	**97.9**	**89.0**
Aroostook	86.7	88.9	80.0	97.0	95.5
Cumberland	76.6	90.0	64.7	93.3	90.0
Franklin	91.3	100.0	92.0	98.7	88.9
Hancock	88.6	100.0	84.7	99.8	93.9
Kennebec-Somerset	83.3	100.0	87.0	99.2	83.6
Knox-Sagadahoc-Lincoln	87.0	100.0	76.2	96.6	91.1
Oxford	82.6	100.0	81.7	98.8	80.6
Piscataquis-Penobscot	76.7	100.0	76.8	98.4	84.7
Waldo	93.8	100.0	89.3	99.1	70.0
Washington	86.0	100.0	78.8	96.7	100.0
York	93.1	92.3	87.5	99.9	94.1

OUTCOMES: DOES HOME VISITING IMPROVE THE HEALTH AND WELL-BEING OF FAMILIES?

Maine Families supports ongoing evaluation of their program to demonstrate impact. Two evaluations have been completed to examine the impact of MFHV on birth outcomes. One was completed in 2018 and focused on all infants enrolled in MF. The other was completed in 2019 and compared birth outcomes of substance exposed infants (SEI) enrolled in MFHV to the outcomes of SEI not enrolled in MFHV or those enrolled postnatally.

Results from the 2018 evaluation included:

- Women prenatally enrolled in home visiting were **less likely to have a premature or low birth**

weight infant compared to those who enrolled postpartum.

- There were no differences in the rate of low birth weight, prematurity, small for gestational age, and infant mortality between women enrolled in home visiting prenatally and women who never enrolled in home visiting.
- Women enrolled in home visiting prenatally were **more likely than non-enrolled women to breastfeed at hospital discharge**.
- Women who enrolled in home visiting prenatally were **more likely than women who enrolled postpartum to receive more than 80% of expected prenatal care visits.** There was no difference in expected prenatal care between prenatally enrolled and never enrolled women.
- Among women whose delivery was paid for by Medicaid, **prenatally enrolled women were more likely than all other women to be enrolled in WIC** during pregnancy, demonstrating cross-collaboration between these two programs.
- Women enrolled in home visiting prenatally were more likely to smoke during pregnancy compared to those who never enrolled. However, compared to women who enrolled postpartum, **prenatally enrolled women were more likely to quit smoking during pregnancy and more likely to decrease the number of cigarettes that they smoked during their pregnancy.**

Based on this evaluation, it was recommended that Maine Families should continue to prioritize enrollment of pregnant women and try to enroll pregnant women as early as possible in their pregnancy. To promote enrollment among pregnant women, home visitors should work more closely with providers, such as OB/GYN offices, to help them understand MF services and their benefits to pregnant women.

The 2019 evaluation focused on SEI enrolled in Maine Families found:

- Infants with a SEI report who enrolled in Maine Families prenatally were **less likely to be born small-for-gestational age**, compared to infants with a SEI report who did not enroll in Maine Families prenatally.
- SEIs enrolled in Maine Families prenatally were **more likely to have mothers who received expected prenatal care visits and were more likely to be breastfed at hospital discharge**, compared to SEIs whose mothers do not enroll prenatally.
- Families with a SEI who ever enrolled in Maine Families were **more likely to have had an investigation for child maltreatment** compared to those who did not enroll in Maine Families.

These findings demonstrate that home visiting provides support that pregnant women need to access needed health care and make informed decisions about breastfeeding a SEI. The finding that infants with a SEI report enrolled in Maine Families are less likely to be SGA may be related to the receipt of adequate prenatal care, or pregnancy education provided by family visitors.

COLLECTING AND REPORTING INFORMATION

MFHV data are collected using a web-based data system, *ERIN*. This system is available to all LIAs and family visitors are expected to enter information into the system from a recent visit within two days of the visit. The system was launched in October 2016.

LIAs can run reports based on family visitors or for their agency. The system is updated on a regular basis to help make it more efficient and to ensure it collects data needed by the programs.

Maine is unique because it has one home visiting model used statewide. As a result, all LIAs can use the same data system, making collection and reporting of data easier than in states that rely on different systems for different models.

MFHV staff feedback was sought and incorporated during the design or the ERIN system, and a small group of MF staff from across LIAs continue to meet to work on system changes. Most MF program managers agree that the ERIN system is an improvement on the older system. Program managers appreciate that they can easily view their visit numbers, screenings and tools that need to be completed, referrals received, and enrollments.

They feel that the tool is helpful for supervision and they use it to help develop Continuous Quality Improvement (CQI) projects and report to their Boards. Program staff also use the data to examine trends to help inform where they should focus their efforts (e.g., safe sleep groups, encouragement of breastfeeding duration). Staff have access to reports and can run their own to help them with visit planning.

MIECHV performance measure data are collected in the system, but performance measure reports are not currently available in ERIN. This is something staff would like to change. However, quarterly reports are provided to LIAs along with information on missing performance measure data.

SUMMARY: QUALITY AND CAPACITY OF EXISTING HOME VISITING PROGRAMS

- MFHV LIAs are serving a diverse population that is very satisfied with the services they are receiving and benefits from the service.
- Staff are well-qualified and receive ongoing training.
- MF program managers and central MF staff see the value in collecting data to monitor quality through their web-based data system and funding of evaluations.

There are areas for improvement:

- Although MF is a universal program, not all families are being served. More high-risk families are being served. While this is a positive finding, waiting lists at many agencies indicate there are interested families not being served.
- Directors indicated that they do not have the financial or human resources needed to eliminate waitlists or conduct outreach to families who choose not to enroll or do not know about the program.
- The three-month eligibility is seen as a barrier for those families who may learn about the program from a friend only to find out they can't receive services.
- Participants would like to have more opportunities to connect with other families in their communities.

SERVICE CAPACITY, GAPS AND QUALITY IN MAINE COUNTIES

In this section, we review barriers and gaps in availability and accessibility of health and social services and family supports in Maine. Information from this section comes from interviews with program directors from Maine Families and Early Head Start, as well as a survey on maternal and child health needs fielded in 2019 that was completed by 240 Maine Families participants and over 1,071 other professionals and non-professionals across the state. We also reviewed needs assessments from Maine's Community Action Programs and county reports from Maine's Shared CHNA.

Gaps in Services in Maine

Based on these sources, the following emerged as key service needs across Maine counties:

- **Mental health services**
- **Substance use services**
- **Economic assistance**
- **Transportation**
- **Housing**
- **Childcare**

Mental health services

Among MFHV participants, 53% reported on the MCH priorities survey that mental health was the top issue facing women in Maine. Almost half of home visiting program managers interviewed reported an increased need for mental health services. More than 60% of LIAs report that, due to long waitlists caused by a lack of mental health providers in some areas, families and children cannot easily get needed services. Some families are having to travel two to three hours to access pediatric mental health services. On the MCH survey, one service provider stated, *"High quality treatment needs to be easily accessible instead of making parents fight the system for every little thing they manage to procure for their children."* Another noted, *"Psychiatric*

services for all ages are in great shortage. It's the number one issue facing families and in the past 20 years; the need has increased greatly."

While home visiting programs shared they do not have staff with specific qualifications/ credentials to work with families with mental illness, family visitors do seek training through the state Maine Families Program or other sources.

Mental health was also identified as a priority in all 16 counties as part of Maine's Shared Community Health Needs Assessment. In 2018, Maine CDC received a Pediatric Mental Health Care Access grant from HRSA. This funding will be used to integrate behavioral health into pediatric primary care using telehealth. This should expand the availability of mental health care for children across the state.

Substance use services

Almost all home visiting program managers interviewed (89%) discussed the impact of substance use (opioids, marijuana and alcohol) on children and families. Almost half (44%) of Maine Families participants identified substance use as an issue on the MCH priorities survey, making it the third most frequently selected area of need. MCH providers on the survey noted that, *"Parents need more help with substance use disorder both during and after pregnancy so that children can stay with their parent rather than go into the foster system."*

Community members who completed the MCH priorities survey frequently mentioned the need for more help for people struggling with substance use disorder (SUD), as well as the need for prevention activities. Access problems were attributed to the lack of affordability and availability. Specific suggestions included more sober housing, appropriate treatment inside prisons, recovery groups and rehab centers. More family support was also suggested, especially for children whose parents are affected by SUD.

"…Programs for substance use problems. Our community is revenged[sic] by opioids and so many family's don't even know where to start to get help and get someone clean without disrupting the flow of family life."

More information about Maine's capacity to address substance use treatment and counseling can be found in the next section.

Poverty is experienced in all corners of the state yet its toll is more visible in the more rural areas. For many, poverty is generational and is accompanied by other risk factors. Families in rural Maine are more likely to be unemployed, as there are a limited number of employers in rural areas and available jobs tend to be service-related, offering lower salaries and few, if any, benefits. Families living in poverty tend to be transient and may "couch surf" with other family members or friends, sometimes in poor living conditions. For those who can work, available jobs typically are minimum wage positions that don't provide adequate income to meet basic needs for food, housing, utilities, car or healthcare.

Many community members who completed the MCH priorities survey mentioned the need for free programs or resources, such as free tutoring, free dental care, free childcare, free birth control, free healthcare, free gym memberships, low income housing, etc. While those comments could simply be described as "access" issues in their respective categories, there is value in grouping them and framing them in terms of the social determinants of health. When poor and low-income families cannot afford to meet their basic needs, it does not matter how many great services are available in their community, they will not be able to utilize them, and their health will suffer. Health insurance/cost of health care was selected by the most Maine Families' participants (41%) as a priority issue on the MCH survey. Community members concerned about cost barriers to health recommended two types of assistance: provision of free and subsidized programs, and/or jobs that provide a living wage.

"Better opportunities for people with low-income wishing they didn't have to rely on the government. Chances to get ahead."

"Dental and mental health that didn't cost an entire paycheck. The 'affordable' options are never affordable to the people who need them."

Transportation plays a significant role in accessing services and employment, particularly in rural areas. Public transportation, for the most part, is only available in metro areas. For example, outpatient services for families in recovery or those seeking mental health counseling require driving to a provider office and many families either do not own a vehicle or may not have one that is dependable. Some families rely on friends or families to get to services; others have no transportation at all.

For those experiencing unemployment getting to and from work can be a challenge without reliable transportation. Car repairs could mean going without other necessities or the potential of losing a job. About one-third of those interviewed talked about *isolation*. Families may live several miles from neighbors, family or the nearest town therefore lacking few if any support systems. Family visitors also talked about the duration of travel time to families living rural areas hampering their ability to maintain higher caseloads. Additional factors include higher traffic volume on the state's rural road system in the coastal areas during summer (tourist season) that creates longer travel time for family visitors as well as longer travel time to visit families on Maine's islands (taking ferry to and from islands).

"Transportation becomes a huge issue as there isn't a reliable transportation service in this area or the trips get canceled and there aren't services for this after 5pm, so some families who have had later appointments are left at the doctors…"

Lack of affordable housing for families was expressed as a need by nearly 70% of those interviewed and it was the second highest priority identified as an issue for all Mainers on the MCH survey (selected by 40% of respondents).

Unstable and unaffordable housing can lead to families living in substandard housing, which sometimes prevents family visitors from seeing a family. As one program manager said; "the insecurities [MF participants have] about their living situations are huge" and referred to it as "housing shame."

In some urban areas in Maine, housing prices have skyrocketed forcing people to move out of the cities. However, due to lack of shelters in rural areas, some families must leave rural communities and go to cities for shelter. Shelters that do exists in rural areas have very limited capacity and families are not allowed to be there during the day. Many families enrolled in Maine Families are sleeping on friends' couches or living with family. There is limited availability of subsidized housing.

In 2019, 56% of Maine households were unable to afford to buy a home at the State's median home price of $225,000; 57% were unable to afford to rent an average priced two-bedroom apartment.[32] In 2018, there were 51 affordable and available rental homes per 100 extremely low-income renter households in Maine.[31] About 60% of extremely low-income renter households spend more than half of their income on housing costs and utilities.[33] A survey of Maine people conducted in 2019 found that most Mainers feel that housing in Maine is not affordable and are unsatisfied with the condition of their home.[34]

Lack of flexible, affordable childcare*:* In some counties with a large number of seasonal workers or where workers work night shifts, finding childcare to accommodate schedules can be challenging. It is also difficult for many to afford childcare. On the MCH priorities survey, safe and affordable childcare was the third highest ranked priority selected by 37% of Maine Families participants.

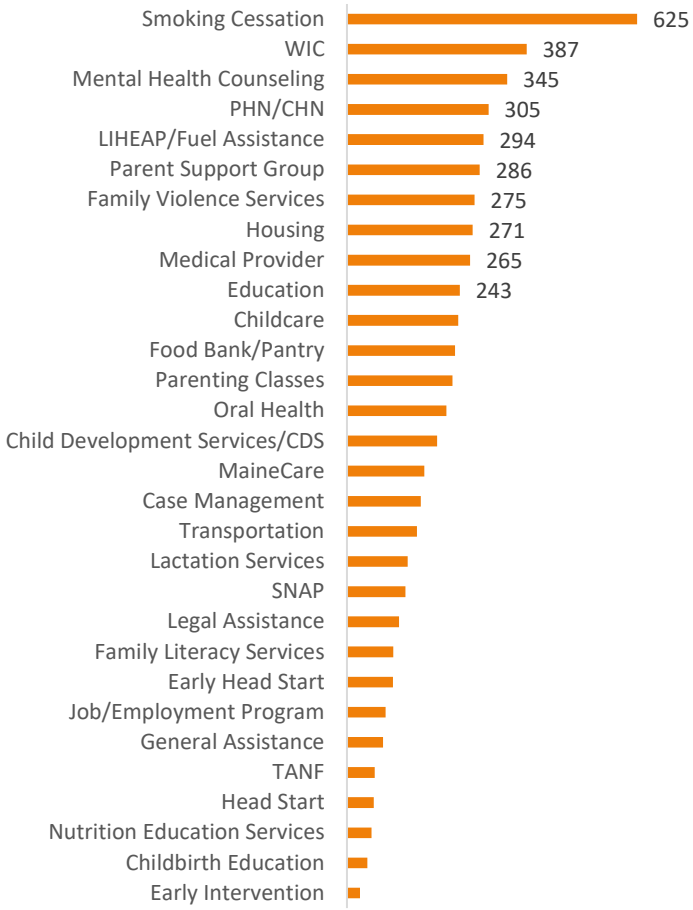
How do home visiting programs address needs of families in Maine?

The issues mentioned above are challenges for all communities in Maine. Although MFHV is not in the position to improve county transportation systems or increase affordable housing units, home visiting programs can ensure ongoing collaboration and coordination with area agencies that provide services for mental health, substance use, domestic violence, housing, food assistance, transportation services, etc.

In the Maine Families ERIN data system, family visitors record referrals for families and document services that families are receiving. For families with one or more children born to a Maine resident between 10/1/2016 and 12/31/2018, we examined referrals made and services received.

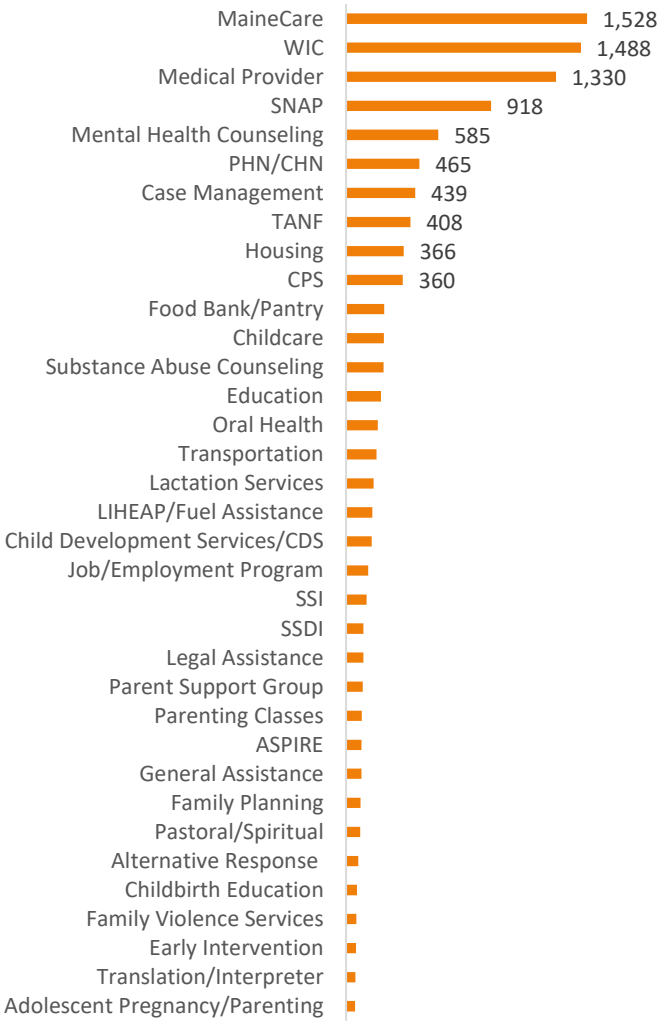
About **7,500 referrals were made by Maine Families** home visiting programs between 10/2016 and 12/2018. The most frequent referrals were to smoking cessation programs, the WIC nutrition program, mental health counseling services, public health nursing, and heating assistance (Figure 17).

