



EC-LINC Outcomes and Metrics Initiative: Year-End 2017 Progress Report

Appendix A: System Performance Measures Data Development and Pilot Implementation Summary

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Table of Contents

Introduction	5
Activities and Methods.....	5
Ongoing Implementation Recommendations	6
Value Propositions and System Performance Measures	7
SPM 1.1: Early Prenatal Care (piloted)	8
Desired Data.....	8
Data Availability	8
Results	11
Assessment.....	13
Options for Ongoing Implementation	13
SPM 1.2: Maternal Depression Screening (piloted)	14
Desired Data.....	14
Data Availability	14
Results	19
Assessment.....	21
Options for Ongoing Implementation	22
SPM 1.2.1 Mothers Connected to Mental Health Services	23
Desired Data.....	23
Data Availability	23
Assessment.....	23
Options for Ongoing Development	24
SPM 1.3: Developmental Screening (piloted)	25
Desired Data.....	25
Data Availability	25
Results	29
Assessment.....	30
Options for Ongoing Implementation	30
SPM 1.3.1: Children Connected to Developmental Services (piloted)	31
Desired Data.....	31
Data Availability	31
Results	32
Assessment.....	34
Options for Ongoing Implementation	35
SPM 1.4: Unidentified Developmental Issue at Kindergarten Entry	36
Desired Data.....	36
Data Availability	36
Assessment.....	36
Options for Ongoing Implementation	37
SPM 2.1-2.5: Service Integration Standards (pilot in-progress)	38
Desired Data.....	38
Data Availability	38
Assessment.....	38
Options for Ongoing Implementation	39
SPM 3.1: Changing Public Norms and Opinions on Early Childhood	40
Desired Data.....	40

Data Availability	40
Assessment.....	40
Options for Ongoing Implementation	41
SPM 3.2: Results to Expect if Norms are Changed (to be developed).....	42
Desired Data.....	42
Data Availability	42
Assessment.....	42
Options for Ongoing Implementation	42
SPM 3.3: Community Leadership Engagement in Early Childhood	43
Desired Data.....	43
Data Availability	43
Assessment.....	43
Options for Ongoing Implementation	44
PLI 3.3: Communities and Neighborhoods are Child and Family Friendly.....	45
Desired Data.....	45
Data Availability	45
Assessment.....	46
Options for Ongoing Implementation	46

List of Tables

Table 1: Data Availability by Geography for Early Prenatal Care*	8
Table 2: Detailed Notes by Geography for Early Prenatal Care.....	9
Table 3: Data Sources for Early Prenatal Care.....	10
Table 4: Percentage of Women Receiving Early Prenatal Care by Geography, 2009-2017.....	11
Table 5: Percentage of Women Receiving Early Prenatal Care by Geography and Race/Ethnicity, 2013*	12
Table 6: Implementation Assessment for Early Prenatal Care	13
Table 7: Data Availability for Maternal Depression Screening by Geography	15
Table 8: Detailed Notes by Geography for Maternal Depression Screening.....	15
Table 9: Data Sources for Maternal Depression Screening.....	18
Table 10: Count of Mothers Screened for Depression by Geography, 2009-2017	19
Table 11: Percent of Mothers Screened for Depression by Geography, 2009-2016 (Population-Level Data Only).....	20
Table 12: Implementation Assessment for Maternal Depression Screening	22
Table 13: Preliminary Assessment for Mothers Connected to Mental Health Services.....	24
Table 14: Data Availability by Geography for Developmental Screening.....	26
Table 15: Detailed Notes by Geography for Developmental Screening.....	26
Table 16: Data Sources for Developmental Screening	28
Table 17: Count of Children Receiving Standardized Developmental Screening by Geography, 2011-2017 (Program- and Population-level)	29
Table 18: Percentage of Children Receiving Standard Developmental Screening by Geography (Age Ranges and Timeframes vary), 2007-2016 (Population-Level only).....	29
Table 19: Preliminary Assessment for Developmental Screening.....	30
Table 20: Data Availability by Geography for Children Connection to Services.....	31
Table 21: Data Sources for Children Connection to Services	32
Table 22: Data Descriptions by Geography for Children Connected to Services.....	32
Table 23: Preliminary Assessment for Connection to Services	35

Table 24: Preliminary Assessment for Unidentified Issues at Kindergarten Entry	37
Table 25: Preliminary Assessment for Service Integration Standards.....	39
Table 26: Preliminary Assessment for Changing Public Norms	41
Table 27: Preliminary Assessment for Results of Changing Norms.....	42
Table 28: Preliminary Assessment for Community Leadership Engagement.....	44
Table 29: Preliminary Assessment for Communities are Family Friendly	46

List of Figures

Figure 1: Percentage of Women Receiving Early Prenatal Care by Geography, 2009-2017	11
Figure 2: Percentage of Women Receiving Early Prenatal Care by Geography and Race/Ethnicity, 2013*	12
Figure 3: Count of Mothers Screened for Depression by Geography, 2011-2017 (Program-Level Data Only).....	20
Figure 4: Percent of Mothers Screened for Depression by Geography, 2009-2016 (Population-Level Data Only).....	21

Introduction

The following summary report provides detailed documentation of the system performance measure data development and data collection work of the EC-LINC Outcomes and Metrics workgroup. The research and data collection methods employed, and overall recommendations for ongoing data collection, are provided below, followed by a summary of each system performance measure. For each system performance measure, this summary documents: the desired data, the availability of data, an assessment of the data quality, opportunities for data development, strength of the measure according to data, communication and proxy power, and options for ongoing implementation.¹ For measures that were piloted, summary results are provided, along with detailed documentation of data sources and constraints. Additionally, a summary of data development needs for a newly proposed population-level indicator (PLI 3.3 Communities and Neighborhoods are Child and Family Friendly) is provided at the end of the report.

Activities and Methods

The EC-LINC Outcomes and Metrics initiative had two core goals in 2017. The primary goal was to further define the system performance measures and identify data opportunities and constraints. The workgroup began with a set of draft measures and participated in conference calls throughout the winter and spring of 2017 to discuss each in turn. The workgroup conference calls used the following general format of assessment: the current data reality (what data are currently available), what data are desired, what the opportunities and barriers are for developing the desired data, and what strategies can be adopted to take advantage of identified opportunities. Four measures, including sub-measures, were discussed using this line of inquiry (Prenatal Care, Developmental Screening, Children with Identified Need Connected to Services, and Maternal Depression Screening). A fifth measure – Service Integration Performance Standards – was in development by CSSP staff over this period. Drafts of the standards were shared with the group and discussed at several intervals.

The remaining seven measures were the core subject of an in-person meeting held in November of 2017.² In preparation for the meeting, participants were asked to select one of the seven measures and conduct research to answer questions similar to those posed during the conference calls. Since some of the measures were very preliminary, participants were asked to propose a definition of the measure and identify available or needed data.

The secondary goal for the Outcomes and Metrics initiative in 2017 was to pilot a subset of measures. The five measures that were the subject of the early-2017 conference calls were selected for testing. Following the methodology used for the pilot implementation of the population-level indicators in 2016, participants were issued a data collection shell in Excel and a Word document providing guidelines for

¹ Data power: data quality and availability; cross-community alignment is an asset but not a necessary criterion for the system performance measures.

Communication power: whether the measure is intuitive and clear to a broad audience.

Proxy power: whether the indicator is a good measure of progress on its associated value proposition.

² The seven measures were: Children Complete the Services to which they were Referred, Mothers Connected to Mental Health Services, Social Network Density, Unidentified Developmental Issue at Entry to School, Change Public Norms About Early Childhood, Communities are Child and Family Friendly, and Community Leadership Engagement.

data collection and reporting. Each participating community provided their own data, which were compiled and summarized by the consultants. In some instances, for measures which were unlikely to elicit quality, comparable data, the request was for a verbal description of the data that were available locally. Where results were incomplete or incongruous across communities, the consultants filled in some gaps and attempted to align data where possible. The consultants also populated national- and state-level data when available. Analysis and data below reflect the data that were provided during the pilot; additional data (e.g. additional years, subpopulation, etc.) may be available from all or some sites.

Ongoing Implementation Recommendations

The model employed for data collection described above has the advantage of providing access to local level data that only communities are aware of or have access to. It also relies on pro bono contributions of communities' staff time to seek out and report the data, reducing the overall project budget. The primary challenge is the lack of continuity across communities in terms of sources and definitions, years of data submitted, and universe (whether population- or program-level data). Consequently, going forward, the EC-LINC Outcomes and Metrics workgroup will want to continue to have a "data manager" role to compile and complete the data collection. This role could be fulfilled by a workgroup member or a consultant.

The workgroup may also want to consider a model in which the data manager obtains all the data, rather than requesting that communities submit data. The advantage would be the ability for the data manager to have better control over data alignment and to independently verify the data, which is not always possible in the current model. Additionally, in the scenario where the data manager role is contracted out, this model would reduce burden on communities' staff.