Figure 17. Number of referrals made by Maine Families family visitors



Between 2016 and 2018, **about 11,500 Maine Families participants received at least one service to help their family.** The most common were MaineCare (Medicaid), WIC, a visit with a medical provider, receipt of SNAP benefits, mental health counseling, and Public Health Nursing. Services for basic needs such as SNAP, TANF, housing, and food banks were also commonly accessed by home visiting participants (Figure 18).

Figure 18. Services received by Maine Families Home Visiting participants



SUMMARY: SERVICE CAPACITY, GAPS AND QUALITY IN MAINE COUNTIES

Based on quantitative data on availability of service providers, high rates of poverty, food insecurity, and housing instability, as well as qualitative data from home visiting managers and participants, we know there are many families struggling across Maine to get the services they need.

Throughout Maine, there is need for comprehensive services to address mental health, substance use, affordable housing, and childcare, among others. Even when these services exist, many families are challenged to access them due to issues such as:

- Lack of transportation for non-medical appointments
- Long waitlists
- Not enough services/slots for the need
- Eligibility restrictions (e.g., age restrictions for children with parents in residential treatment programs)
- Limited availability of services

Although there may be challenges in accessing services in Maine, Maine Families family visitors are partnering with local and State agencies to help families get the services they need.

Table 24 highlights some of the partnerships forged by home visiting agencies in every county that ensure that families are helped when they need services.

Table 24. Selected partnerships of Maine Families LIAs

Counties served by MF LIA	Selected partnerships
Androscoggin/Oxford	WIC, Community Action Program, LiHeap, Child Development Services (CDS), local schools, libraries, municipalities, FedCap, Community Partnership for Protecting Children (CPPC), Child Protective Services (CPS), medical community, hospitals, Child Abuse and Neglect (CAN) Council, Substance Use (SU) and Mental Health (MH) providers, Early Head Start
Aroostook	Area school nurses and guidance counselors, Family Planning (3 clinics), OBs, WIC, CAN Council, MH & SU Providers, PHN (more recently), CDS, case managers, CPS
Cumberland	WIC, Portland Public Health Department, Early Head Start, CPPC – allows MF to be aware of other provider services in the area.
Franklin	WIC, CAN Council, Public Health Nursing (PHN), SU & MH providers, local after school programs, community health centers, school guidance counselors, jails
Hancock	WIC, PHN, CAN Council, Downeast Community Partners, Early Head Start, OBs and Midwives through MaineCoast Hospital
Kennebec/Somerset	Domestic Violence services (DV), WIC, PHN, CAN Council, SU, (sit on SU Task Force), hospitals, OBs, and social workers.
Knox/Lincoln/Sagadahoc	Agencies serving families in recovery, EHS, CAN Council, CAP, WIC, DV, Passages Program, Landing Place for homeless teens.
Penobscot/Piscataquis	WIC, Journey House, EHS, Bangor Public Health, CAN Council, CPPC, Department of Health and Human Services & w/families at Infinity House of Wellspring
Waldo	PHN, WIC, Seaport Healthcare, adult Ed, Literacy Volunteers, Building Communities with Children, Diaper Closet Collaborative, CAN Council, Passages, Early Head Start
Washington	Community Action Program, Bridging nurses, CAN council, WIC, SU
York	DV, CPPC, Allied Community Health – attend meetings, CDS, Parents as Partners, WIC, EHS

CAPACITY FOR PROVIDING SUBSTANCE USE DISORDER (SUD) TREATMENT AND COUNSELING SERVICES

SUD prevalence rates exceed national averages in Maine (Figure 16). The prevalence of any SUD among people 12 and older in Maine was almost 9% during 2017-2018.[35] The ongoing opioid epidemic is of particular concern in the state, which in 2018 had the tenth highest rate of opioid-related overdose deaths (23.4 per 100,000 population) in the country.[36]

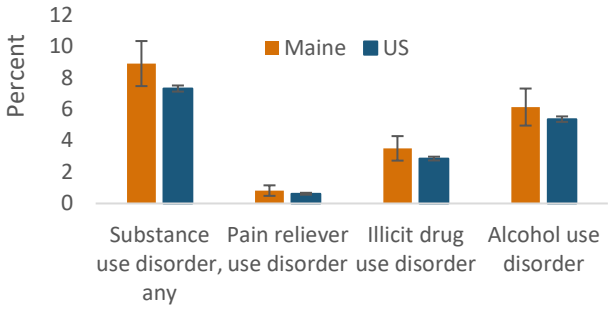
In a 2019 statewide Community Health Needs Assessment, all 16 Maine counties identified substance use as a top health priority.[37]

Rates of neonatal abstinence syndrome (NAS) trend above national averages; in 2018, NAS prevalence in Maine was 28.3 per 1,000 newborn hospitalizations.[38] Of related concern, maternal Opioid Use Disorder (OUD) was present at 1 in 29 hospital deliveries in 2018, up from 1 in 44 in 2009.[39] Alcohol and marijuana use remain issues as well. In 2017, 10% of pregnant women reported alcohol use in the last trimester of pregnancy and 22% reported marijuana use in the three months before becoming pregnant or while pregnant.[40] According to a 2017-2018 estimate, more than 10% of children in Maine have lived with someone with problematic drug or alcohol use.[41] Connecting pregnant and postpartum women (PPW) and families of young children to SUD treatment has been identified as a priority at the state level.[42] The following sections outline the range of SUD treatments available in Maine for the MIECHV population, gaps in the current treatment system, barriers to service, as well as opportunities for collaboration and state-level efforts to improve access to SUD treatment for PPW and families of young children.

Range of Substance Use Disorder Treatment and Counseling Services

Timely and appropriate access to treatment and counseling is critical to addressing SUD and related health outcomes. This section provides an overview of substance use treatment services offered in Maine, with a focus on programs specific to PPW.

Figure 19. Prevalence of substance use disorders, 12+ years of age



National Survey of Drug Use and Health, 2017-2018

SUD Screening, Intervention, and Referral

Clinical guidance recommends that all pregnant women be screened for substance use and SUD as early as possible during prenatal care.[43] The Maine Department of Health and Human Services (DHHS) has issued state-specific, evidence-informed guidance for healthcare providers related to the care and treatment of pregnant women with SUD and their infants since 2013. This document, the **Snuggle ME Guidelines**, recommends that providers treating pregnant women follow the SBIRT (screen, brief interview, referral to treatment) protocol to universally screen pregnant women for substance use.[44] Evidence-based screening tools, information on Maine's Prescription Monitoring Program database, and referral resources are included in the Snuggle ME Guidelines.

Screening for substance use is also an important feature of Maine Families home visiting; 85% of caregivers served by Maine Families were screened for depression and substance use in 2019.[45] Other SUD screening and referral services available for families in Maine include:

- **211 Maine** is an information and referral service that connects Mainers to a wide range of services, including SUD treatment and counseling. In partnership with DHHS, 211 operates a statewide opiate helpline and can assist pregnant women with OUD with immediate transfers to treatment providers.[46]
- **24-Hour Statewide Crisis Hotline** provides crisis counseling for individuals and families in the state.

Counselors help stabilize people in crisis, develop individual crisis plans, and connect callers to community resources and providers.[47]

- **Maine Mother's Network** offers case management for pregnant and parenting women with SUD. The program offers trauma screening, parenting and treatment groups, and helps to coordinate services and advocate for clients. The program is funded through the Maine Office of Behavioral Health and operated by Crisis and Counseling Services.[48]
- **CradleME** is a referral system for birthing families in Maine that connects pregnant women and families with newborns to home visiting services (for more detail, see **Home Visiting Enrollment and Reach**). Referrals with medical needs, including SUD, are connected with PHN home visitors.[49]

SUD Treatment and Counseling

Pregnant women are given priority access to SUD treatment programs in Maine, however there is not a statewide treatment program specifically targeted to PPW.[50] MaineCare covers SUD treatment, including medication assistance treatment (MAT) for OUD, and some recovery services.[51] MaineCare was expanded in 2019 under the Patient Protection and Affordable Care Act (ACA) and has provided SUD treatment to more than 10,000 Maine residents through the expanded coverage (for more detail, see **State Actions to Address SUD**).[52]

According to data from the 2019 National Survey of Substance Abuse Treatment Services (N-SSATS), out of 186 SUD treatment facilities surveyed in Maine (87% response rate), 46 (25%) offered tailored programs for PPW. A descriptive overview of treatment facilities in Maine is presented in Table 25.

Table 25. Overview of Maine substance use treatment facilities reporting to N-SSATS, 2019

	All facilities n (%)	Facilities with program for PPW n (%)
Facilities	186	46
Ownership		
Private for-profit	98 (53.0)	19 (41.3)
Private non-profit	79 (42.7)	26 (56.5)
Government (local, tribal, or federal)	8 (4.3)	1 (2.3)
Type of care provided		
Residential (non-hospital)	21 (11.4)	7 (15.2)
Hospital inpatient	4 (2.2)	0 (-)
Outpatient	166 (89.7)	40 (87.0)
Type of treatment provided		
Detoxification	18 (9.7)	6 (13.0)
Medication assisted treatment, OUD (any)	88 (47.6)	30 (65.2)
Methadone	11 (6.0)	5 (10.9)
Buprenorphine	85 (46.0)	29 (63.0)
Naltrexone	53 (29.0)	23 (50.0)
Medication assisted treatment, alcohol use	42 (22.7)	12 (26.1)
Treatment for co-occurring mental health disorders	92 (49.7)	44 (95.7)
Payment options		
Accepts Medicaid as source of payment	154 (83.2)	41 (89.1)
Uses a sliding fee scale	114 (61.6)	32 (69.6)
Offers treatment at no charge or minimal payment to clients who cannot afford to pay	93 (50.3)	34 (73.9)

Source: National Survey of Substance Abuse Treatment Services (N-SSATS), 2019
Notes: Facilities may provide multiple types of care, treatment, and payment options. Detoxification is not recommended for PPW with OUD, and therefore may not be provided to that population.

For PPW with OUD, MAT with methadone or buprenorphine coupled with behavioral interventions is the standard of care.[53] There are approximately 900 licensed buprenorphine prescribers in Maine, and seven licensed opioid treatment programs (methadone clinics) with 11 locations. More than half (65%) of N-SSATS surveyed facilities with programs for PPW offered opioid MAT in 2019, while a quarter offered MAT for alcohol use disorder. Preliminary results from a study of MAT during pregnancy among MaineCare enrollees with OUD suggest that buprenorphine MAT access has been improving in Maine in this population. The findings reveal that rates of consistent treatment (buprenorphine or methadone use monthly for five months prior to delivery) for pregnant buprenorphine users increased from 23 to 41% from 2010 to 2018; consistent treatment for methadone users decreased (19 to 9%) over the same time period.[54]

The majority (90%) of N-SSATS SUD treatment facilities surveyed operated outpatient services. Of facilities with tailored programs for PPW, seven (15%) offered non-hospital residential treatment in 2019. As of August 2020, there were two integrated SUD treatment facilities serving PPW in Maine that offered residential beds for clients' children (a third closed in 2019): the Infinity House for Women and Children in Bangor,[55] and the Crossroads Children and Mothers Residential Program in Portland.[56] Both facilities use trauma-informed models of care to treat pregnant and parenting women, and offer MAT, treatment for co-occurring mental health disorders, and numerous ancillary services supportive of parenting while in treatment.[57]

Recovery and Peer Support Programs

In addition to clinical treatment, recovery and peer support programs help to facilitate recovery from SUD. The Maine Recovery Hub is made up of eight state-funded recovery community centers that connect people in recovery to a network of local support services. Four other centers operate outside of the Hub.[58] Mutual-aid programs (e.g. Alcoholics Anonymous, Narcotics Anonymous, SMART Recovery) are central to these networks, and many offer meetings for specific populations including women and parents.[27]

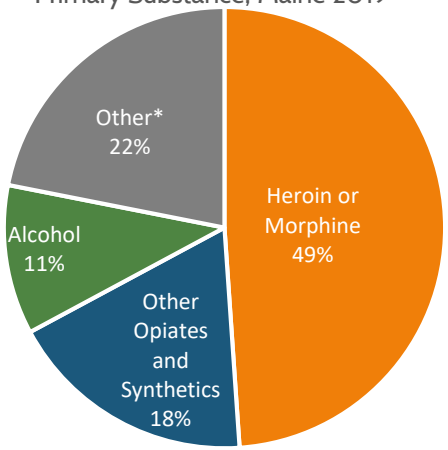
Recovery homes, also known as sober homes, halfway houses, or Oxford houses, offer structured, substance-free living environments that support recovery from SUD, and can help ease the transition from residential treatment back to community living. The Maine Association of Recovery Residences certifies recovery homes using standards set by the National Association of Recovery Residences. As of August 2020, Maine had 16 certified women's recovery residences, most in Southern Maine.[60] Oxford Houses and other non-certified recovery residences also provide housing for women. One recovery home, the McAuley House in Portland (with a second location planned in Bangor) provides transitional housing for women and dependent children under age 10.[61]

Gaps in the Current Level of Treatment and Counseling Services

The need for SUD treatment among the MIECHV service population remains an issue in Maine, as evidenced by the indicators of maternal and child health in the section **Domain 3: Substance Use Disorder.** According to the National Survey on Drug Use and Health, an estimated 92% of those who needed SUD treatment in Maine did not receive it in 2017-2018.[35] Though needing treatment is not the same as being ready to accept treatment, key informants from the Maine Office of Behavioral Health (OBH) noted that treatment capacity is an ongoing issue in Maine, especially for residential treatment. OBH staff also recognized limited detox programs and treatment for PPW with co-occurring mental health diagnoses. Of 3,938 female SUD treatment admissions reported to the state in 2019, 137 were identified as pregnant at the time of admission (Figure 17). Data on the number of pregnant or parenting women needing or waiting for treatment was not available from the state at the time of this report. OBH is currently in the process of updating its data collection systems, and recognized data gaps and reporting issues as a historical challenge at the agency.

Treatment services with a focus on serving PPW and women with dependent children are limited in Maine. As previously stated, Maine lacks a coordinated response system for addressing SUD among this population,[50] though a treatment model for maternal

Figure 20. Pregnant Women Admitted to Substance Use Treatment (n=137) by Primary Substance, Maine 2019



*Cocaine/crack, marijuana/hashish/THC, methamphetamines, hallucinogens, inhalants, benzodiazepines, or other
Source: Maine Office of Behavioral Health

OUD is in the process of being developed, and will be discussed in a later section. In interviews, MIECHV service providers acknowledged a lack of tailored SUD services designed to meet the needs of families (especially those who want to continue actively parenting while in treatment) as a gap in the current treatment system. This gap can mean parents and caretakers must "take what they can get and not always what is best for the family" when it comes to SUD treatment.

Another limiting factor in meeting the need for treatment services is Maine's reliance on outpatient vs. residential treatment programs. The majority of SUD treatment facilities in Maine offer only outpatient treatment. Of 14,500 people receiving SUD treatment on March 29, 2019, 98% were receiving outpatient care, while less than 2% were in residential care.[62] Participation in a residential program has been associated with improved treatment outcomes compared to outpatient treatment,[63] however access to residential treatment for the MIECHV population is further limited by a lack of programs offering residential beds for clients' children.

Healthcare workforce shortages can also contribute to SUD treatment gaps. As of August 2020, there were 60 designated primary care health professional shortage areas in Maine, and 50 mental health professional shortage areas, 90% of which were in rural or partially-rural areas.[64] These shortages may be exacerbated by provider reluctance to treat OUD, especially among pregnant women, a limitation identified by members of the Maine Maternal Opioid Model (MaineMOM) advisory group and OBH staff. Though buprenorphine treatment access appears to be improving in Maine, MAT treatment gaps remain; approximately 27% of pregnant MaineCare enrollees with OUD had no MAT during pregnancy in 2018.[54] Of clinicians licensed to prescribe buprenorphine MAT in Maine, more than half prescribed to no patients or to only one patient in 2019.[65] Even when providers are willing to treat SUD, gaps in provider knowledge and a lack of coordinated care were acknowledged by key informants as impediments to treatment.

Telehealth services can help to close the gap in treatment availability, particularly in rural areas of high need with limited geographic access to treatment. Use of telehealth for SUD treatment is growing in Maine, though barriers related to internet or technology access can limit use. Of facilities surveyed in the 2019 N-SSATS, 32% reported frequent use of telehealth.[62] The COVID-19 pandemic has forced many treatment providers to deliver services via telehealth. OBH staff reported anecdotal evidence from providers that telehealth service delivery has helped to address some of the barriers to service experienced by PPW such as lack of transportation and childcare, and that telehealth treatment options are helping to improve client engagement.

Barriers to Receipt of SUD Treatment and Counseling Services

Barriers to SUD treatment for PPW and families with young children have been well documented in academic research, and include social stigma, fear of custody loss, lack of childcare and transportation, and not wanting to be away from children or partners to attend residential treatment.[66] Many of these challenges are present in Maine, as identified by MIECHV providers, the MaineMOM advisory board, Maine OBH, and other sources. Moreover, Maine's status as a largely rural state presents unique challenges to receipt of services.

Geographic access to both prenatal care and SUD treatment services can be limited in more rural parts of the state,[37] requiring residents to travel further distances to access care. Maine has a larger share of residents living in rural areas (61%) than any other state,[67] and rates of maternal OUD have been found to be higher among rural populations in Maine,[39] suggesting that rural access issues are compounded by an increased need for services.

Transportation issues were identified more than any other barrier to treatment by key informants. MaineCare, the state's Medicaid program, covers transportation to treatment services for enrollees, but informants identified challenges faced by parents and caretakers in using MaineCare-approved transportation services, such as the need to bring children with them to appointments. Related to this, limited access to childcare was also identified as a barrier to SUD services for the MIECHV population. Only nine SUD treatment facilities in Maine listed childcare as an ancillary service in the 2019 N-SSATS.[62]

Issues related to stigma and trust were also identified frequently as barriers to care. According to one Maine Families provider, stigma around substance use is attached to fear of being reported to Child Protective Services by home visitors, who are mandated reporters. This fear may act as a barrier to both SUD treatment and MIECHV services.

Other barriers to care cited by key informants include histories of trauma, co-occurring mental health or other substance use disorders, intimate partner violence, and lack of access to treatment for partners. Additionally, Maine's 2019 Shared CHNA cited homelessness as a barrier to SUD treatment in the state.[37] According to data from the 2017 Treatment Episode Data Set, 11% of pregnant women admitted to SUD treatment in Maine were homeless at the time of admission.

Opportunities for Collaboration with State and Local Partners

Though Maine's elevated prevalence of SUD is cause for concern, work is being done throughout the state to improve SUD treatment access. As noted earlier, all 16 Maine counties have identified substance use as a health priority area.[37] Existing partnerships between MIECHV agencies, the state, and local organizations that help address barriers and connect families to SUD treatment are discussed below. In addition, MaineMOM, a promising new collaborative model of care for PPW with OUD in which home visiting plays a critical role, is currently under development. MaineMOM will be discussed in more detail in the section **Strengthening Systems of Care**.

- **Public Health Nursing.** Maine Families collaborates with the Maine Division of Public Health Nursing (PHN) to coordinate home visiting services for pregnant women and families who have just had a baby. Referrals through the CradleME system are sent to PHN when a family or infant has a medical need, including SUD. Maine Families home visitors can also refer families to PHN services as needs are identified, and many agencies (n=7) report working regularly with PHN in their service areas.
- **Local SUD Treatment and Counseling Services.** In interviews, MIECHV providers (n=9) reported collaborating with local substance use and mental health service providers to conduct outreach to families dealing with SUD. These relationships, with SUD treatment facilities, counselors, recovery homes, support groups, and task forces, offer MIECHV providers opportunities to recruit families to home visiting services, and provide home visitors with contacts in their community to refer clients to SUD treatment.
- **Child Protective Services.** As mandated reporters, Maine Families family visitors work with Child Protective Services (CPS) to report concerns about parental or caretaker substance use and related child welfare issues. The Office of Child and Family Services recognizes that the provision of timely and appropriate SUD treatment for parents and caretakers can address one of the primary risk factors for CPS involvement, and is engaged with state efforts to address opioid and other substance use in Maine.[68]
- **Children and Recovering Mothers (CHARM) Collaborative.** Maine Families is a partner in CHARM, a collaborative approach to treating PPW with OUD and their infants based in Waldo

County. CHARM brings medical and behavioral healthcare providers, SUD treatment services, and social service providers together to improve care coordination and community support for PPW with OUD. The program encourages intervention at multiple points for families in need.[69]

State Actions to Address SUD and Strengthen Systems of Care

Maine is in a transitional period in its response to SUD and the provision of treatment services. Since taking office in January 2019, Governor Janet Mills' administration has made responding to Maine's opioid epidemic a state-level priority. According to OBH staff, collaboration between state agencies has been increasing. Two executive orders issued by the Governor have expanded access and addressed gaps and barriers to treatment in the state:

- **MaineCare Expansion:** A January 2019 executive order expanded the state's Medicaid program, to cover adults at or below 138% of the FPL under the ACA. As of August 1, 2020, 59,797 Maine residents have enrolled through MaineCare expansion, including 9,857 parents and caretakers. MaineCare expansion has provided SUD treatment to 10,944 enrollees.[52]
- **Opioid Epidemic Response:** A second executive order, issued in February 2019, outlined steps to be taken to reduce overdose deaths, expand treatment and recovery programs, prevent SUD, and reduce stigma around SUD. The Director of Opioid Response, a position within the newly created Governor's Office of Policy Innovation and the Future, was placed in charge of creating a Prevention and Recovery Cabinet and developing an Opioid Response Strategic Action Plan, described below.

Maine Opioid Response Strategic Action Plan

The Strategic Action Plan was issued in December 2019, with the goal of reducing "the negative health and economic impacts of substance use disorder and opioid use disorder on individuals, families, and communities in Maine."[42] The plan outlines five focus areas: **leadership, prevention, overdose rescue, treatment, and recovery**; priorities and strategies within each focus area are detailed. Though the plan is designed to address overall SUD and OUD in Maine, these general efforts will no doubt benefit families in the state. Additionally, certain strategies within the plan speak to the specific needs of pregnant women, children, and families (Table 26).

Table 26. Strategies and actions within the Maine Opioid Response Strategic Action Plan to support and treat pregnant women, children, and families affected by SUD

Priority: Prevent the early use of addictive substances by children and youth	
Strategy: Support healthy early childhood development	
Actions	Support, maintain, develop, or promote: • Funding for integrated models of care for PPW with SUD (e.g. MaineMOM) • Maternal SUD and SEI Task Force • Staff and funding to decrease prevalence of SEI and NAS • Access to long-acting reversible contraception (LARC) • Evidence-based treatment for SEI (e.g. SnuggleME Guidelines) • Plan of Safe Care for every SEI • Thorough review of infant and child mortality data • Early childhood education including social and emotional learning skills • Strategic workplan for prevention and treatment of SEI • Expansion of home visiting and public health nursing • Education and skill-building for parents using evidence-based programs • Education and training for child care providers
Strategy: Reduce adverse childhood experiences (ACES)	
Actions	Support, develop, or promote: • Awareness and education on the prevention of ACEs • MaineCare policies to provide education and support for parents

	• Evidence-based trainings on ACEs and SUD prevention • ACEs education and training for high-risk communities and/or families
Priority: Ensure the availability of local, immediate, and affordable treatment	
Strategy: Improve access to MAT with special efforts to target at-risk populations	
Actions	• Strengthen treatment for pregnant and parenting women • Provide education on the provision of integrated MAT in pregnancy • Create payment models to support MAT in pregnancy

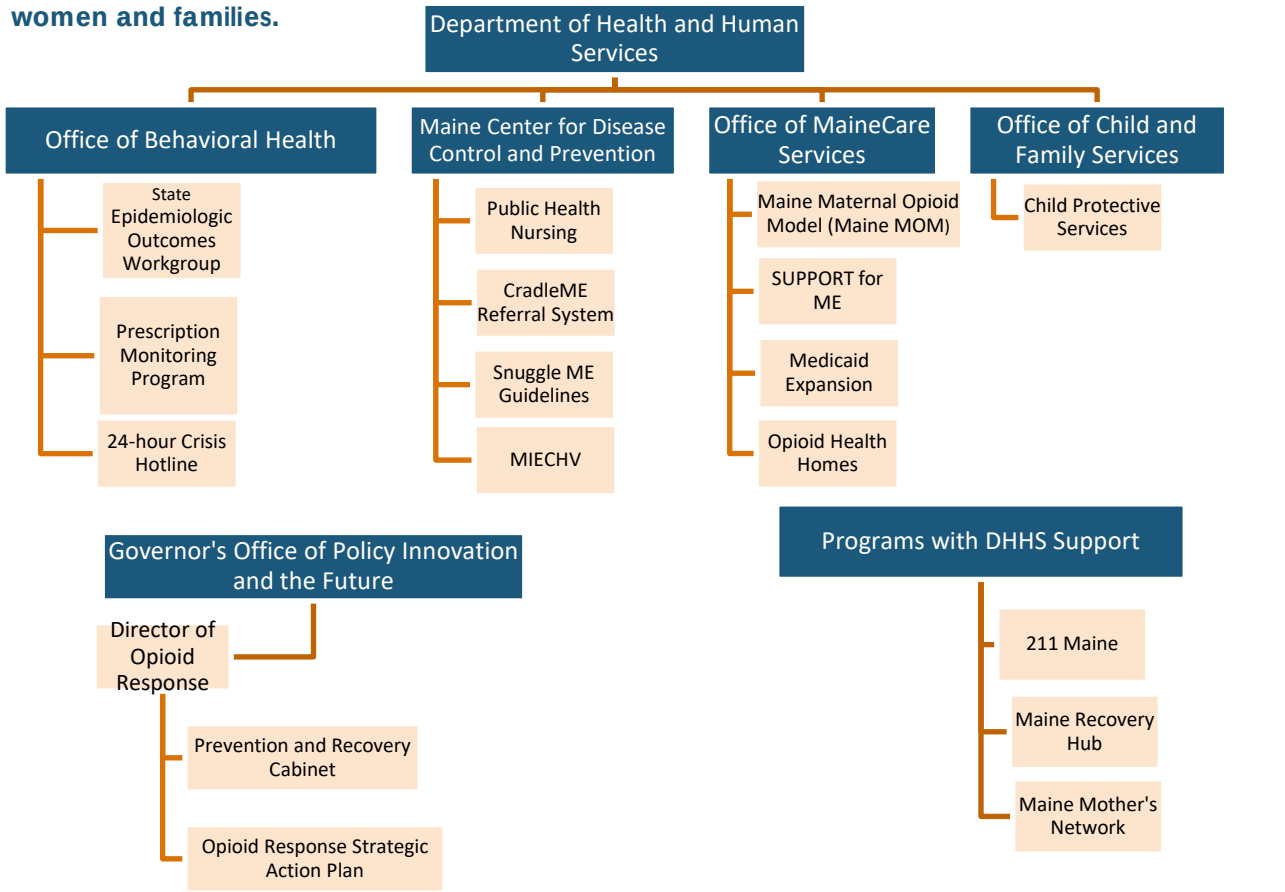
Source: Governor's Office of Policy Innovation and the Future

Other strategies in the plan that will help to address the gaps and barriers to SUD treatment identified for pregnant women and families include:

- Continued development of state-level opioid response leadership
- Expansion of community partnerships to prevent and treat SUD
- Outreach and education to reduce stigma around SUD
- Pilot targeted SUD prevention for rural communities
- Improve provider capacity and patient access to MAT by assessing and strengthening telehealth, transportation services, rural access, and provider education

A flowchart of state agencies, programs, and partners involved in addressing SUD among the MIECHV service population is shown in Figure 21.

Figure 21. State agencies, programs, and partners engaged in responding to SUD among pregnant women and families.



Strengthening Systems of Care

State-level action to address SUD in Maine has been accompanied by programs and initiatives to strengthen systems of care for MaineCare enrollees with SUD. The MaineMOM project is specifically designed to improve systems of care for PPW, and other projects are poised to extend benefits to the MIECHV population.

Maine Maternal Opioid Model (MaineMOM): In January 2020, Maine was awarded a $5.3 million federal grant from the Centers for Medicare and Medicaid Services (CMS) to implement the MaineMOM project over five years. Working with six healthcare providers throughout the state, MaineMOM will develop a statewide system of care for PPW with OUD. MaineMOM will increase outreach to PPW and referrals to OUD treatment, and address many of the needs and barriers to service identified in earlier sections of this report through the following actions:

- Facilitate tailored programs offering group-based MAT for mothers.
- Reduce stigma by offering a welcoming, "no wrong door" approach to care.
- Provide education and support for providers treating maternal OUD.
- Increase system capacity for integrated SUD, maternal care, and telehealth.
- Screen for social needs and offer referrals to home visiting and nutrition services.

Home visiting will be a standard of care for all MaineMOM enrollees; MaineMOM will provide referrals to Maine Families and PHN, as well as regular opportunities for home visiting providers to attend MaineMOM groups. Enrollment in MaineMOM will begin in July 2021.[70]

SUPPORT for ME: A $2.1 million planning grant from CMS is helping MaineCare increase provider capacity to deliver SUD treatment. The project will specifically target rural populations and address some of the gaps and barriers identified for PPW and families by improving data on SUD treatment needs, expanding provider capacity and training, offering technical assistance for MAT, and creating plans to address barriers to treatment.[71]

Health Homes: To address issues related to coordination of care, MaineCare operates three health home programs: Health Homes, Behavioral Health Homes, and Opioid Health Homes.[71] Though the programs enroll PPW (Table 27), none are specifically targeted to this population.

Table 27. MaineCare Health Home Programs and number of pregnant women served, 2018

Program	MaineCare population targeted	Pregnant women served
Health Homes	Adults with 2 or more chronic conditions, or 1 chronic condition and at-risk for another	1,799
Behavioral Health Homes	Adults diagnosed with serious and persistent mental illness; Children diagnosed with serious emotional disturbance	396
Opioid Health Homes	Adults with OUD diagnosis who have or are at-risk for a second chronic condition	72

Source: Office of MaineCare Services

Wraparound Services for Pregnant Women and Families with Young Children

Guidelines for treating PPW and families with young children recommend specialized, comprehensive treatment services that address co-occurring issues such as mental health diagnoses, polysubstance use, housing instability, and domestic violence.[73] Specialized programs offering comprehensive treatment and ancillary services such as childcare or other social services have been associated with improved outcomes among parents and children.[74,75] Access to treatment facilities offering ancillary and wraparound services can help to address or remove barriers to care faced by PPW, parents, and caretakers with SUD. Data on service availability in Maine are provided in Table 28.

Table 28. Tailored programs and ancillary services available at Maine SUD treatment facilities responding to N-SSATS, 2019

Facility or program type	All facilities	Facilities with program for PPW
	n (%)	*n* (%)
Tailored programs		
Clients who have experienced trauma	68 (36.8)	40 (87.0)
Clients with HIV or AIDS	35 (18.9)	28 (60.9)
Ancillary services		
Childcare for clients' children	9 (4.9)	9 (19.6)
Residential beds for clients' children	3 (1.6)	3 (6.5)
Case management services	112 (60.5)	30 (65.2)
Transportation assistance	49 (26.5)	14 (30.4)
Assistance obtaining social services	115 (62.2)	30 (65.2)
Assistance locating housing	100 (54.1)	23 (50.0)
Social skills development	108 (58.4)	27 (58.7)
Mentoring/peer support	103 (55.7)	31 (67.4)
Employment counseling or training	39 (21.1)	16 (34.8)
Domestic violence services	58 (31.4)	18 (39.1)
Mental health services	133(71.9)	36 (78.3)

Source: National Survey of Substance Abuse Treatment Services, 2019

COORDINATION WITH TITLE V MCH BLOCK GRANT, HEAD START, CAPTA AND OTHER NEEDS ASSESSMENTS

Maine's MIECHV needs assessment was conducted in collaboration and coordination with other needs assessment efforts around the state.