Value Propositions and System Performance Measures

Value Proposition 1: Young children and families receive services and supports to meet universal and identified needs

SPM 1.1: Percentage of pregnant women receiving early prenatal care

SPM 1.2: Percentage of postpartum and pregnant women screened for depression

SPM 1.2.1: Percentage of postpartum and pregnant women connected to mental health services when indicated

SPM 1.3: Percentage of young children that have received a standardized developmental screening

SPM 1.3.1: Percentage of young children with identified concerns connected to services

SPM 1.4: Percentage of children with developmental needs at age six whose developmental issue was identified by age four

Future SPM under VP 1 or 2: Percentage of parents reporting positive experiences receiving services and supports from the early childhood system

Value Proposition 2: Systems are integrated to improve quality and avoid duplication

Performance is measured in five areas that, taken together, describe the ways in which systems try to achieve “integration and coordination:”

SPM 2.1: Understanding the full range of family strengths and needs

SPM 2.2: Helping families get to the right place(s), where their needs can be met

SPM 2.3: Working together when multiple service providers are involved with the same family

SPM 2.4: Sharing data, both for improved service coordination at the case level and to support planning and quality improvement at the system level

SPM 2.5: Professional development and organizational capacity building is supported

Value Proposition 3: People understand the importance of early childhood and take action to support children’s health, learning, and well-being

SPM 3.1: Community performance on a self-selected measure of changing public norms and/or public opinions about early childhood

[Examples: First 5 California’s Read, Talk, Sing initiative and effectiveness assessment; THRIVE Tool for Health and Resilience; Let’s Grow Vermont survey asking population about the value of early childhood; Vroom app analytics, etc.]

SPM 3.2: *To-be-developed measure of results expected if norms are changed [e.g. parental leave, changes in public policies that support young children and their families]*

SPM 3.3: Early childhood service system performance on the Assessment of Community Leadership Engagement in Early Childhood

SPM 1.1: Early Prenatal Care (piloted)

Desired Data

Uniform population-level data indicating the percentage of pregnant women who received prenatal care in their first trimester. Whether the measure also includes adequacy of prenatal care is still to be researched.

Data Availability

Overall

The desired data are generally available at the population-level from state vital statistics reporting agencies or local departments of public health, but the pilot implementation of this measure revealed some challenges:

- The data years available vary by region.
- A reliable annual data source has not been identified for some regions, as well as the nation.
- Data may be available, but for a fee from the state vital statistics reporting agency.
- There can be a considerable time lag, with data several years old by time of release.

Despite caveats, comparable population-level data from vital statistics agencies should be available to all regions with increased efforts. Some regions have postpartum surveillance survey data for early prenatal care. While these data produce similar results as the vital statistics sources, the preference should be for vital statistics sources, if available, for maximum consistency.

Subpopulations

Data are available by race/ethnicity for most of the participating communities and their respective states, with the exception of Lamoille Valley and Vermont. Categories for all the communities with race/ethnicity data include: African American/Black, Asian/Pacific Islander, and Hispanic/Latina, White (Non-Hispanic). Other categories by selected communities include American Indian/Alaska Native, Multiracial, Haitian, and Other.

Data are not available for different income levels from state or local vital statistics agencies, however, the Medicaid Child Core Set may provide an opportunity for determining prenatal care rates for lower-income mothers.

U.S. data are not readily available by income, but data are presented by race/ethnicity.

Table 1: Data Availability by Geography for Early Prenatal Care*

Geography	Data Universe	Data Years	Year Description	Age Range	Income Levels	Race/Ethnicity
United States	Pop-level	2010-2012, 2016	Calendar	N/A	No	Yes
California	Pop-level	2009-2013	Calendar	N/A	No	Yes
Alameda County	Pop-level	2009-2014	Calendar	N/A	No	Yes
Los Angeles County	Pop-level	2019-2013, 2017	Calendar	N/A	No	Yes
Orange County	Pop-level	2009-2015	Calendar	N/A	No	Yes

Geography	Data Universe	Data Years	Year Description	Age Range	Income Levels	Race/Ethnicity
Ventura County	Pop-level	2009-2016	Calendar	N/A	No	Yes
Florida	Pop-level	2013-2016	Calendar	N/A	No	Yes
Palm Beach County	Pop-level	2013-2016	Calendar	N/A	No	Yes
Massachusetts	Pop-level	2011	Calendar	N/A	No	Yes
Boston	Pop-level	2010	Calendar	N/A	No	Yes
Vermont	Pop-level	2009-2013	Calendar	N/A	No	No
Lamoille Valley	Pop-level	2001, 2004, 2007, 2010, 2013	3-year pooled	N/A	No	No

**This table summarizes data provided for the pilot; additional data may be available from all or some sites.*

Table 2: Detailed Notes by Geography for Early Prenatal Care

Geography	Notes
United States	This is a National Outcome Measure per the Title V Maternal and Child Health Block Grant.
California	As of 2013, California stopped releasing prenatal care data publicly, but the state enables the purchase of data for counties and the state overall. (Data from 2014 and 2015 were available as of August 2017, and the cost for the participating communities was approximately \$700.) For this pilot, not all participating CA counties were interested in purchasing the data, since they could get some level of data for no charge from local sources. Kidsdata.org reports prenatal care data by county, but the latest available is 2013; if kidsdata.org continues to report these data, it would be a uniform source for the state and all California communities.
Alameda County	
Los Angeles County	For the pilot, Los Angeles provided 2017 data from a local surveillance survey. For better consistency, and since it was readily available, Los Angeles data through 2013 available through kidsdata.org, including by race/ethnicity, were obtained and reported in the pilot.
Orange County	
Ventura County	
Florida	For all calculations, the numerator and denominator included only those for whom prenatal care was known. In addition, those for whom race was “unknown” were excluded. 2016 are considered preliminary.
Palm Beach County	For all calculations, the numerator and denominator included only those for whom prenatal care was known. In addition, those for whom race was “unknown” were excluded. 2016 are considered preliminary.
Massachusetts	Further research is required to determine current and regular access to vital statistics data in Massachusetts and Boston.
Boston	<i>See Massachusetts note</i>
Vermont	2015 data are considered preliminary.
Lamoille Valley	<i>See Vermont note</i>

Table 3: Data Sources for Early Prenatal Care

Community or State	Data Source
United States	U.S. Department of Health and Human Services; Centers for Disease Control and Prevention; National Center for Health Statistics; National Vital Statistics System: https://mchb.hrsa.gov/chusa12/hsfu/downloads/pdf/pc.pdf (2010); https://mchb.hrsa.gov/chusa13/health-services-utilization/health-services-utilization.html (2011); https://mchb.hrsa.gov/chusa14/dl/health-services-financing-utilization.pdf (2012) https://www.cdc.gov/nchs/data/vsrr/report002.pdf (2016)
California	California Department of Public Health, Center for Health Statistics, Birth Statistical Master Files, retrieved from kidsdata.org
Alameda County	California Department of Public Health, Center for Health Statistics, Birth Statistical Master Files, retrieved from kidsdata.org
Los Angeles	California Department of Public Health, Center for Health Statistics, Birth Statistical Master Files, retrieved from kidsdata.org (2009-2013); LA Health Survey, 2017
Orange County	California Department of Public Health, Center for Health Statistics, Birth Statistical Master Files, retrieved from kidsdata.org (2009-2010); Orange County Health Care Agency, Statistical Birth Master File (2011-2015)
Ventura County	California Department of Public Health, Center for Health Statistics, Birth Statistical Master Files, retrieved from kidsdata.org (2009-2010); Ventura County: Live Births to residents of Ventura County, data from AVSS (Automated Vital Statistics System), retrieved September, 2017 (2014-2016)
Florida	Florida Department of Health; Division of Public Health Statistics & Performance Management; Florida CHARTS, http://www.flhealthcharts.com
Palm Beach County	Florida Department of Health; Division of Public Health Statistics & Performance Management; Florida CHARTS, http://www.flhealthcharts.com
Massachusetts	Massachusetts Department of Public Health. Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) 2011 Surveillance Report, 2015, Table 11 (http://www.mass.gov/eohhs/docs/dph/com-health/prego-newborn/prams-report-2011.pdf)
Boston	Massachusetts Department of Public Health, MassCHIP, Perinatal Report for Boston, 2013, All Perinatal and Child Health Indicators: Boston (http://www.mass.gov/eohhs/researcher/community-health/masschip/health-status-indicators.html), and; Selected Prenatal Care Characteristics by Race/Hispanic Ethnicity: Boston (http://www.mass.gov/eohhs/researcher/community-health/masschip/perinatal-reports.html)
Vermont	Vermont Insights, http://www.vermontinsights.org/early-prenatal-care-first-trimester
Lamoille Valley	Vermont Insights, http://www.vermontinsights.org/early-prenatal-care-first-trimester

Results

Table 4: Percentage of Women Receiving Early Prenatal Care by Geography, 2009-2017

	2009	2010	2011	2012	2013	2014	2015	2016	2017
United States		73.1%	73.7%	74.1%				77.2%	
California	82.9%	83.5%	83.5%	83.8%	83.6%				
Alameda	85.7%	87.3%	89.1%	89.7%	90.6%				
Los Angeles	85.9%	86.3%	85.4%	85.0%	84.9%				81.9%
Orange County	88.8%	89.6%	88.7%	88.6%	88.3%	86.1%	85.2%		
Ventura	79.8%	81.6%	82.7%	82.5%	81.9%	82.3%	83.3%	85.1%	
Florida					80.0%	79.4%	79.3%	78.5%	
Palm Beach					76.1%	75.7%	76.3%	75.9%	
Massachusetts			91.8%						
Boston		84.7%							
Vermont	83.3%	83.0%	82.8%	83.8%	84.0%				
Lamoille Valley		77.0%			80.9%				

Note: U.S. data reflect the vital statistics data of 33 states in 2010, 36 states and the District of Columbia in 2011, 38 states and D.C. in 2012, and all states and territories in 2016. Green text reflects a change in data source for that geography.