Maine's Title V MCH Block Grant Needs Assessment: Members of the MIECHV needs assessment team were part of the Title V Needs Assessment team ensuring efficiency and synergy in the work. Examples of our collaboration included:

- Data for the MCH and MIECHV needs assessments were analyzed by the same team of epidemiologists. Many of the indicators for the MIECHV needs assessment were analyzed initially for the Title V assessment and much of the data produced were used for both assessments.
- A survey designed to assess potential maternal and child health priorities was developed by the MIECHV needs assessment team in collaboration with the MCH Needs Assessment team and was used to inform the MIECHV needs assessment as well as the Title V priorities. Home visiting participants completed the MCH priorities survey at the same time they completed their annual home visiting participant survey. About 250 home visiting participants completed the survey. About 850 completed the survey overall.
- Domains for the MIECHV needs assessment of communities at-risk were added to reflect Maine's 2020-2025 Title V priorities.
- Maps created for the MIECHV needs assessment are being used by the Title V program.
- Many of the connections used to gather information for the substance use capacity section of the MIECHV needs assessment were aided by Maine's Title V director and members of Maine's Title V Needs Assessment Domain Leads and Partners' Group.

Maine's MIECHV needs assessment team has ongoing conversations with **Maine's Title V program** about both needs assessments and how the data can be

disseminated widely. We plan to coordinate efforts on presentations and dissemination products.

Head Start/Early Head Start Needs Assessment: In addition to our work with Maine's Title V program, the MIECHV needs assessment team gathered information from the State Head Start coordinator on their needs assessment. This included interviewing the State coordinator and reviewing their most recent needs assessment. Head Start is planning on updating their needs assessment in the next year. We will share the results of the MIECHV needs assessment to inform their work.

CAPTA Inventory: We obtained the most recent Child Abuse and Neglect (CAN) Councils needs assessment from the OCFS Prevention Coordinator. The needs identified in the 2018 assessment closely relate to those of the MIECHV program. Many of the Maine Families and CAN Council Directors sit on each other's boards and collaborate on a regular basis.

Other Needs Assessments: We reviewed the needs assessment produced as part of **Maine's Preschool Development Grant**. Maine's Title V director, who is the principal investigator on Maine's MIECHV grant, was a key participant in the development of Maine's Preschool Development Grant needs assessment.

Maine CDC, in collaboration with three hospital systems in Maine, completed **Maine's Shared Community Health Needs Assessment (CHNA)** in 2018. Team members of the MIECHV needs assessment were part of this process. Many of the indicators for the MIECHV needs assessment were included in the Shared CHNA and many of the county priorities identified in the Shared CHNA process, including mental health, access to care, and social determinants of health, were included in the MIECHV needs assessment. We also used findings from the Shared CHNA to inform our analysis on service gaps across the State.

We reviewed **needs assessments from Maine's Community Action Programs** across the state. These needs assessment informed our discussion of service gaps in communities around the state and barriers to accessing services. These CAP needs assessments confirmed information gathered in interviews and surveys with Maine Families staff and participants.

Stakeholder Involvement and Dissemination

Maine's MIECHV project coordinator and needs assessment team lead are part of **Maine's Maternal and Child Health Domain Lead and Partners Meeting**. This is a diverse group of stakeholders representing multiple programs within the Maine CDC, as well as other state agencies, including Medicaid, Child Welfare, and Department of Education. Findings from the MIECHV needs assessment will be shared with this group.

We also plan to share results from this needs assessment with the **Maine Child Health Data Group,** which is convened by the Office of the Commissioner of Maine's Department of Health and Human Services and includes representatives from the Maine CDC, Office of Child and Family Services, MaineCare, and the Maine Children's Cabinet. Maine's Title V director will also share results from the MIECHV and Title V needs assessments with the **Maine Child Health Leadership Group**, which includes almost 40 staff members from across State government with a stake in child health.

CONCLUSION

The purpose of Maine's MIECHV needs assessment was to document key indicators that reflect the health and well-being of Maine's families and examine how home visiting serves families with a broad set of needs. This assessment found that there are communities and families that would benefit from services provided by home visiting programs in every Maine county.

- Currently, all counties are served by at least one of two evidence-based home visiting programs, Early Head Start and Maine Families Home Visiting (MFHV). Together these programs serve about 3,800 Maine children and pregnant women each year. MFHV is the home visiting program funded through HRSA's MIECHV grant.
- Increasing awareness and understanding of home visiting programs could improve program's reach allowing it to serve more families who could benefit. However, capacity issues such as staffing

shortages and wait lists present challenges to doing so.

- This needs assessment demonstrates that the MFHV program is well-received by participants, has a positive impact on their health, and is effective at connecting them to needed services in their community.
- Maine struggles to provide mental health, substance use treatment, and basic needs (e.g., housing, transportation, childcare) services in all areas of the state. New funding sources, such as the MaineMOM grant and Maine's Pediatric Mental Health Access grant, will expand availability of services for women with substance use disorders and children with behavioral health concerns. Yet, there continues to be a dire need for affordable housing, reliable transportation, and quality, affordable childcare.
- MFHV provides critical support to families as they navigate pregnancy and parenting. They are effective partners in communities across the state ensuring that parents have internal and external resources to support healthy child growth and development.

Plan for Disseminating Results

We anticipate this assessment will be used by local implementing agencies of home visiting programs across the State to examine areas of greatest need in their communities. We will be providing **county and sub-county maps** with available indicators from this report to visualize the impact of maternal and child health issues in Maine. These maps will be provided directly to Maine Families and Early Head Start Programs and will be available online. In addition, we have developed **county-specific profiles** that highlight results from this needs assessment. These will be distributed to each of the MFHV LIAs. The **full MIECHV Needs Assessment document** will be available on the Maine CDC's MCH webpage and will be emailed to all stakeholders who participated in the assessment and who will be encouraged to disseminate it broadly. **Presentations of key findings** will be given via webinar to MFHV agency staff and State staff. We hope that the comprehensive data analyzed and presented for this needs assessment will be a useful resource for communitywide health improvement efforts across the state of Maine.

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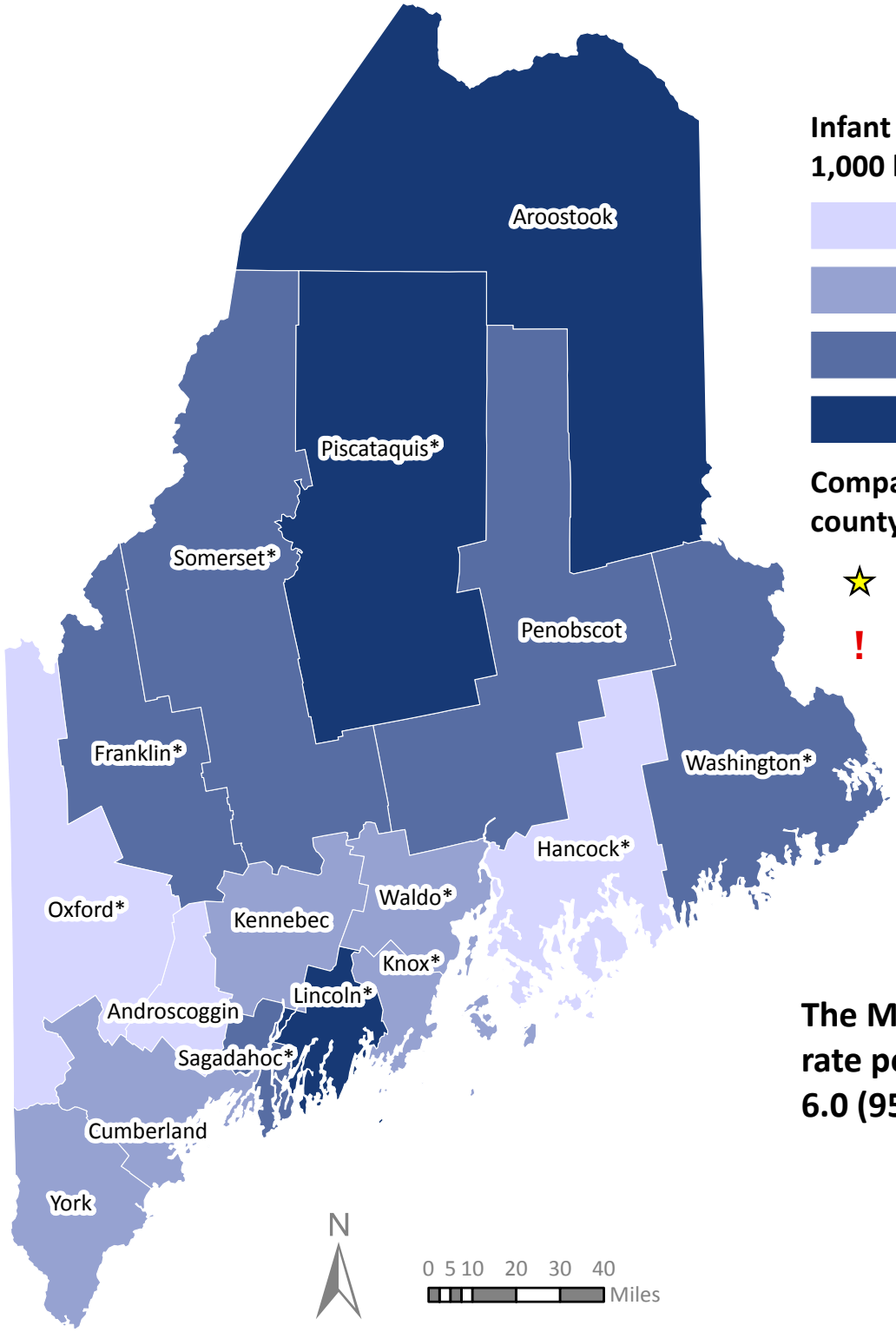
APPENDIX A: HRSA Excel spreadsheets with indicator definitions, values, and z-scores by county and sub-county areas

(see attached)

APPENDIX B: Samples of county and subcounty maps

Infant Mortality by County, Maine, 2014-2018



Infant Mortality Rate per 1,000 live births

- 3.9—4.7
- 4.8—6.1
- 6.2—7.0
- 7.1—9.1

Compared to state rate, county rate is:

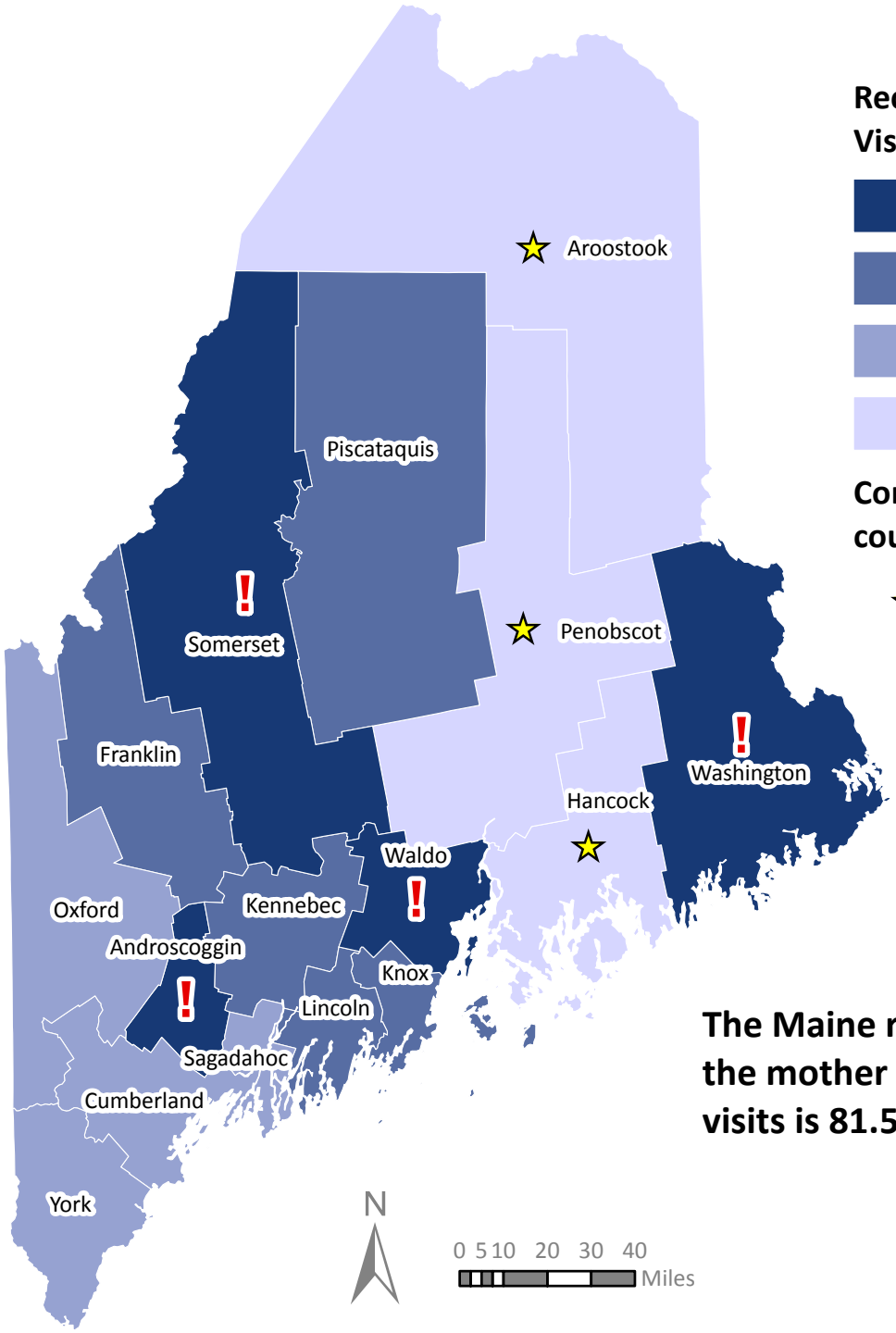
- ★ Significantly lower
- ! Significantly higher

The Maine infant mortality rate per 1,000 live births is 6.0 (95% CI: 5.4—6.7).

Definition: Rate of 1,000 births of babies who died before their first birthday.
County is based on maternal county of residence from the birth certificate.
Data Source: Maine CDC Vital Records.
*Interpret with caution; estimates based on less than 20 infant deaths.
95% CI: 95% confidence interval of the rate.
Prevalence estimates mapped using the Natural Breaks (Jenks) method with four categories.
Statistical significance was determined by comparing confidence intervals and non-overlapping confidence intervals were considered to be statistically different.

Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program Needs Assessment in April 2020.

Received Expected Prenatal Visits by County, Maine, 2014-2018



Received Expected Prenatal Visits (%)

- 72.7—77.0
- 77.1—80.7
- 80.8—81.8
- 81.9—89.3

Compared to state rate, county rate is:

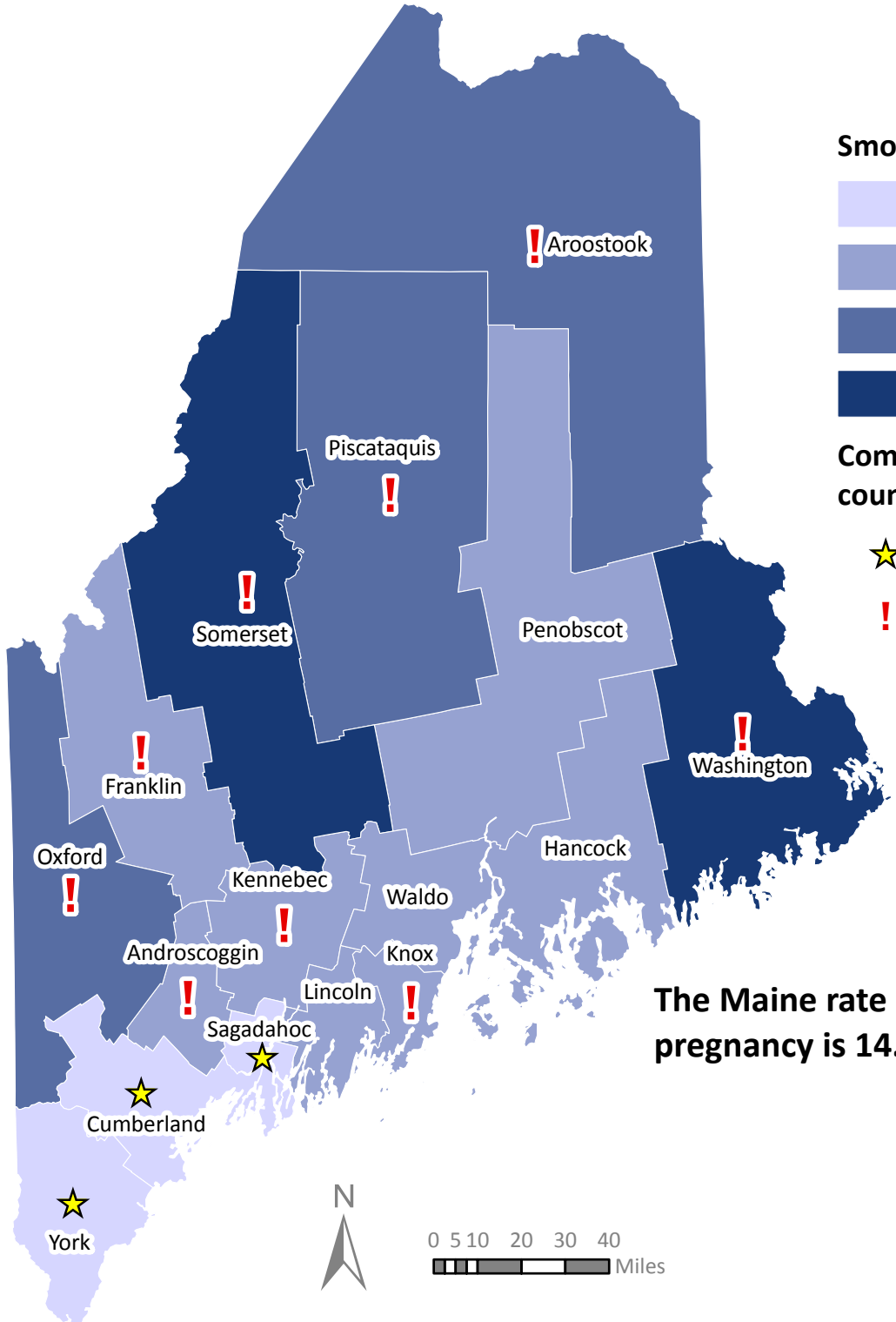
- ☆ Significantly lower
- ! Significantly higher

The Maine rate of live births for which the mother received expected prenatal visits is 81.5% (95% CI: 81.2—81.8).

Definition: Percentage of births for which the mother received more than 80% of the expected prenatal visits based on infant's gestational age at birth.
County is based on maternal county of residence from the birth certificate.
Data Source: Maine CDC Vital Records.
*Interpret with caution; estimates based on less than 20 births for which the mother received expected prenatal visits.
95% CI: 95% confidence interval of the rate.
Prevalence estimates mapped using the Natural Breaks (Jenks) method with four categories.
Statistical significance was determined by comparing confidence intervals and non-overlapping confidence intervals were considered to be statistically different.

Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program Needs Assessment in April 2020.

Smoked During Pregnancy by County, Maine, 2014-2018



Smoked During Pregnancy (%)

- 6.3—11.7
- 11.8—18.4
- 18.5—21.7
- 21.8—27.4

Compared to state rate, county rate is:

- ☆ Significantly lower
- ! Significantly higher

The Maine rate of any smoking during pregnancy is 14.3% (95% CI: 14.0—14.6).

Definition: Percentage of mothers who smoked cigarettes at any time during pregnancy.
Note: Mercy Hospital had incomplete birth data in 2014 and 2015.
County is based on maternal county of residence from the birth certificate.
Data Source: Maine CDC Vital Records.
*Interpret with caution; estimates based on less than 20 mothers who smoked during pregnancy.
95% CI: 95% confidence interval of the rate.
Prevalence estimates mapped using the Natural Breaks (Jenks) method with four categories.
Statistical significance was determined by comparing confidence intervals and non-overlapping confidence intervals were considered to be statistically different.

Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program Needs Assessment in April 2020.

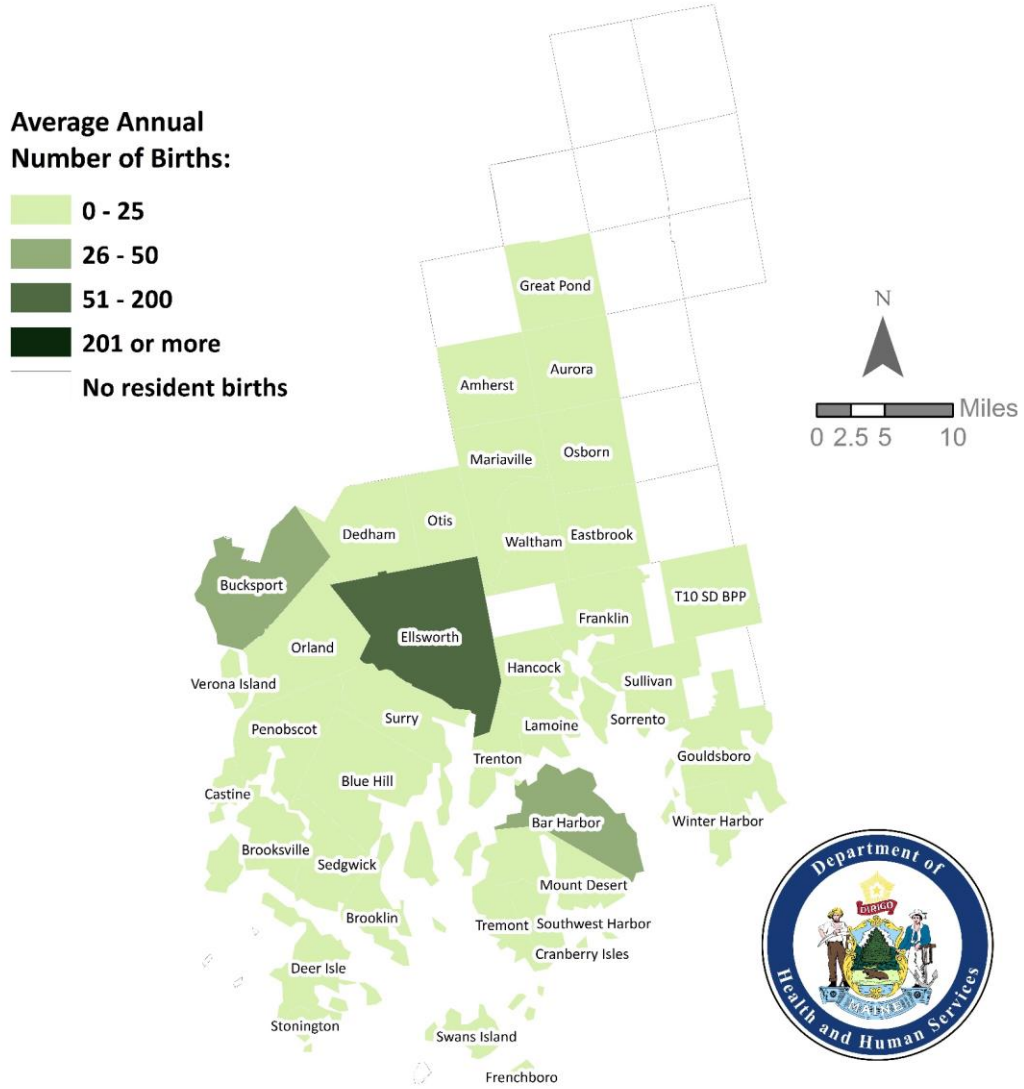
Town-Level Birth Data Hancock County, Maine 2014-2018

Prepared for the 2020 Maine's Maternal, Infant, and Early Childhood Home Visiting Needs Assessment

September 2020

Icon	Town Name	Average Annual Number of Births
	Amherst	3
	Aurora	1
	Bar Harbor	33
	Blue Hill	22
	Brooklin	6
	Brooksville	5
	Bucksport	48
	Castine	3
	Cranberry Isles	2
	Dedham	13
	Deer Isle	19
	Eastbrook	3
	Ellsworth	83
	Franklin	16
	Frenchboro	1
	Gouldsboro	13
	Great Pond	0
	Hancock	22
	Lamoine	11
	Mariaville	4
	Mount Desert	14
	Orland	19
	Osborn	0
	Otis	5
	Penobscot	7
	Sedgwick	11
	Sorrento	1
	Southwest Harbor	16
	Stonington	13
	Sullivan	9
	Surry	14
	Swans Island	2
	T10 SD BPP	0
	Tremont	14
	Trenton	17
	Verona Island	4
	Waltham	3
	Winter Harbor	1

Average Annual Number of Births by Town, Hancock County, Maine, 2014-2018

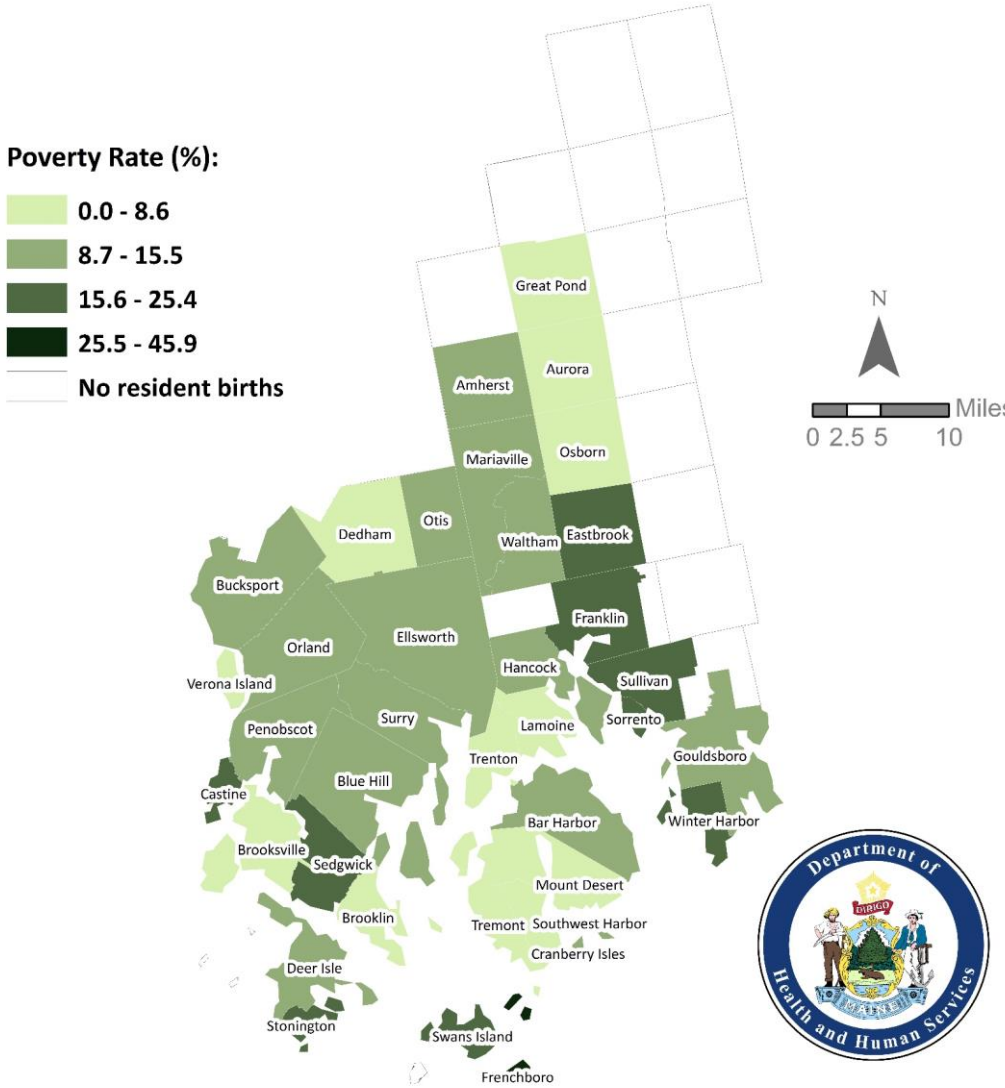


Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Total number of births between 2014 and 2018 divided by the five year period.
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
●	Amherst	10.5	5.5 - 15.5
●	Aurora	1.5	0.0 - 6.6
●	Bar Harbor	9.0	5.4 - 12.6
●	Blue Hill	13.8	6.1 - 21.5
●	Brooklin	5.7	2.9 - 8.5
●	Brooksville	7.4	3.9 - 10.9
●	Bucksport	13.0	7.5 - 18.5
●	Castine	19.6	12.0 - 27.2
●	Cranberry Isles	12.7	0.0 - 28.7
●	Dedham	5.1	1.1 - 9.1
●	Deer Isle	12.0	5.8 - 18.2
●	Eastbrook	23.8	14.5 - 33.1
●	Ellsworth	9.9	6.7 - 13.1
●	Franklin	19.7	13.9 - 25.5
●	Frenchboro	33.3	6.7 - 59.9
●	Gouldsboro	15.0	9.0 - 21.0
●	Great Pond	0.0	0.0 - 27.9
●	Hancock	12.0	7.3 - 16.7
●	Lamoine	8.4	5.0 - 11.8
●	Mariaville	10.1	5.5 - 14.7
●	Mount Desert	5.2	2.6 - 7.8
●	Orland	9.2	5.8 - 12.6
●	Osborn	3.7	0.0 - 7.7
●	Otis	12.3	7.0 - 17.6
●	Penobscot	12.3	6.1 - 18.5
●	Sedgwick	15.7	8.5 - 22.9
●	Sorrento	19.0	4.5 - 33.5
●	Southwest Harbor	6.2	3.2 - 9.2
●	Stonington	21.1	13.3 - 28.9
●	Sullivan	17.4	11.7 - 23.1
●	Surry	8.8	4.0 - 13.6
●	Swans Island	19.2	9.7 - 28.7
●	Tremont	5.7	3.2 - 8.2
●	Trenton	6.4	3.5 - 9.3
●	Verona Island	7.3	1.9 - 12.7
●	Waltham	13.4	7.7 - 19.1
●	Winter Harbor	18.6	8.6 - 28.6

Table notes:
■ = Lower than state based on non-overlapping 90% margin of error
■ = Higher than state based on non-overlapping 90% margin of error

Poverty Rate by Town, Hancock County, Maine, 2014-2018



Data Source: U.S. Census, American Community Survey
Town is based on matching places geography to town name.
Definition: Percentage of population living below 100 percent of the federal poverty level.
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
●	**Bar Harbor**	**28.8**	22.3 - 36.4
●	**Blue Hill**	**57.3**	46.9 - 67.1
●	**Brooklin**	**71.4**	50.0 - 86.2
●	**Brooksville**	**DUR**	DUR
●	**Bucksport**	**65.5**	57.9 - 72.3
●	**Dedham**	**41.5**	29.3 - 54.9
●	**Deer Isle**	**62.8**	51.7 - 72.7
●	**Ellsworth**	**57.2**	51.5 - 62.8
●	**Franklin**	**67.9**	54.5 - 78.9
●	**Gouldsboro**	**73.2**	58.1 - 84.3
●	**Hancock**	**77.9**	66.7 - 86.2
●	**Lamoine**	**58.3**	44.3 - 71.2
●	**Mount Desert**	**43.9**	31.8 - 56.7
●	**Orland**	**67.7**	55.6 - 77.8
●	**Otis**	**52.4**	32.4 - 71.7
●	**Penobscot**	**45.8**	27.9 - 64.9
●	**Sedgwick**	**61.1**	44.9 - 75.2
●	**Southwest Harbor**	**58.6**	45.8 - 70.4
●	**Stonington**	**70.7**	55.5 - 82.4
●	**Sullivan**	**81.3**	64.7 - 91.1
●	**Surry**	**47.3**	34.7 - 60.2
●	**Tremont**	**59.3**	46.0 - 71.3
●	**Trenton**	**47.5**	35.5 - 59.8