Figure 1: Percentage of Women Receiving Early Prenatal Care by Geography, 2009-2017

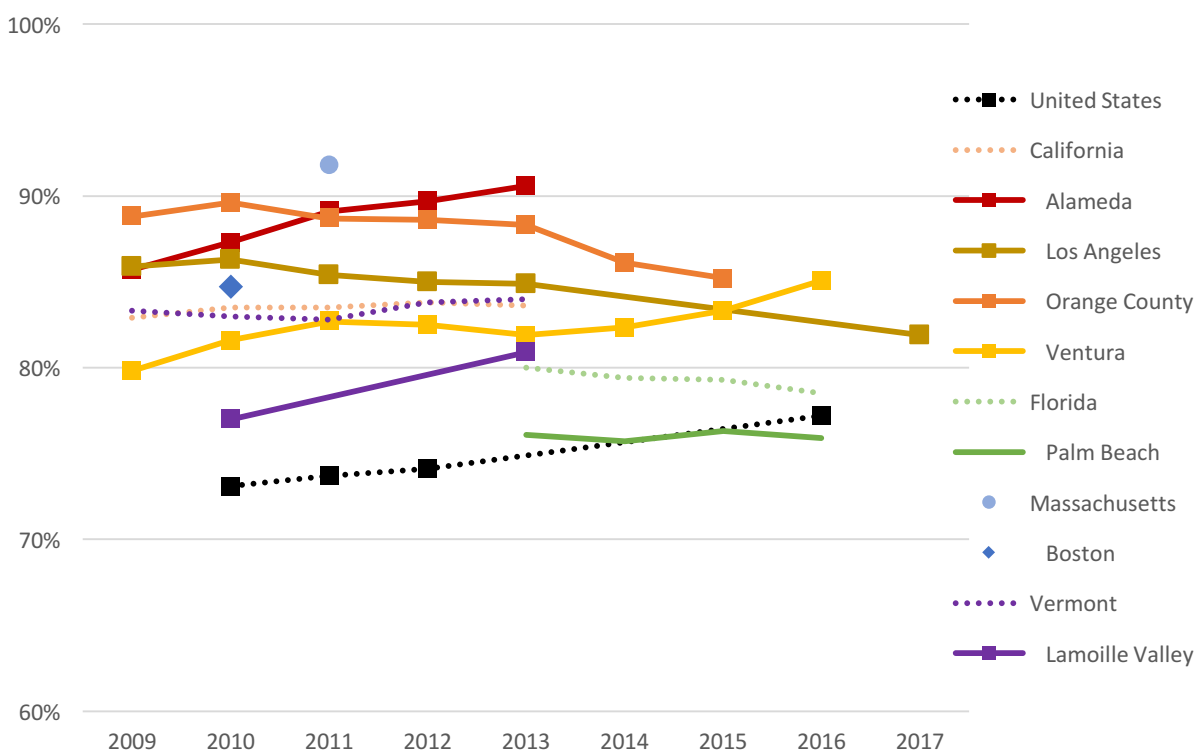
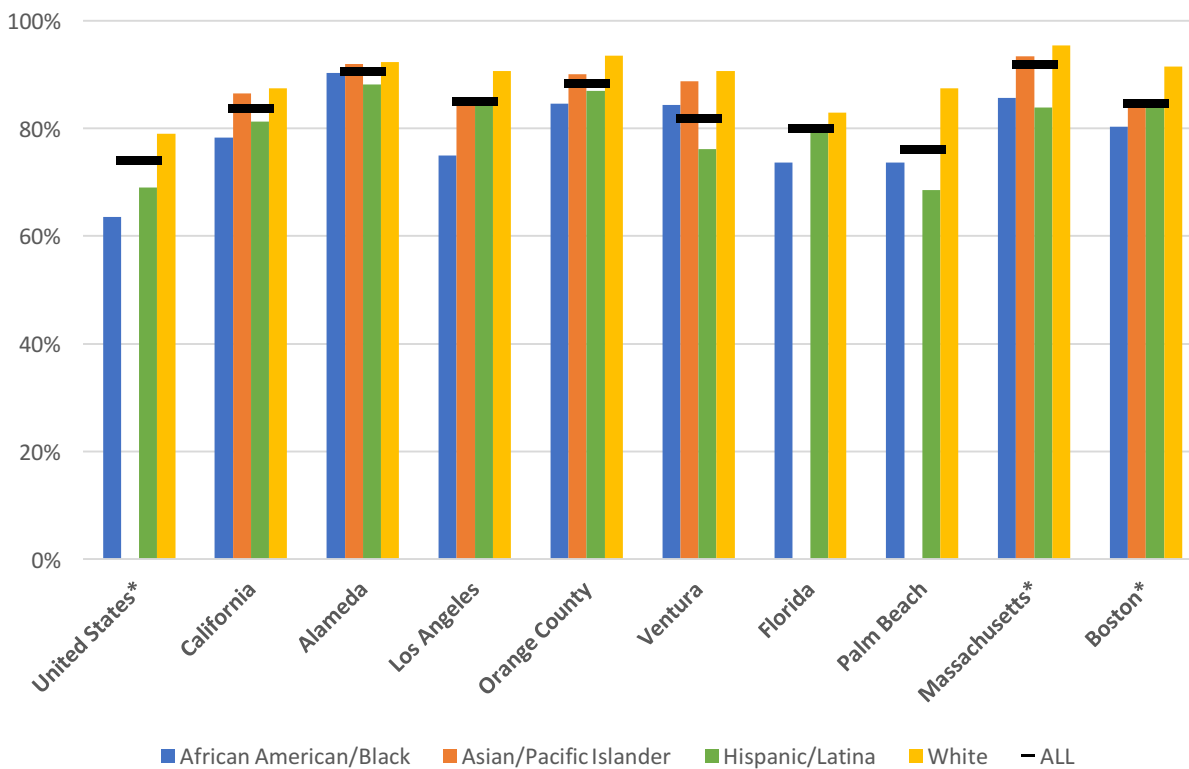


Table 5: Percentage of Women Receiving Early Prenatal Care by Geography and Race/Ethnicity, 2013*

	African American/Black	American Indian/Alaska Native	Asian/Pacific Islander	Hispanic/Latina	White	Multiracial	Haitian	Other
United States								
California	78.3%	68.9%	86.5%	81.3%	87.5%	82.4%		
Alameda	90.3%	82.9%	91.9%	88.2%	92.3%	91.5%		
Los Angeles	75.0%	76.8%	85.3%	84.2%	90.6%	83.7%		
Orange	84.6%	87.9%	90.1%	87.0%	93.5%	89.5%		
Ventura	84.3%		88.8%	76.2%	90.6%	87.8%		
Florida	73.6%			80.3%	82.9%		72.9%	80.1%
Palm Beach	73.6%			68.5%	87.4%		64.8%	77.7%
Massachusetts	85.6%		93.4%	83.9%	95.4%			81.1%
Boston*	80.3%		85.1%	84.0%	91.5%			
Vermont								
Lamoille								

* Data are presented for the year 2013 except, U.S. data are 2012, Boston data are 2010 and Massachusetts data are 2011.

Figure 2: Percentage of Women Receiving Early Prenatal Care by Geography and Race/Ethnicity, 2013*



* Data are presented for the year 2013 except, U.S. data are 2012, Boston data are 2010 and Massachusetts data are 2011. Data for Asian/Pacific Islander for the U.S. are not shown since the data source reports these races separately.

Assessment

Data Quality

Although early prenatal care data are generally available across regions, the timeframe of data provided for the pilot varies by region, and no consistent national data source has yet been identified.

Data Development Opportunities

- For maximum consistency, continue to use state and local vital statistics sources to populate this measure; survey data should only be used if vital statistics data are not available.
- If the workgroup chooses to add adequacy of prenatal care to the definition of the measure, the Medicaid Child Core Set data may provide data at the state-level, and possibly local-level, on frequency of ongoing prenatal care and adequacy of prenatal care for Medicaid customers. If Core Set data are not easily accessible at the local level, communities may be able to request local Medicaid data to assess excess burden for lower-income mothers.
- The Medicaid Child Core Set data may provide a source for early prenatal care for lower-income women, which is subpopulation-level data not available from standard vital statistics sources.

Table 6: Implementation Assessment for Early Prenatal Care

Notes	
Data Power	High: The data for this indicator are standardized across the country, but availability for analogous timeframes across regions may be limited. Data for California and its counties are available for purchase. Data are generally available by race/ethnicity. No data by income, except perhaps through the Medicaid Core Set.
Communication Power	High: This indicator is a commonly used measure of maternal and infant health and is easily understood by most people.
Proxy Power	High: This is a strong measure of maternal and infant health system functioning to meet universal needs.
Overall Readiness	Ready: Comparable data are likely available, particularly if communities are willing to make specific requests of local departments of health or purchase data when up-to-date data are not readily available.