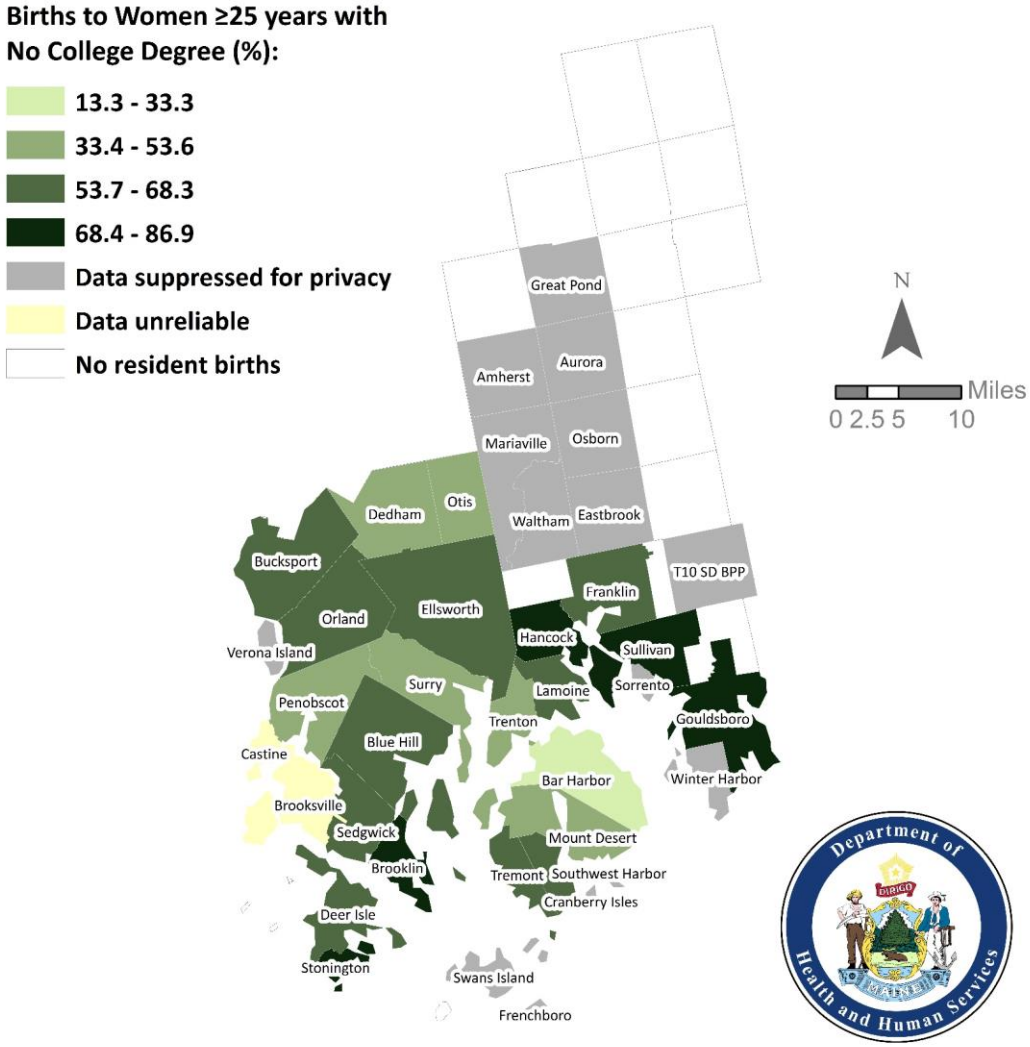
Table notes:

■ = Lower than state rate based on non-overlapping 95% confidence intervals

■ = Higher than state rate based on non-overlapping 95% confidence intervals

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Births to Women ≥25 years with No College Degree by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of births to mothers ages 25 years and over who do not have a college degree at the time of birth.
Data suppressed for privacy when based on fewer than 6 births where mothers ages 25 years and over do not have a college degree.
Data are considered unreliable when there are fewer than 20 events (births) in that geographic area during the five-year period (2014-2018).
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
	Bar Harbor	20.0	14.6 - 26.8
	Blue Hill	42.2	33.4 - 51.6
	Brooklin	34.5	19.9 - 52.7
	Brooksville	52.2	33.0 - 70.8
	Bucksport	47.1	40.8 - 53.4
	Dedham	27.3	18.0 – 39.0
	Deer Isle	41.2	32.0 - 51.2
	Ellsworth	44.8	40.1 - 49.6
	Franklin	54.4	43.5 – 65.0
	Gouldsboro	53.0	41.2 - 64.6
	Hancock	56.3	47.0 - 65.1
	Lamoine	40.4	28.6 - 53.3
	Mount Desert	36.4	25.8 - 48.4
	Orland	54.3	44.2 - 64.1
	Otis	51.9	34.0 - 69.3
	Penobscot	34.3	20.8 - 50.8
	Sedgwick	43.4	31.0 - 56.7
	Southwest Harbor	39.0	28.8 - 50.1
	Stonington	53.8	41.9 - 65.4
	Sullivan	57.1	42.2 - 70.9
	Surry	32.9	23.0 - 44.5
	Tremont	48.6	37.4 - 59.9
	Trenton	38.1	28.4 - 48.8

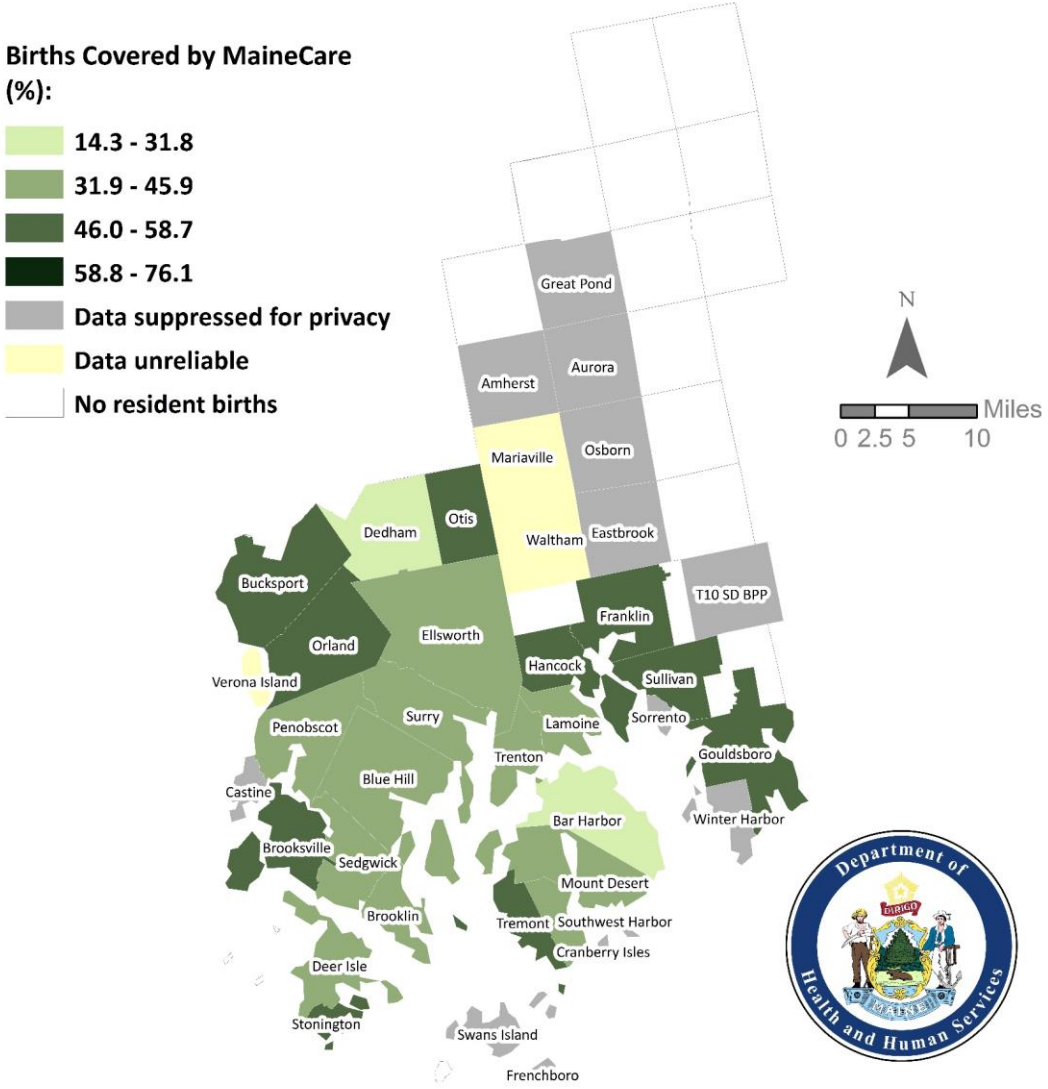
Table notes:

= Lower than state rate based on non-overlapping 95% confidence intervals

= Higher than state rate based on non-overlapping 95% confidence intervals

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Births Covered by MaineCare by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of births for which MaineCare, the state Medicaid program, was the primary payer.
Data suppressed for privacy when based on fewer than 6 births where Medicaid was the primary payer.
Data are considered unreliable when there are fewer than 20 events (births) in that geographic area during the five-year period (2014-2018).
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
	Bar Harbor	6.0	3.3 - 10.7
	Blue Hill	DSP	DSP
	Brooklin	DSP	DSP
	Brooksville	DSP	DSP
	Bucksport	9.2	6.2 - 13.6
	Dedham	DSP	DSP
	Deer Isle	6.2	2.9 - 12.8
	Ellsworth	7.4	5.3 - 10.4
	Franklin	16.5	9.9 - 26.1
	Gouldsboro	9.0	4.2 - 18.2
	Hancock	8.9	4.9 - 15.7
	Lamoine	DSP	DSP
	Mount Desert	DSP	DSP
	Orland	DSP	DSP
	Otis	DSP	DSP
	Penobscot	DSP	DSP
	Sedgwick	17.0	9.2 - 29.2
	Southwest Harbor	DSP	DSP
	Stonington	DSP	DSP
	Sullivan	DSP	DSP
	Surry	8.6	4.0 - 17.5
	Tremont	DSP	DSP
	Trenton	DSP	DSP

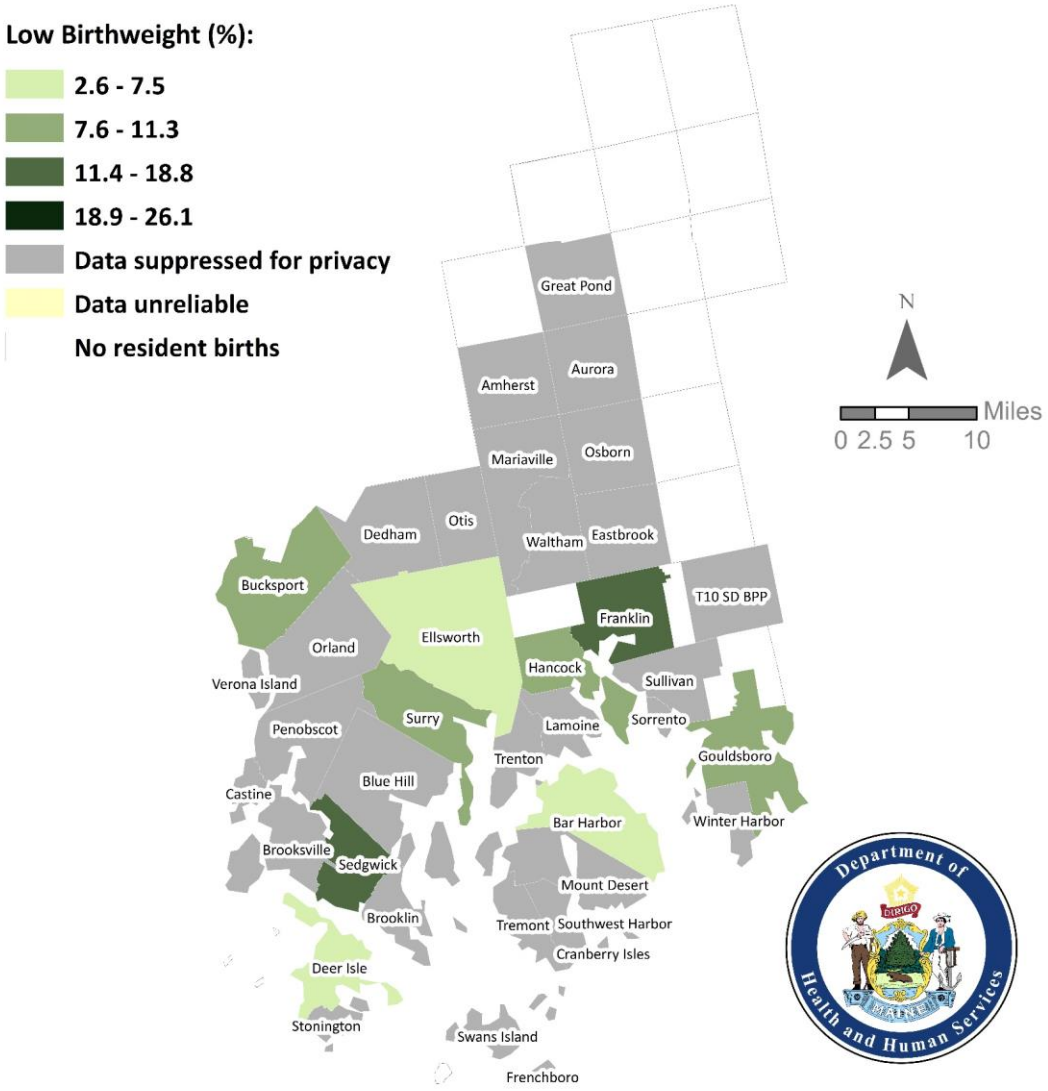
Table notes:

= Lower than state rate based on non-overlapping 95% confidence intervals

= Higher than state rate based on non-overlapping 95% confidence intervals

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Low Birthweight by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of babies born with a weight less than 2,500 grams.
Data suppressed for privacy when based on fewer than 6 low birthweight babies.
Data are considered unreliable when there are fewer than 20 events (births) in that geographic area during the five-year period (2014-2018).
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
	Bar Harbor	4.2	2.1 - 8.4
	Blue Hill	DSP	DSP
	Brooklin	DSP	DSP
	Brooksville	DSP	DSP
	Bucksport	10.1	6.9 - 14.6
	Dedham	DSP	DSP
	Deer Isle	DSP	DSP
	Ellsworth	5.0	3.3 - 7.6
	Franklin	13.9	8.0 - 23.2
	Gouldsboro	9.0	4.2 - 18.2
	Hancock	10.7	6.2 - 17.8
	Lamoine	DSP	DSP
	Mount Desert	8.8	4.1 - 17.9
	Orland	DSP	DSP
	Otis	DSP	DSP
	Penobscot	DSP	DSP
	Sedgwick	18.9	10.6 - 31.4
	Southwest Harbor	DSP	DSP
	Stonington	14.1	7.6 - 24.6
	Sullivan	DSP	DSP
	Surry	18.6	11.2 - 29.2
	Tremont	11.1	5.7 - 20.4
	Trenton	7.1	3.3 - 14.7

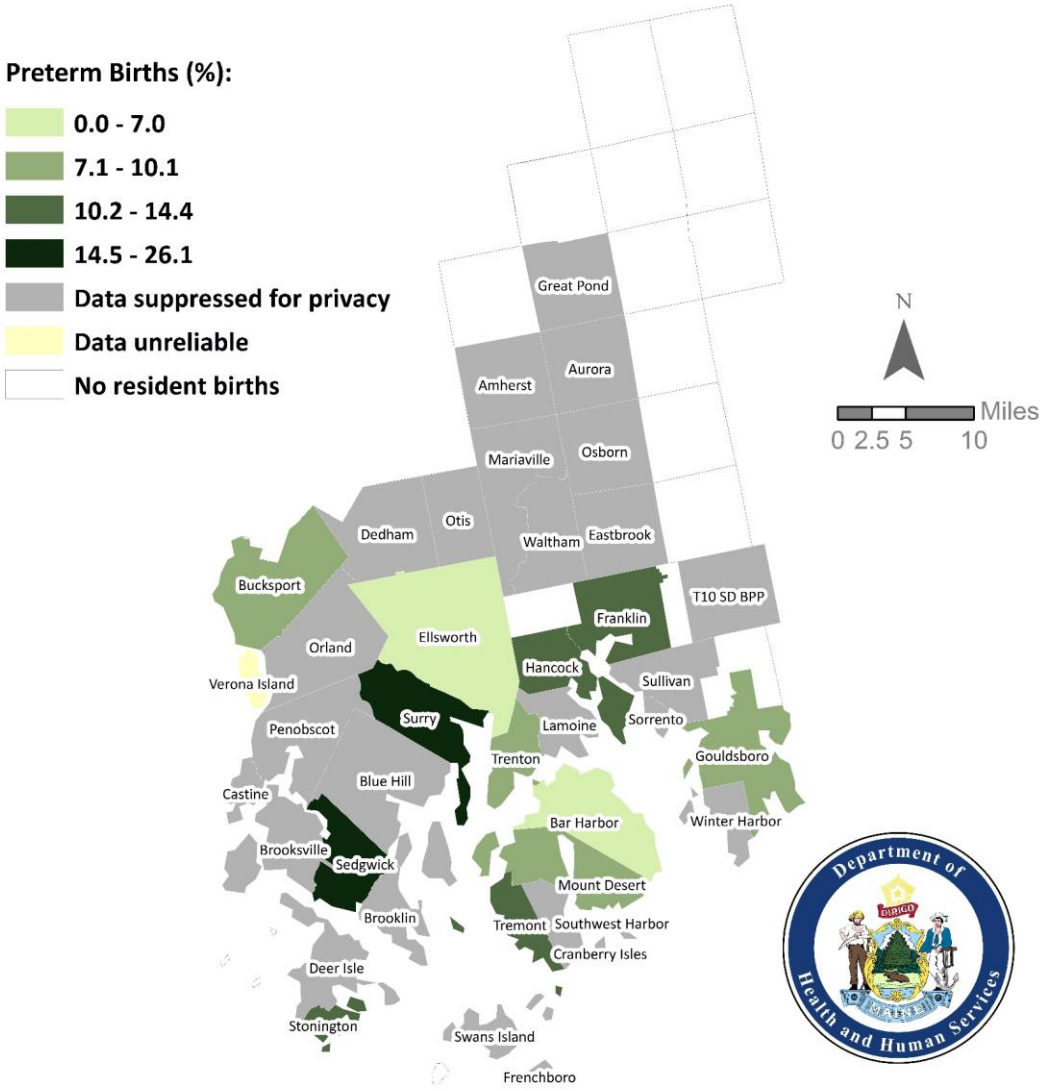
Table notes:

= Lower than state rate based on non-overlapping 95% confidence intervals

= Higher than state rate based on non-overlapping 95% confidence intervals

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Preterm Births by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of babies born before 37 weeks of gestation.
Data suppressed for privacy when based on fewer than 6 preterm babies.
Data are considered unreliable when there are fewer than 20 events (births) in that geographic area during the five-year period (2014-2018).
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
●	**Bar Harbor**	**DSP**	DSP
●	**Blue Hill**	**DSP**	DSP
●	**Brooklin**	**DSP**	DSP
●	**Brooksville**	**DSP**	DSP
●	**Bucksport**	**31.1**	17.4 – 51.3
●	**Dedham**	**DSP**	DSP
●	**Deer Isle**	**DSP**	DSP
●	**Ellsworth**	**18.9**	11.5 – 29.1
●	**Franklin**	**DSP**	DSP
●	**Gouldsboro**	**DSP**	DSP
●	**Hancock**	**24.8**	10.0 – 51.1
●	**Lamoine**	**DSP**	DSP
●	**Mount Desert**	**DSP**	DSP
●	**Orland**	**DSP**	DSP
●	**Otis**	**DSP**	DSP
●	**Penobscot**	**DSP**	DSP
●	**Sedgwick**	**DSP**	DSP
●	**Southwest Harbor**	**DSP**	DSP
●	**Stonington**	**DSP**	DSP
●	**Sullivan**	**DSP**	DSP
●	**Surry**	**DSP**	DSP
●	**Tremont**	**DSP**	DSP
●	**Trenton**	**DSP**	DSP

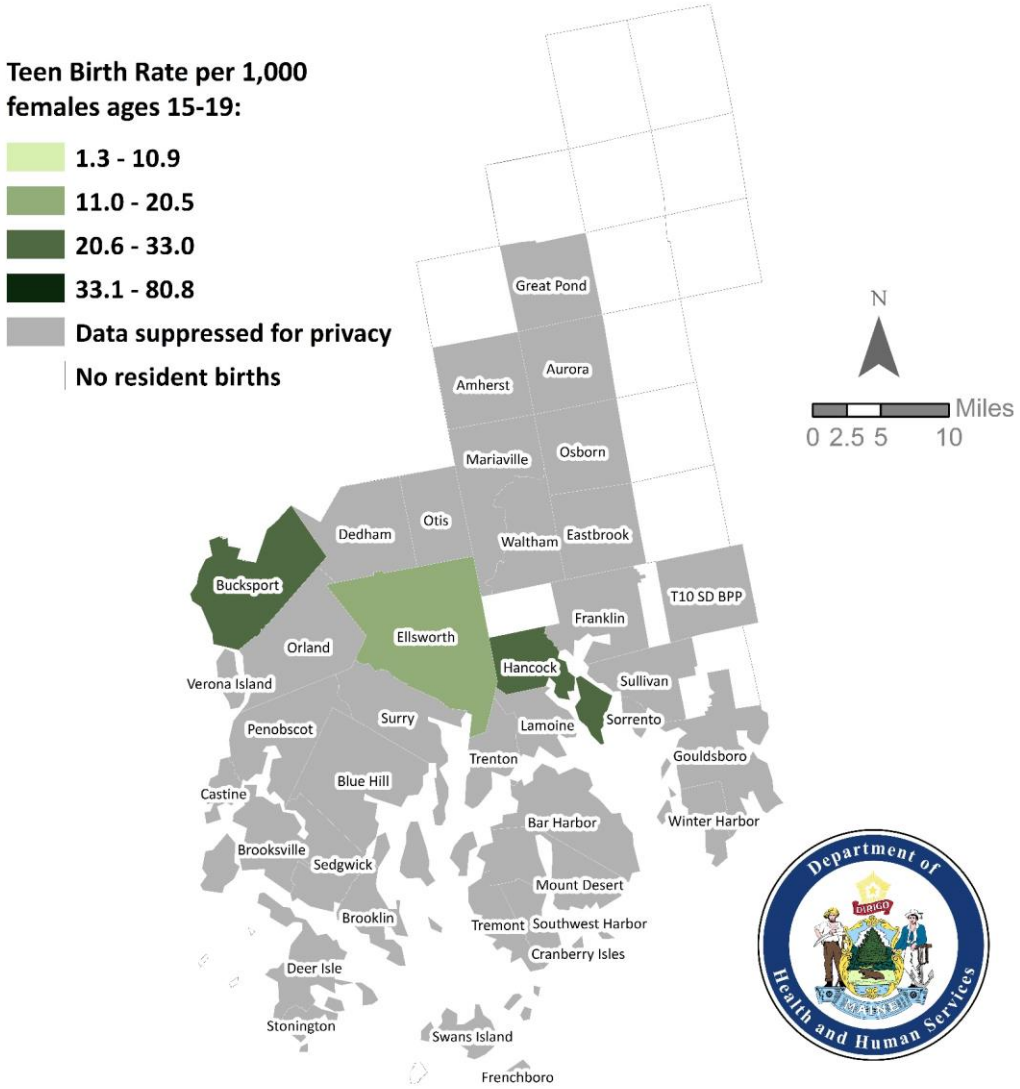
Table notes:

■ = Lower than state rate based on non-overlapping 95% confidence intervals

■ = Higher than state rate based on non-overlapping 95% confidence intervals

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Teen Birth Rate by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of live births to 15-19 year olds.
Data suppressed for privacy when based on fewer than 6 births to females ages 15-19 years or when there are fewer than 50 females ages 15-19 years living in the geographic area.
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
●	**Bar Harbor**	**21.1**	15.6 - 27.9
●	**Blue Hill**	**DSP**	DSP
●	**Brooklin**	**DSP**	DSP
●	**Brooksville**	**DSP**	DSP
●	**Bucksport**	**DSP**	DSP
●	**Dedham**	**DSP**	DSP
●	**Deer Isle**	**DSP**	DSP
●	**Ellsworth**	**4.1**	2.6 - 6.4
●	**Franklin**	**DSP**	DSP
●	**Gouldsboro**	**DSP**	DSP
●	**Hancock**	**DSP**	DSP
●	**Lamoine**	**DSP**	DSP
●	**Mount Desert**	**DSP**	DSP
●	**Orland**	**DSP**	DSP
●	**Otis**	**DSP**	DSP
●	**Penobscot**	**DSP**	DSP
●	**Sedgwick**	**DSP**	DSP
●	**Southwest Harbor**	**9.0**	4.4 - 17.4
●	**Stonington**	**DSP**	DSP
●	**Sullivan**	**DSP**	DSP
●	**Surry**	**DSP**	DSP
●	**Tremont**	**DSP**	DSP
●	**Trenton**	**DSP**	DSP

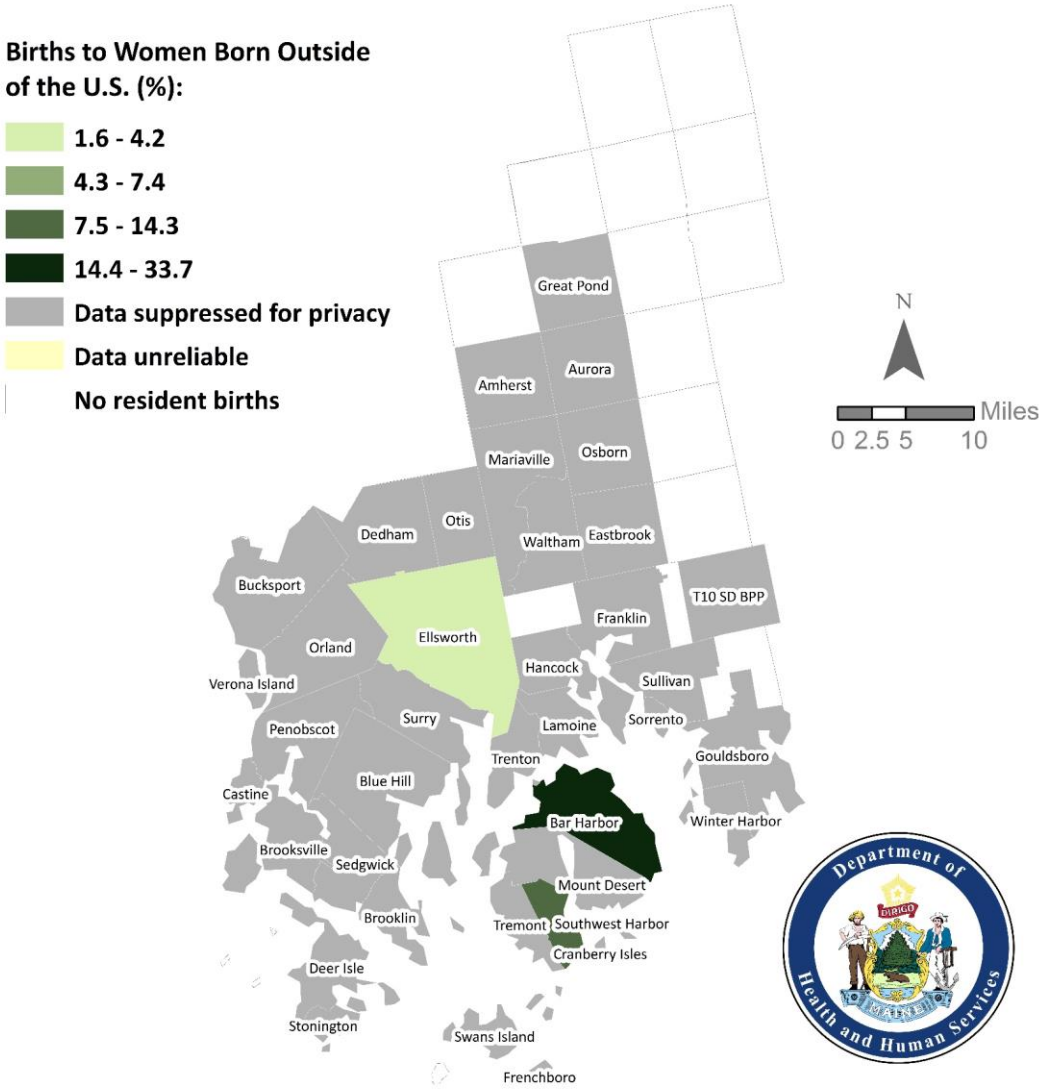
Table notes:

■ = Lower than state rate based on non-overlapping 95% confidence intervals.

■ = Higher than state rate based on non-overlapping 95% confidence intervals.

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Births to Women Born Outside of the U.S. by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of babies born to mothers who were born outside of the United States
Data suppressed for privacy when based on fewer than 6 babies born to foreign-born mothers.
Data are considered unreliable when there are fewer than 20 events (births) in that geographic area during the five-year period (2014-2018).
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
●	**Bar Harbor**	**86.1**	80.1 - 90.6
●	**Blue Hill**	**86.4**	78.7 - 91.6
●	**Brooklin**	**DSP**	DSP
●	**Brooksville**	**DSP**	DSP
●	**Bucksport**	**88.6**	83.9 - 92.1
●	**Dedham**	**DSP**	DSP
●	**Deer Isle**	**DSP**	DSP
●	**Ellsworth**	**88.2**	84.7 – 91.0
●	**Franklin**	**89.9**	81.3 - 94.8
●	**Gouldsboro**	**88.1**	78.2 - 93.8
●	**Hancock**	**92.0**	85.4 - 95.7
●	**Lamoine**	**86.0**	74.7 - 92.7
●	**Mount Desert**	**88.2**	78.5 - 93.9
●	**Orland**	**80.2**	70.9 - 87.1
●	**Otis**	**DSP**	DSP
●	**Penobscot**	**80.0**	64.1 – 90.0
●	**Sedgwick**	**88.7**	77.4 - 94.7
●	**Southwest Harbor**	**84.6**	75.0 – 91.0
●	**Stonington**	**89.1**	79.1 - 94.6
●	**Sullivan**	**86.0**	72.7 - 93.4
●	**Surry**	**87.1**	77.3 - 93.1
●	**Tremont**	**90.3**	81.3 - 95.2
●	**Trenton**	**89.3**	80.9 - 94.3

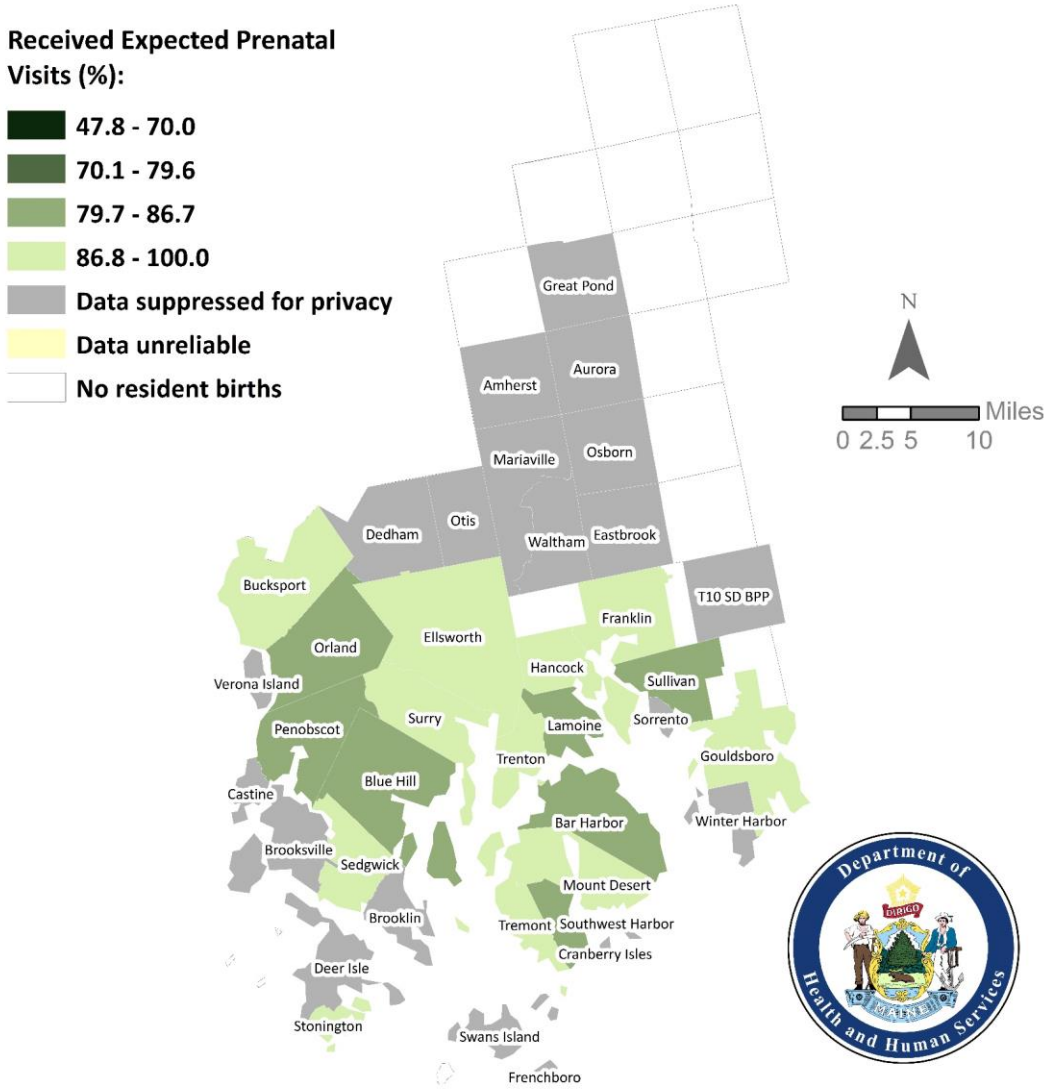
Table notes:

■ = Lower than state rate based on non-overlapping 95% confidence intervals.