Options for Ongoing Implementation

- Consider whether to add adequacy of care to this measure. If adequacy is added, review suitability of Kotelchuck Index methodology to measure adequacy of prenatal care and review the availability of Medicaid Child Core Set measures of frequency of ongoing prenatal care and timeliness of prenatal care, as potential source of data that incorporates adequacy of care.
- Research Medicaid Child Core Set data as a source for early prenatal care data for lower-income women.

SPM 1.2: Maternal Depression Screening (piloted)

Desired Data

As identified on the May 22 conference call, the workgroup seeks uniform population-level data that tracks the percentage of all postpartum mothers screened for depression within a specified time frame or at appropriate intervals over time. During subsequent work to identify the desired timeframe or interval, the workgroup should decide whether prenatal screens should be included. Note that most current population-level survey data ask, retrospectively, about prenatal care screens, not postpartum screens.

Data Availability

Overall

At this juncture, while some regions have access to population-level data via surveys, the data for this measure are largely program-level data.

The PRAMS-sourced population-level data are only at the state level and tend to fall short of a screen; PRAMS measures whether a health care worker talked with a mother during a prenatal care visit about what she should do if she feels depressed during or after pregnancy. California's MIHA-sourced population-level data is closer to measuring screening; it asks whether the health care worker ever asked the mother during a prenatal care visit if she felt depressed. However, this data source stopped asking this question as of 2014.

The program-level data are also fairly variable, which may be in part due to the incomplete definition, which does not specify the timeframe, interval, or number of screens. The variability may be due to other factors, as well. For example, in some cases, program-level data are sourced to several different programs or practices, and may be duplicated. In these cases, the data reflect a count of screens, not mothers screened.

Where an unduplicated rate is not possible, the intent is for this measure to focus on showing a trend in the count of screenings. Where a rate is possible, the measure will report change in the percentage of mothers screened over time.

Since this measure is considered interim, in lieu of providing data, some communities provided descriptive paragraph related to the data available in their region. Those notes are included in the Detailed Notes by Geography table below.

Subpopulations

Data are not available by race/ethnicity or income for nearly all states and regions, with the exception of Massachusetts and, in part, Vermont. See Detailed Notes by Geography table below for details.

Table 7: Data Availability for Maternal Depression Screening by Geography

Geography	Data Universe	Data Years	Year Description	Screening Interval	Income Levels	Race/Ethnicity
United States						
California	Pop-level	2014	2-year pooled	Prenatal	All	No
Alameda County	Pop-level; prog-level	2014 pop-level; 2013-2016 prog-level	2-year pooled; fiscal	Prenatal; postpartum	All	No
Los Angeles County	Pop-level	2014 pop-level	2-year pooled	Prenatal	All	No
Orange County	Pop-level; prog-level	2014 pop-level; 2015-2017 (prog-level)	2-year pooled; fiscal	Prenatal; postpartum	All	No
Ventura County	Pop-level; prog-level	2014 pop-level; 2013-2016 (prog-level)	2-year pooled; calendar	Prenatal; prenatal and postpartum	All	No
Florida	Pop-level; Prog-level*					
Palm Beach County	Pop-level; Prog-level*					
Massachusetts	Pop-level	2009-2011; 2016	Calendar	Prenatal and postpartum	All, and four intervals	Yes
Boston						
Vermont	Pop-level	2009-2011, 2014, 2016	Calendar	Prenatal and postpartum	N/A	Yes (partial)
Lamoille Valley						

*Upon further articulation of data availability, depending on how the measure is defined (whether a screen or an assessment), Florida and Palm Beach have population- or program-level data.

Table 8: Detailed Notes by Geography for Maternal Depression Screening

Geography	Notes
United States	
California	The Maternal and Infant Health Assessment (MIHA) survey, which is based on PRAMS (see entries for Massachusetts and Vermont), no longer asks about prenatal maternal depression screening, however, results from the last year available (2013-2014 pooled) are provided for the following question: During any of your prenatal care visits, did a doctor, nurse, or other healthcare worker ask you if you were feeling sad, empty, or depressed (y/n)? MIHA notes: Estimates

Geography	Notes
	<p>resulting from this question may not reflect the prevalence of screening by a validated clinical tool, interpret with caution.</p> <p>Currently, the MIHA asks new mothers about depressive symptoms.</p> <p>Maternal depression screening has not been identified as a HRSA Maternal and Child Health State Performance Measures for California, so these data are not available through that portal like they are for other states that participate in PRAMS.</p>
Alameda County	<p><i>For MIHA population-level data, see California note.</i></p> <p><i>For program-level data:</i> The bulk of the screenings were done by home visiting programs; less than 100 were conducted by community agencies (e.g., parenting programs, homeless shelters). This is the number of screenings conducted. It's possible that a parent was screened more than once during the year, in which case, the number of parents screened would be smaller.</p>
Los Angeles County	<p><i>For MIHA population-level data, see California note.</i></p> <p>Data were also provided from Los Angeles Mom and Baby (LAMB) survey, 2014 and/or the LA Health Survey, 2017, which were obtained via requests to LA County Department of Public Health. These data were not included in the tables below, pending confirmation that they are measuring screens by a health professional, not maternal depression self-screens. LAMB is a population-level postnatal (6-9 months) survey with 2-year pooled results. In looking at previous LAMB surveys, it appears the 2017 data provided may reflect rates of self-reported depression among postpartum mothers. The 2017 rate provided was 23 percent, which is substantially different from the 2014 MIHA data.</p>
Orange County	<p><i>For MIHA population-level data, see California note.</i></p>
Ventura County	<p><i>For MIHA population-level data, see California note.</i></p> <p><i>For 2013-2016 program-level data:</i> data are collapsed for prenatal and postpartum screens.</p>
Florida	<p><i>For population-level data:</i> Florida participates in PRAMS (Pregnancy Risk Assessment Monitoring Survey) but data are not currently available online or by special request. Maternal depression screening has not been identified as a state performance measure for Florida, so these data are not available through HRSA Maternal and Child Health State Performance Measures.</p>
Palm Beach County	<p><i>For program-level data:</i> Palm Beach County has data on the number of clients receiving a prenatal risk screen (PRS) and/or infant risk (postnatal) screen (IRS) in any given year. Women who are determined to be at risk based upon their total score on the PRS or IRS or judged through the presence of specific risk factors* to be at risk are referred to the appropriate Entry Agency. At this point, the clients are offered a depression (and possibly other relevant) assessments to determine what services, if any, are indicated. In addition to receiving a depression screen as part at the point of entry to the Healthy Beginnings (HB) system, specific providers within the system (e.g., nurse home visitors, developmental specialists, social workers/mental health practitioners) administer depression screens as part of their program model. It is possible that a woman will screen into a home</p>

Geography	Notes
	<p>visiting program without depression noted by the Entry Agency, but later show evidence of depressive symptoms via the depression screen administered by the HB program. At this point, the client can be referred for counseling or other appropriate services. <i>Due to this active surveillance model within HB provider agencies, <u>women frequently have multiple depression screens in any given time period.</u></i> In HB system, there can be overlap between prenatal and postpartum services within a given FY or CY and what is considered as reflective of "eligible" will change for these women also. For us, eligible would vary by program criteria further complicating estimates. This will require further discussion.</p> <p>*Risk factors that result in referral for postpartum women include:</p> <ul style="list-style-type: none"> • Teen mother • Medically complex • Inadequate social support • Maternal depression • No pediatrician • Mother currently enrolled in an HB program <p>*Risk factors that result in referral for prenatal women include:</p> <ul style="list-style-type: none"> • Depression • Tobacco use • Poor prior birth outcome • <18 (teen mom) • Medically complex condition <p>A number of the risk factors listed above are included on the risk screens, but may not result in a total score that is considered to be "at risk" and in need of referral.</p> <p>For PRS, the total score must be ≥ 6 to be at risk; for the IRS, the total score must be ≥ 4 to be at risk. So, In PBC, if any of the above are present, it is sufficient to warrant a referral.</p>
Massachusetts	<p>Massachusetts participates in PRAMS (Pregnancy Risk Assessment Monitoring Survey).³ Data for 2009-2011 are available online and presented in the tables below. Data for 2014 and previous are available by request. In Massachusetts, data are available for white, black, and other (all non-Hispanic), and Hispanic (any race). Data are population-level and focused on the prenatal period, asking "During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about what to do if you feel depressed during pregnancy or after your baby is born?"</p> <p>2016 PRAMS data were obtained from the U.S. Department of Health and Human Services, HRSA Maternal and Child Health, State Performance Measures.</p>

³ PRAMS is a CDC sponsored, population-based random sample survey of women who have recently given birth. It has been in existence since 1987. It provides state-level data on many topics, including maternal depression. The Phase 8 (2016) Standard PRAMS questionnaire asks, "During your postpartum checkup, did a doctor, nurse, or other health care worker talk with you about any of the things listed below?" Options include, "What to do if I feel depressed during my pregnancy or after my baby is born." This question is not on the Core PRAMS questionnaire. Consequently, not all states ask this question.

Geography	Notes
Boston	
Vermont	<p>Vermont participates in PRAMS (Pregnancy Risk Assessment Monitoring Survey). Data for 2009-2011, 2014 and 2016 are available online and presented in the tables below. Data are available for “white, non-Hispanic” and “other, non-Hispanic.” Data are population-level, asking “During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about what to do if you feel depressed during pregnancy or after your baby is born?”</p> <p>2014 PRAMS data were obtained from the Title V MCH Block Grant Program State Snapshot, FY2018 Application/FY2016 Annual Report.</p> <p>2016 PRAMS data were obtained from the U.S. Department of Health and Human Services, HRSA Maternal and Child Health, State Performance Measures.</p>
Lamoille Valley	

Table 9: Data Sources for Maternal Depression Screening

Geography	Data Sources
United States	
California	<p>Maternal and Infant Health Assessment (MIHA) Survey 2013-2014. Prepared by: California Department of Public Health; Center for Family Health; Maternal, Child and Adolescent Health Program; Epidemiology, Assessment and Program Development Branch: Maternal and Infant Health Assessment (MIHA) Survey, 2013. Notes: MIHA data are weighted to represent all women with a live birth in California</p>
Alameda	<p><i>Program-level data:</i> First 5 Alameda County data systems (ECCOnline, ECChange); <i>Population-level data:</i> see California MIHA source</p>
Los Angeles	<p>See California MIHA source</p>
Orange	<p><i>Program-level data:</i> Persimmony, Children and Families Commission of Orange County <i>Population-level data:</i> see California MIHA source</p>
Ventura	<p><i>Program year data:</i> Nursing Referral System, Ventura County Public Health <i>Population-level data:</i> see California MIHA source</p>
Florida	
Palm Beach	
Massachusetts	<p>Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Division of Reproductive Health. Pregnancy Risk Assessment Monitoring System, 2014, Table 3 (https://nccd.cdc.gov/pramstat/);</p> <p>Massachusetts Department of Public Health. Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) 2011 Surveillance Report, 2015, Table 37 (Appendix A) (http://www.mass.gov/eohhs/docs/dph/com-health/prego-newborn/prams-report-2011.pdf);</p>

Geography	Data Sources
	2016 PRAMS, retrieved via U.S. Department of Health and Human Services, HRSA Maternal and Child Health, State Performance Measures (https://mchb.tvisdata.hrsa.gov/PrioritiesAndMeasures/StatePerformanceMeasures)
Boston	
Vermont	Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Division of Reproductive Health. Pregnancy Risk Assessment Monitoring System (PRAMS), 2009-2011 (https://nccd.cdc.gov/pramstat/); 2014 PRAMS, obtained from the U.S. Department of Health and Human Services, HRSA Maternal and Child Health, State Performance Measures, Title V MCH Block Grant Program, Vermont, State Snapshot, FY2018 Application/FY2016 Annual Report (https://mchb.tvisdata.hrsa.gov/uploadedfiles/StateSubmittedFiles/2018/stateSnapshot/s/VT_StateSnapshot.pdf); 2016 PRAMS, obtained from the U.S. Department of Health and Human Services, HRSA Maternal and Child Health, State Performance Measures (https://mchb.tvisdata.hrsa.gov/PrioritiesAndMeasures/StatePerformanceMeasures)
Lamoille	

Results

Table 10: Count of Mothers Screened for Depression by Geography, 2009-2017

	2011	2012	2013	2014	2015	2016	2017
United States							
California				330,165			
Alameda			816	674	731	703	
Los Angeles							
Orange County					876	1,559	1,350
Ventura			562	639	578	645	
Florida							
Palm Beach							
Massachusetts	1,221						
Boston							
Vermont							
Lamoille Valley							

Note: Figures in orange represent program-level data. Figures in black represent population-level data.

Figure 3: Count of Mothers Screened for Depression by Geography, 2011-2017 (Program-Level Data Only)

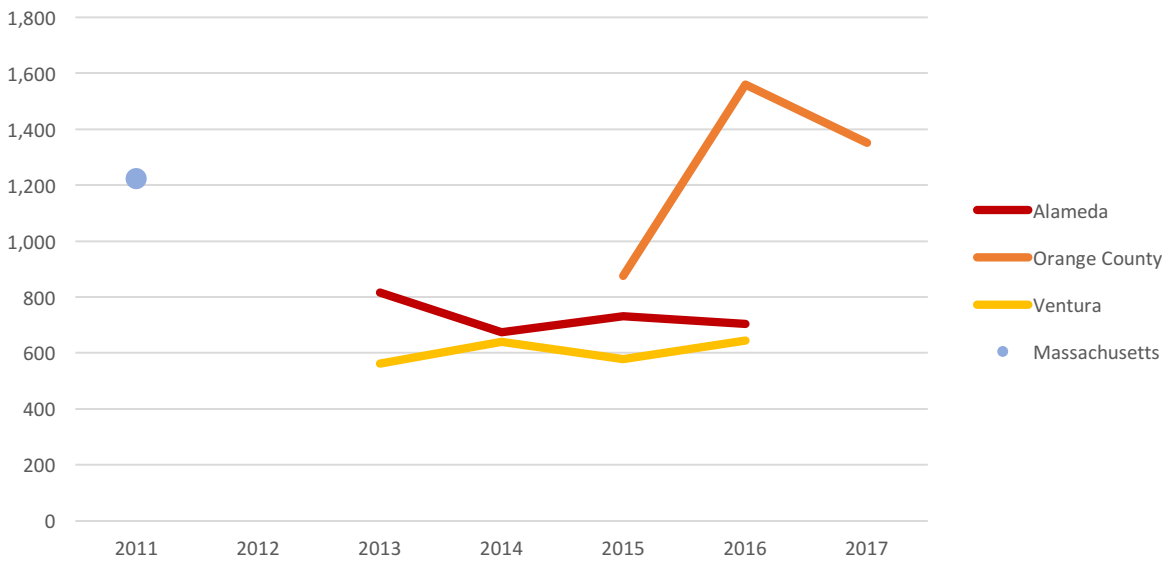
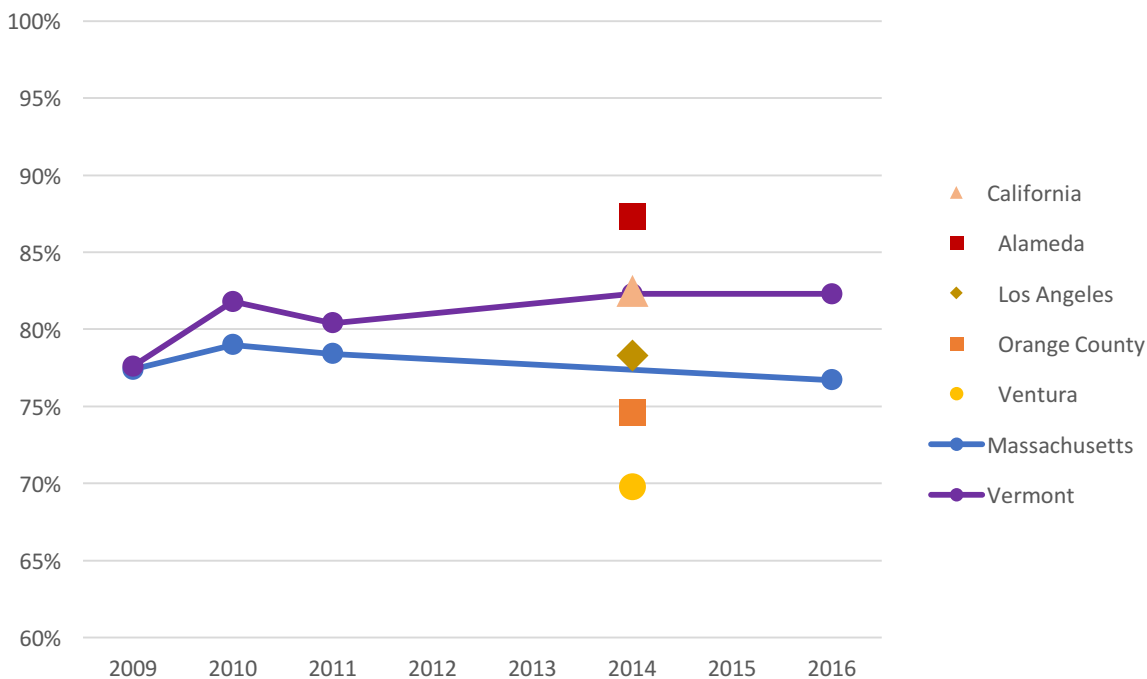


Table 11: Percent of Mothers Screened for Depression by Geography, 2009-2016 (Population-Level Data Only)

	2009	2010	2011	2012	2013	2014	2015	2016
United States								
California						82.5%		
Alameda						87.3%		
Los Angeles						78.3%		
Orange County						74.6%		
Ventura						69.8%		
Florida								
Palm Beach								
Massachusetts	77.4%	79.0%	78.4%					76.7%
Boston								
Vermont	77.6%	81.8%	80.4%			82.3%		82.3%
Lamoille Valley								

Figure 4: Percent of Mothers Screened for Depression by Geography, 2009-2016 (Population-Level Data Only)



Assessment

Data Quality

While some states will continue to have state-level population-level data going forward, data measuring maternal depression screening at the local level is likely to be programmatic for the foreseeable future. Current characteristics of data quality include the following:

- Program-level data likely to be duplicated.
- Population-level data use slightly different questions and are mostly only available at the state level.
- No data are available across all regions for the same year for either population- or program-level data.
- Programs included in program-level data may vary across years due to changes in funding, service delivery, and reporting.
- Definitions of what constitutes a “depression screen” may vary, from a single question to an entire assessment.