■ = Higher than state rate based on non-overlapping 95% confidence intervals.

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Received Expected Prenatal Visits by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of of births for which the mother received more than 80% of the expected prenatal visits based on infant's gestational age at birth.
Data suppressed for privacy when based on fewer than 6 births where the mother received expected prenatal visits.
Data are considered unreliable when there are fewer than 20 events (births) in that geographic area during the five-year period (2014-2018).
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
	Bar Harbor	**5.4**	2.9 – 10.0
	Blue Hill	**16.2**	10.5 - 24.2
	Brooklin	**DSP**	DSP
	Brooksville	**DSP**	DSP
	Bucksport	**15.1**	11.1 - 20.2
	Dedham	**10.6**	5.2 - 20.3
	Deer Isle	**14.4**	8.8 - 22.8
	Ellsworth	**18.2**	14.8 - 22.2
	Franklin	**19.0**	11.9 – 29.0
	Gouldsboro	**17.9**	10.6 - 28.7
	Hancock	**20.5**	14.1 - 28.9
	Lamoine	**24.6**	15.2 - 37.1
	Mount Desert	**16.2**	9.3 - 26.7
	Orland	**19.4**	12.6 - 28.5
	Otis	**DSP**	DSP
	Penobscot	**DSP**	DSP
	Sedgwick	**11.3**	5.3 - 22.6
	Southwest Harbor	**11.5**	6.2 - 20.5
	Stonington	**16.9**	9.7 - 27.8
	Sullivan	**25.6**	14.9 - 40.2
	Surry	**8.6**	4.0 - 17.5
	Tremont	**23.6**	15.3 - 34.6
	Trenton	**8.3**	4.1 - 16.2

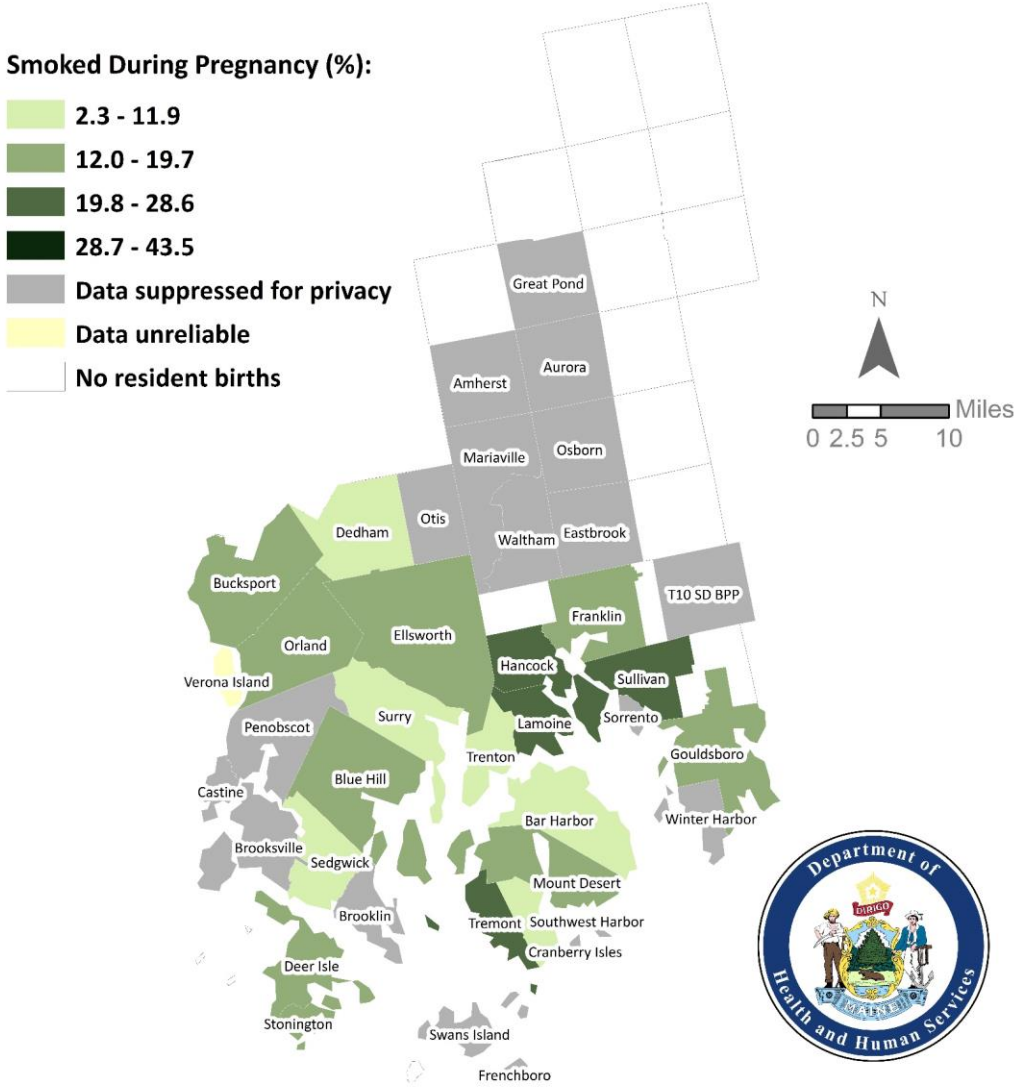
Table notes:

■ = Lower than state rate based on non-overlapping 95% confidence intervals.

■ = Higher than state rate based on non-overlapping 95% confidence intervals.

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Smoked During Pregnancy by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of births where mother smoked at any time during pregnancy.
Data suppressed for privacy when based on fewer than 6 births where mothers smoked during pregnancy.
Data are considered unreliable when there are fewer than 20 events (births) in that geographic area during the five-year period (2014-2018).
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

Icon	Town Name	Percent	95% CI
	Bar Harbor	**94.0**	89.3 - 96.7
	Blue Hill	**88.3**	81.0 – 93.0
	Brooklin	**DSP**	DSP
	Brooksville	**DSP**	DSP
	Bucksport	**87.3**	82.4 - 90.9
	Dedham	**DSP**	DSP
	Deer Isle	**85.4**	77.0 - 91.1
	Ellsworth	**82.9**	78.9 - 86.2
	Franklin	**84.4**	74.7 - 90.9
	Gouldsboro	**70.8**	58.8 - 80.4
	Hancock	**81.3**	73.0 - 87.4
	Lamoine	**DSP**	DSP
	Mount Desert	**91.2**	82.1 - 95.9
	Orland	**92.3**	85.0 - 96.2
	Otis	**77.8**	59.2 - 89.4
	Penobscot	**DSP**	DSP
	Sedgwick	**81.1**	68.6 - 89.4
	Southwest Harbor	**89.7**	81.0 - 94.7
	Stonington	**78.1**	66.6 - 86.5
	Sullivan	**DSP**	DSP
	Surry	**87.1**	77.3 - 93.1
	Tremont	**87.3**	77.6 - 93.2
	Trenton	**88.1**	79.5 - 93.4

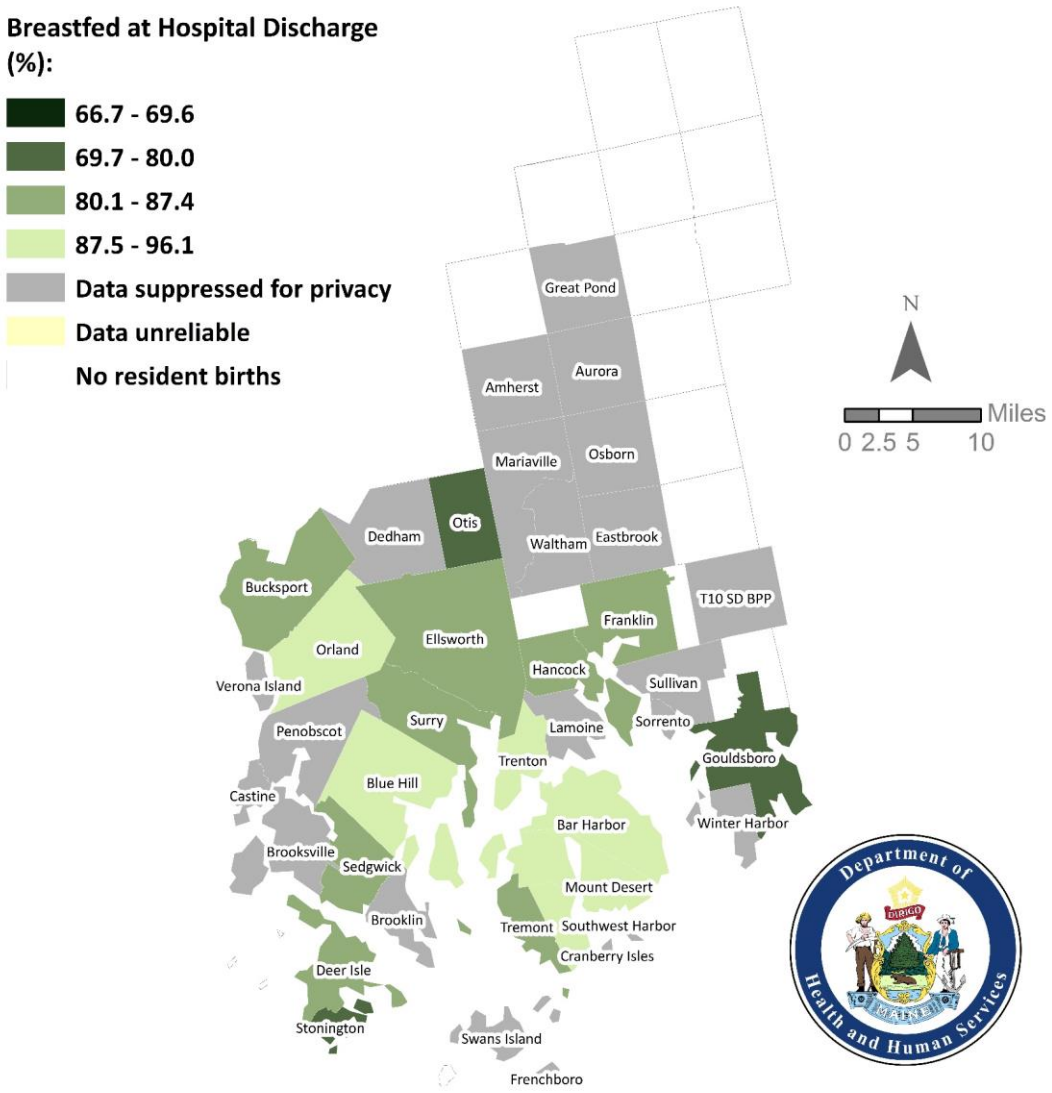
Table notes:

= Lower than state rate based on non-overlapping 95% confidence intervals.

= Higher than state rate based on non-overlapping 95% confidence intervals.

Towns with less than 20 births over the five year period 2014-2018 are not shown in the table, as their data are unreliable. These towns include: *Amherst, Aurora, Castine, Cranberry Isles, Eastbrook, Great Pond, Frenchboro, Mariaville, Osborn, Sorrento, Swans Island, T10 SD BPP, Verona Island, Waltham and Winter Harbor.*

Breastfed at Hospital Discharge by Town, Hancock County, Maine, 2014-2018



Data Source: Maine Birth Certificate Dataset, 2014-2018; Maine CDC Vital Records.
Town is based on maternal town of residence from the birth certificate.
Definition: Percentage of babies who were ever fed breast milk at hospital discharge.
Data suppressed for privacy when based on fewer than 6 babies who were ever fed breast milk.
Data are considered unreliable when there are fewer than 20 events (births) in that geographic area during the five-year period (2014-2018).
Prevalence estimates mapped using the Natural Jenks method for all Maine towns.
Map created by the University of Southern Maine Epidemiology Team for the Maine Maternal, Infant, and Early Childhood Home Visiting Program 2020 Needs Assessment.

APPENDIX C: Supplemental Tables

Table 1. Adults and children enrolled in Maine Families home visiting by race and county.

Table 2. Socioeconomic status indicators among Maine Families enrollees by county, 2019

Appendix C, Table 1. Adults and children enrolled in Maine Families home visiting by race and county.

	Children enrolled in Maine Families								Adults enrolled in Maine Families							
	AI/AN	Asian	Black	NH/OPI	White	More than one	Unknown	Hispanic	AI/AN	Asian	Black	NH/OPI	White	More than one	Unknown	Hispanic
Androscoggin	1%	0%	20%	0%	67%	11%	1%	7%	1%	0%	19%	0%	74%	3%	4%	4%
Aroostook	0%	1%	1%	1%	84%	12%	2%	3%	2%	1%	2%	1%	90%	3%	2%	3%
Cumberland	0%	2%	41%	0%	49%	8%	1%	7%	0%	2%	39%	0%	57%	2%	1%	6%
Franklin	0%	0%	0%	0%	96%	4%	0%	1%	1%	0%	1%	0%	98%	1%	0%	1%
Hancock	0%	1%	1%	0%	91%	7%	0%	2%	0%	3%	2%	1%	92%	2%	1%	1%
Kennebec	0%	1%	4%	1%	88%	6%	1%	6%	0%	1%	5%	0%	90%	2%	1%	6%
Knox	0%	0%	0%	0%	90%	8%	1%	4%	0%	2%	1%	1%	93%	1%	1%	2%
Lincoln	0%	0%	0%	0%	97%	0%	3%	0%	0%	0%	0%	0%	94%	2%	4%	0%
Oxford	0%	0%	4%	0%	91%	5%	1%	1%	1%	0%	2%	0%	95%	1%	1%	0%
Penobscot	0%	1%	1%	0%	83%	14%	0%	3%	0%	3%	3%	0%	90%	3%	0%	2%
Piscataquis	5%	0%	0%	0%	85%	10%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%
Sagadahoc	0%	0%	2%	0%	89%	7%	2%	2%	0%	2%	2%	0%	96%	0%	0%	0%
Somerset	0%	1%	0%	0%	92%	6%	0%	6%	0%	1%	0%	1%	97%	1%	0%	5%
Waldo	6%	0%	0%	1%	82%	12%	0%	7%	3%	0%	0%	0%	95%	2%	0%	0%
Washington	0%	0%	4%	0%	89%	5%	0%	6%	8%	0%	1%	1%	88%	2%	1%	4%
York	1%	1%	9%	0%	81%	8%	1%	4%	0%	1%	2%	0%	94%	2%	0%	3%
State Total	0%	1%	1%	1%	84%	12%	2%	3%	1%	1%	8%	0%	86%	2%	1%	3%

AI/AN= American Indian/Alaska Native; NH/OPI=Native Hawaiian/Other Pacific Islander.

Appendix C, Table 2. Socioeconomic status indicators among Maine Families enrollees by county, 2019

	Caregivers with high school education or less	Caregivers who are not working	Households living at less than 200% FPL	Households living at less than 100% FPL	Adults without health insurance	Children without health insurance	Adults enrolled in MaineCare	Children enrolled in MaineCare
Androscoggin	81%	58%	88%	66%	8%	2%	59%	71%
Aroostook	78%	45%	66%	49%	4%	0%	60%	71%
Cumberland	60%	48%	77%	58%	12%	2%	50%	71%
Franklin	79%	37%	78%	47%	7%	4%	48%	65%
Hancock	71%	41%	75%	30%	9%	2%	40%	56%
Kennebec	86%	47%	80%	53%	6%	4%	60%	76%
Knox	73%	43%	65%	35%	8%	1%	55%	67%
Lincoln	60%	31%	51%	21%	4%	3%	42%	54%
Oxford	84%	54%	83%	55%	6%	1%	61%	72%
Penobscot	76%	54%	82%	60%	3%	1%	65%	73%
Piscataquis	90%	76%	95%	84%	5%	0%	76%	90%
Sagadahoc	54%	36%	39%	27%	4%	2%	34%	36%
Somerset	88%	52%	79%	53%	12%	0%	54%	80%
Waldo	78%	65%	80%	75%	8%	0%	69%	89%
Washington	83%	52%	78%	52%	4%	2%	60%	76%
York	73%	37%	65%	40%	9%	2%	44%	62%
State Total	75%	47%	74%	50%	7%	2%	54%	69%