Data Development Opportunities

- Research whether the Medicaid Child Core Set, which includes a behavioral health risk assessment for pregnant women, could serve as a consistent proxy for this measure, pending whether prenatal or postpartum screens are included in the definition and local Medicaid data are available. These data would be for lower-income women only. Several states are adopting Medicaid guidance that enables doctors to bill for maternal depression screens through the child’s Medicaid policy, which has reportedly increased screening in these states.

- Research using Medicaid Child Core Set data as a source for determining excess burden by income status for this measure.
- Test adding postpartum depression screening questions to the ASQ, or otherwise connect maternal screening to well-baby checks.
- Advocate for continued California and local level depression-screening data: the California Maternal and Infant Health Assessment (MIHA) asked about medical professional depression screening until the 2014 survey. They no longer ask this question, but if there is interest in reinstating this measure or adding another measure of interest (such as postpartum screening by a medical professional), the MIHA staff have indicated they welcome feedback. They strive for the MIHA to have high utility for end-users.
- Research whether other states or localities have similar maternal and infant health survey's which ask about depression screening based on PRAMS or similar.

Table 12: Implementation Assessment for Maternal Depression Screening

Notes	
Data Power	Medium: Uniform population-level data across sites is not currently available. Program-level data most likely available for the foreseeable future, but tends to be duplicated.
Communication Power	High: This is a commonly used measure of maternal and infant health and is easily understood by most people.
Proxy Power	High: This is a strong measure of maternal and infant health system functioning to meet universal needs.
Overall Readiness	Mixed: The measure needs additional clarity around timeframe before consistent full implementation can take place. Data alignment and quality issues may persist; data sharing to reduce duplication (for program-level data) or new survey questions (for population-level) may help.

Options for Ongoing Implementation

- Research recommended intervals (e.g. prenatal, in-hospital, postnatal to 6 months, etc.) and/or intervals for which there is commonly data. Use this research to define the measurement timeframe.
- Investigate data available through the Medicaid Child Core Set.
- Continue investigation of availability of broader population-level survey's like the MIHA.
- Test adding maternal depression screen questions to the ASQ.

SPM 1.2.1 Mothers Connected to Mental Health Services

Desired Data

Program-level percentage of expectant mothers and mothers of children from birth to age five who are connected to services when indicated for depression. Indication of need is defined as those who score at-risk for depression on screening tool or are recommended by a mental health professional to seek care. What is considered “at-risk” will vary by the screening tool used. Connected to services is defined as the completion of the initial family in-person contact that includes completion of intake and written consent of services.

Data Availability

Overall

This indicator was not piloted, but data development was discussed at the November in-person meeting.

Data are generally considered by the workgroup to be strong at the program-level, though there may be duplication issues if multiple providers’ program-level data are rolled into the measure. Population-level data are likely not realistic in the near term, though different states and localities have population-level postpartum surveillance surveys (such as the Maternal and Infant Health Assessment in California, or the Los Angeles Mommy and Baby survey) that may provide an opportunity if questions are added or modified.

Assessment

Data Quality

Due to the program-level nature of the data, there may be duplication within regions, and data are unlikely to be comparable across regions beyond change in data trends. Further strengthening of the measure definition (e.g. what qualifies as a verified connection) needs to be determined. Additionally, the timeframe of the indicator (limited to post-partum screening, or collected for all mothers of children up to 5) needs to be clarified across program-level data sources to ensure consistency within each data source.

Data Development Opportunities

- Existing population-level surveys could provide a source for population-level data if questions are either modified or added. A series of questions that could elicit a measure of system performance would be: 1) has a health professional conducted a screen, 2) if indicated, did the health professional refer to services, 3) if referred, did the respondent connect to services.
- Tighten the definition in terms of what qualifies as a verified connection to service and the timeframe of the measure to improve cross-community consistency.

Table 13: Preliminary Assessment for Mothers Connected to Mental Health Services

Notes	
Data Power	Medium: Uniform data across sites has not been identified. Program-level data most likely available.
Communication Power	High: This indicator builds on a commonly used measure of maternal health (maternal depression) and is easily understood by most people.
Proxy Power	High: This measure is a strong indicator of maternal health system functioning to meet identified needs.
Overall Readiness	Mixed: Further work defining the measure and the data to be collected will enable a data collection pilot.

Options for Ongoing Development

- More clearly define what constitutes a verified connection to services and the timeframe to improve data uniformity.
- Investigate opportunities with state-level surveys to collect population-level data on the measure.
- Pilot data collection.

SPM 1.3: Developmental Screening (piloted)

Desired Data

Population-level counts of children who have received a developmental screening at determined timeframe, divided by the number of children in the data universe (whether population at-large or those who saw a health professional in the past 12-months) to provide a rate of screening. Final definition needs to be determined or made flexible.

Data Availability

Overall

At this juncture, data are available at either the program-level or population-level, or both, for many communities and states, but they are highly variable. Program-level data are generally limited to counts and sourced to several different programs or practices. As a result, they may be duplicated. Where an unduplicated rate is not possible, the measure shows a trend in the count of screenings, rather the number of children screened.

The pilot attempted to assess the extent to which program-level data measure screening of all young children in a region. Communities were asked to estimate what proportion of all young children they think their program(s) data cover(s). One community provided an estimate of roughly a quarter of all children; given duplication, it is difficult for communities to assess how universal their program data are.

Population-level data are based on survey data, presented as rates of children screened, and reflect varying age ranges and universes of children. For example, the denominator for the National Survey of Children's Health, which is the source for the Title V Child and Maternal Health National Performance Measures, is "Children age 10 months through 71 months who had a health care visit in the past 12 months." The California Health Interview Survey asks of parents of children ages 1 year or older (with the ability to retrieve data limited to children ages 1-5) whether the child's "doctor, other health providers, teachers or school counselors" ever asked the parent to fill out a checklist, which suggests the universe is all children in any context (not just those who have visited a health professional) and whether a checklist has been filled out ever in their lives.

Subpopulations

Data are generally not available by race/ethnicity or income. The exceptions include California, Los Angeles, and Palm Beach County (no income levels). Other California counties have data by subpopulation, however, due to the small sample, these data are unstable in a single-year presentation. Pooling years of data could lead to stabilized results.

The Medicaid Child Core Set includes a measure for a child developmental screening within the first three years of life, which could provide a population-level measure for lower-income children.

Table 14: Data Availability by Geography for Developmental Screening

Geography	Data Universe	Data Years	Year Description	Age Range	Income Levels	Race/Ethnicity
United States	Pop-level	2016	Calendar	10-71 months	No	No
California	Pop-level	2007,2015-2016	Calendar	1-5	Yes	Yes
Alameda County	Pop-level; Prog-level	2007,2015-2016; 2012-2016	Calendar; Fiscal	1-5; 0-5	Yes*; No	Yes*; No
Los Angeles County	Pop-level	2007,2015-2016	Calendar	1-5	Yes	Yes
Orange County	Pop-level; Prog-level	2007,2015-2016; 2015-2017	Calendar; Fiscal	1-5; 0-5	Yes*; No	Yes*; No
Ventura County	Pop-level; Prog-level	2007,2015-2016; 2011-2016	Calendar; Fiscal	0-2 and 3-5	Yes*; No	Yes*; No
Florida	Pop-level	2016	Calendar	10 months-5 years	No	No
Palm Beach County	Prog-level	2013-2017	Fiscal	0-5	No	Yes
Massachusetts	Pop-level	2012, 2016	Calendar	10 months-5 years	No	No
Boston						
Vermont	Pop-level	2013-2016	Fiscal	0-3	No	No
Lamoille Valley	Pop-level	2013-2016	Fiscal	0-3	No	No

*data are considered unstable.

Table 15: Detailed Notes by Geography for Developmental Screening

Geography	Notes
United States	Title V Maternal and Child Health Block Grant National Performance Measure: "Percent of children, age 10-71 months, who received a developmental screening using a parent-completed screening tool among children age 10-71 months who had a health care visit in the past 12 months." In 2016/17 survey, questions will be asked for all children 9-71 months per American Academy of Pediatrics guidelines.
California	Respondents were asked of their children ages 1 year or older: "Did child's doctor, other health providers, teachers or school counselors ever have you fill out a checklist about concerns you have about {his/her} learning, development, or behavior?" and "Did they ever have you fill out a checklist of activities that (child) can do, such as certain physical tasks, whether {her/she} can draw certain objects, or ways {he/she} can communicate with you?"
Alameda County	<i>For population-level data: see California notes</i> <i>For program-level data: Count includes screenings conducted through pediatric offices, ECE programs, home visiting programs, community agencies (e.g., homeless shelters, parenting programs), and online. The count is of screenings</i>

Geography	Notes
	conducted. The number of children screened may be less since some children may have had more than one screening conducted during the year.
Los Angeles County	<i>For population-level data: see California notes</i> <i>For program-level data: Count not provided; only estimate of coverage.</i>
Orange County	Data available by program and rolled up for a total. CHIS data available county-wide for 2015 calendar year.
Ventura County	Data is provided for children 0-2 and 3-5; it has been added for Ventura totals. Ventura also provided a separate count of 4,327 for 2013 data from clinic sites (versus First 5), but comparable clinic data was not provided for other years.
Florida	<i>For population-level data: Florida uses the National Survey of Children’s Health, which is based on children who visited a health care professional in the past 12 months (not all children in the age range).</i>
Palm Beach County	<i>For program-level data: The data on number of children receiving an ASQ3 was extracted 9/20/17 and so is lacking 10 days of data as the FY ends 9/30/2017. In addition, client counts for the system are not available until November and so the number served is the average of the previous two years and should be considered an estimate (and likely an under-estimate).</i> Client counts reflect the total number of unduplicated clients served 0-5 during the FY reported (incorporates programs across CSC early childhood system of care). Count screened is available by race/ethnicity.
Massachusetts	<i>For population-level data: Massachusetts uses the National Survey of Children’s Health, which is based on children who visited a health care professional in the past 12 months (not all children in the age range).</i>
Boston	
Vermont	<i>For population-level data: There are two possible sources of data at the state-level for Vermont. There is the National Survey of Children’s Health, which is based on children who visited a health care professional in the past 12 months (not all children in the age range).</i> There is also Vermont’s Blueprint for Health. The data are defined as: The percentage of children screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. From this source, the 2013 data are only available as calendar year; the remainder reported are fiscal year data.
Lamoille Valley	<i>For population-level data: From the Vermont Blueprint for Health source, the 2013 data are only available as calendar year. Additionally, 2013 numbers are from the Hospital Service Area, which is a slightly different region than the County or the Agency of Human Services region. The data are defined as: The percentage of children screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday.</i>

Table 16: Data Sources for Developmental Screening

Geography	Data Source
United States	National Survey of Children’s Health accessed through the Title V Maternal and Child Health Services Block Grant Program, National Performance Measures https://mchb.tvisdata.hrsa.gov/PrioritiesAndMeasures/NationalPerformanceMeasures (2016) https://mchb.hrsa.gov/chusa14/health-services-financing-utilization.html (2011/12)
California	<i>For population-level data (percent):</i> California Health Interview Survey, 2015 (http://healthpolicy.ucla.edu/chis/Pages/default.aspx)
Alameda County	<i>For population-level data (percent):</i> see California source <i>For program-level data (counts):</i> First 5 Alameda County data systems (ECCOnline, ECChange, Pathways)
Los Angeles	<i>For population-level data (percent):</i> see California source
Orange County	<i>For population-level data (percent):</i> see California source <i>For program-level data (counts):</i> Persimmony, Children and Families Commission of Orange County and Developmental Screening Cohort: Landscape Analysis of Developmental Screening in Orange County. Report to the Children and Families Commission of Orange County, January 2017.
Ventura County	<i>For population-level data (percent):</i> see California source <i>For program-level data (counts):</i> EMT Associates, Inc., First 5 Ventura County Annual Evaluation Report Fiscal Year 2010-2011, (http://www.first5ventura.org/wp-content/uploads/2014/06/First-5-Ventura-Count-AER-Final_2_7_2012.pdf), and Fiscal Year 2011-2012, (http://www.first5ventura.org/wp-content/uploads/2013/10/AER-Final_2-12-2013_0.pdf); First 5 Ventura County, First 5 Ventura County Annual Evaluation Report Fiscal Year 2012-2013, (http://www.first5ventura.org/wp-content/uploads/2013/10/FY12-13-Evaluation-Report_0.pdf); and Fiscal Year 2013-2014, (http://www.first5ventura.org/wp-content/uploads/2015/02/FY-2013-14-AER-FINAL.pdf)
Florida	<i>For population-level data (percent):</i> National Survey of Children’s Health, 2016 (retrieved from childhealthdata.org)
Palm Beach	<i>For program-level data (counts):</i> Children's Services Council of PBC; Healthy Beginnings Data System; Custom Extract, August 2017 compiled by Beth Halleck
Massachusetts	National Survey of Children's Health. NSCH 2011/12. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website, 2012 (www.childhealthdata.org)
Boston	
Vermont	National Survey of Children’s Health (population level percentage) and Vermont Blueprint for Health (count and percentage)
Lamoille Valley	Vermont Blueprint for Health (http://blueprintforhealth.vermont.gov/sites/bfh/files/7-13--6-14%20Pediatric%20Morrisville%20Blueprint%20Community%20Health%20Profile.pdf)

Results

Table 17: Count of Children Receiving Standardized Developmental Screening by Geography, 2011-2017 (Program- and Population-level)

	2011	2012	2013	2014	2015	2016	2017
United States	6,132,446						
California							
Alameda		4,085	6,386	6,995	8,934	10,334	
Los Angeles							
Orange County						112,000	
Ventura	1,395	1,105	899	6,144	8,477	3,866	
Florida							
Palm Beach			18,307	19,255	22,047	24,342	23,194
Massachusetts			187,580				
Boston							
Vermont			7,773	8,552	9,887	11,674	
Lamoille Valley			302	328	429	594	

Note: Figures in orange represent program-level data. Figures in black represent population-level data.

Table 18: Percentage of Children Receiving Standard Developmental Screening by Geography (Age Ranges and Timeframes vary), 2007-2016 (Population-Level only)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
United States					30.8%					27.1%
California	22.8%								41.4%	42.1% 20.9%
Alameda	22.2%								57.4%	48.1%
Los Angeles	21.8%								51.4%	54.6%
Orange County	25.1%								48.9%	24.7%*
Ventura	23.9%								37.4%*	34.5%*
Florida										15.7%
Palm Beach										
Massachusetts						55%				41.0%
Boston										
Vermont							48%	43%	46%	54% 35.6%
Lamoille Valley							4%	4%	10%	24%

Note: Age ranges and timeframes vary by data source. Data in green are VT Blueprint data for children ages 0-3 and reflect percent of all children screened annually (in the 12 months preceding their first, second, and third birthdays). Data in orange are NSCH for children ages 10 months through age 5 (or 71 months) and reflect percent screened among children who visited a health professional in the past 12 months. Data in red are from CHIS for the 1-5 age range and reflect children ever screened by a health professional, teacher or school counselor.

Assessment

Data Quality

Data quality is limited by several issues:

- Program-level data are likely to be counts and duplicated.
- Program-level counts may be of screens conducted, not of children screened.
- Data are not consistently available across all regions for the same year.
- Programs included in program-level data may vary across years.
- The age range and timeframe vary depending on the data source.

The variability in timeframes, definition, and program- versus population-level data hinder cross-region comparisons. However, with some exceptions, it is possible to chart progress over time within regions, and compare rate of change across regions.

Data Development Opportunities

- The Medicaid Child Core Set includes a measure for a child developmental screening within the first three years of life, which could provide population level measure for lower-income children.
- The age range and timeframe of the EC-LINC measure is currently undefined. The variability in age ranges and timeframes of the various sources may suggest a need for advocacy to bring the field into better alignment. The American Association of Pediatrics recommends screenings at 9, 18, and 30 months with autism-spectrum screening recommended at 24 and 30 months. These recommendations may provide context for identifying a time interval.
- Workgroup members should consider either a set age range or timeframe, or explicitly allow flexibility that allows users to choose their data source. Trade-offs between flexibility and cross-community comparability should be considered.
- Local data sharing would improve quality of program-level data by addressing duplication issues.
- The addition of developmental screening questions to local surveillance surveys, following a national model like the National Survey of Children' Health, would improve data availability and cross-community learning.

Table 19: Preliminary Assessment for Developmental Screening

Notes	
Data Power	Medium: Uniform data across sites has not been identified.
Communication Power	High: This indicator is easily understood by most people.
Proxy Power	High: This measure is a commonly used measure of maternal and infant health.
Overall Readiness	Mixed: Further work defining the measure and advocacy to develop local population-level data may improve ongoing data collection efforts.

Options for Ongoing Implementation

- Identify screening interval and timeframe of interest for data collection opportunities.
- Pursue Medicaid/CHIP Child Core Set data which would provide developmental screening data for lower-income children.

SPM 1.3.1: Children Connected to Developmental Services (piloted)

Desired Data

Percentage of young children with identified developmental concerns that were referred to and connected with related supports. (Count of young children connected to supports divided by the total number of children identified with developmental concerns). At the April 7 data development conference call, the workgroup indicated that a universal, population-level measure would be ideal, but it was agreed that the first step was to have every child screened at regular intervals. To get good program-level data, programs need to be able to track clients after screening; a unique identifier or data sharing would facilitate tracking. To get good population-level data, surveys asking parents about developmental screening would need to follow up with questions about referrals and connections to services.

Data Availability

Overall

This measure is a subset of SPM 1.2: Developmental Screening. Each participating EC-LINC community was asked to provide a brief description of what data or information is available locally related to connecting children to services when a concern is identified during a developmental screening. Details are provided below in Table 22.

Population-level data are not available, but most communities reported that they have quality, unduplicated program-level data through Help Me Grow (Alameda, Vermont, and Orange County), or a similar referral infrastructure (Boston). The counts are relatively small, reflecting a subset of all children in a region. Duplication is an issue if data from more than one program is included, or children can be lost to follow-up if they are referred out.

Subpopulations

Communities did not indicate whether or not their data are available by race/ethnicity or income. This requires further inquiry.

Table 20: Data Availability by Geography for Children Connection to Services

Geography	Data Universe	Data Years	Year Description	Age Range	Income Levels	Race/Ethnicity
United States						
California						
Alameda County	Prog-level				Unknown	Unknown
Los Angeles County						
Orange County	Prog-level				Unknown	Unknown
Ventura County	Prog-level	2010/11-2015/16	Fiscal		Unknown	Unknown
Florida						
Palm Beach County	Prog-level				Unknown	Yes
Massachusetts						

Geography	Data Universe	Data Years	Year Description	Age Range	Income Levels	Race/Ethnicity
Boston	Prog- and student-level				Unknown	Unknown
Vermont						
Lamoille Valley					Unknown	Unknown

Table 21: Data Sources for Children Connection to Services

Community or State	Data Source
United States	
California	
Alameda County	First 5 Alameda
Los Angeles	
Orange County	Children and Families Commission of Orange County
Ventura County	First 5 Ventura
Florida	
Palm Beach County	Palm Beach County Children Services Council, Healthy Beginnings; Florida Department of Health, Early Steps; School District of Palm Beach County, Child Find
Massachusetts	
Boston	United Way, DRIVE program; Massachusetts Department of Public Health, Thom Boston Metro Early Intervention Program
Vermont	Vermont Universal Developmental Screening
Lamoille Valley	Vermont Universal Developmental Screening (pilot in Lamoille Valley)

Results

Table 22: Data Descriptions by Geography for Children Connected to Services

Community	Description of Data Available
Alameda	For the First 5 grant-funded community agencies that conduct developmental screenings (e.g., homeless shelters, parenting programs), we ask them to report on the number of ASQ and ASQ-SE screenings they conducted during the year, the number of screenings that scored "of concern" in at least one domain, the number of children screening "of concern" who were subsequently referred for services (either internally at the grantee agency, or outside of the grantee agency), and the number of referred children who received services. When the Help Me Grow phone line staff refer a child for an evaluation and/or service, they follow up on each of the referrals to see if the evaluation or service was received. They consider that a child was "connected to services" if at least one of the referrals provided at the time resulted in an evaluation/service.
Palm Beach County	In Palm Beach County, there are three different entities with oversight of developmental screenings 0-5. <ul style="list-style-type: none"> The first is their Healthy Beginnings system. For those children (0-5), they can track linkages within their system. They can track referrals outside of the system, but not actual linkages. Data are available by race/ethnicity for children screened in the Healthy Beginnings program.

Community	Description of Data Available
	<ul style="list-style-type: none"> • The second is Early Steps. “Early Steps is Florida's early intervention system that offers services to eligible infants and toddlers (birth to thirty-six months) with significant delays or a condition likely to result in a developmental delay. Early Intervention is provided to support families and caregivers in developing the competence and confidence to help their child learn and develop” (http://www.floridahealth.gov/alternatesites/cms-kids/families/early_steps/early_steps.html) • Child Find is through their school district. The purpose of Child Find is to discover whether a child (starting at age 3) has special learning needs, to identify what those needs are, and to provide the programs and services which will best address them. • Between these three sources, county level data could be cobbled together but it would not be unduplicated and there would be holes in the data from a population level perspective. Children who are assessed directly through their pediatrician or other source and referred directly to an appropriate service would not be included. In short, only program level data are available, and they do not include the universe of relevant programs (e.g. pediatrician or other program source). https://www.palmbeachschools.org/ese/cfoverview/
Boston	<p>Through the developmental screening infrastructure Boston built as part of its own DRIVE initiative, they are building a system of tracking referrals.</p> <ul style="list-style-type: none"> • Through the Massachusetts Department of Public Health and the “Thom Boston Metro Early Intervention Program” there are counts of eligible students that were and were not enrolled in services or had an IFSP. These data are comparable to statewide figures. • UW has launched the DRIVE program which seeks to: <ul style="list-style-type: none"> ○ Support Children & Families: <ul style="list-style-type: none"> ▪ Build community capacity to screen children early for potential developmental delays, and use the ASQ as an opportunity for family engagement, education, and referral to services. ▪ Help families take an active approach to gaining more knowledge about their child’s development, and advocating for the resources necessary to support their children’s school readiness. ○ Drive Policy & Systems Change <ul style="list-style-type: none"> ▪ Create a universal screening system in order to gain a better understanding of the developmental progress of young children to inform funding and policy decisions. ▪ The program has many partners, including Head Start, Catholic Charities, and child care centers. In addition to screens in formal settings, DRIVE goal is to reach families in informal settings and support administration of ASQ and then providing follow up. As of 2016, 3,123 children completed initial screens. There are data that track children’s results overtime.
Orange County	<p>Grantee work plans include two follow up milestones for children receiving developmental screenings:</p> <ul style="list-style-type: none"> • HC.2.2.10a: Parents receive referrals regarding their child's health and developmental concerns • HC.2.2.10b: Parents are linked to referred services for their child's health and developmental concerns

Community	Description of Data Available					
Ventura	Fiscal Year	Number of children with suspected delays	Percent of children with developmental concerns referred for follow up assessment and EI services	Percent of parents accepting referrals	Percent of accepted referrals followed	Percent of referrals eligible for services
	2010-2011	279	85%			
	2011-2012			89%		
	2012-2013		100%	88%		
	2013-2014		100%	86%		
	2014-2015		100%	85%	100%	95%
	2015-2016		100%	85%	100%	85%
Vermont	<p>Along with the new Ready for Kindergarten Survey (R4KIS), the addition of the Universal Developmental Screening (UDS) Registry to the data collection and analysis at the Health Department contributes an important data element to tracking children’s access to services and overall growth and development. Part of our Health Department immunization registry, the UDS Registry provides a statewide data collection system for developmental screening results. Screening results for multiple tools are included: The Ages and Stages Questionnaire: Third Edition (ASQ - 3), Ages and Stages Questionnaire-Social Emotional (ASQ:SE), and the Modified Checklist for Autism in Toddlers (M-CHAT). The Registry screening collection system offers reporting features for primary care providers including: a screening history report, <u>screening follow up status</u>, children due for screening (per the American Academy of Pediatrics Bright Futures Periodicity schedule), and screening rates report. The intent is for primary care providers to use the registry features to help them improve developmental screening rates overall for children in their practice and to utilize the data to get credit for improved screening rates under the Vermont Blueprint for Health Care Reform. Four primary care practice sites have signed on to pilot the use of the Registry – and training is underway in the Lamoille region with Applesed Pediatrics and Lamoille Valley early care and education professionals.</p>					

Assessment

Data Quality

- Several regions have program level data available, however it is not comprehensive and may include duplicates.
- Overall counts and percentages are not comparable across regions.
- Regions are at the start of exploring/developing these data, so improvement to data integrity and consistency may be forthcoming.
- If data are stable across years within each region, rate of change over time may be comparable across regions.

Data Development Opportunities

- This is a growing area, with ongoing implementation questions and need for greater clarity, such as ambiguity around distinctions between referrals, connection, and uptake of services.
- Data sharing would help track families from referral to connection and completion. In reference to the service integration value proposition, in general, and SPM 2.4: Data Sharing, in particular, given the level of integration systems have now, this may be a long-term goal.
- To increase the feasibility of measuring connection to services, communities may wish to collectively define core services or supports that, 1) represent key resources for development issues (e.g. early intervention services, etc.) and, 2) have strong data. Focusing data development on these core services could expedite implementation and increase utility of results.
- In order to adequately measure the strength of the early childhood system, communities may be interested in continuing to discuss whether to broaden “services” to include access to formal services, as well as informal support networks that can fulfill needs.

Table 23: Preliminary Assessment for Connection to Services

Notes	
Data Power	Low: Data are not standardized within or across regions, and comparability is limited.
Communication Power	Medium: This indicator is understood by most people, however there may be confusion regarding what qualifies as connection to services for different audiences.
Proxy Power	Medium: This measure is a moderate proxy for early childhood system functioning. Measure does not include informal supports or fully adequate definition of value of connection to services. It may be stronger for policymakers than families, who may not agree that connection to services is necessarily a measure of fulfilled needs.
Overall Readiness	Not Ready: Measure requires additional refinement before implementation would be possible.

Options for Ongoing Implementation

- Discuss desired next steps for this measure, whether to attempt to collect data, or to identify discrete data development tasks, or to place this measure on hold while focusing on measures that are readier for implementation.
- Identify core services that may be more amenable to collecting needed data and provide greatest utility for assessing system effectiveness and guiding decision making.
- Revisit the issues of data sharing limitations and definitional distinctions along service path (screens, referrals, connection, and receipt of services); whether “services” can include informal supports, not just formal services; and general clarity about what is being measured.

SPM 1.4: Unidentified Developmental Issue at Kindergarten Entry

Desired Data

Percentage of children with developmental needs at age six whose developmental issue was identified by age four, to be measured using population-level (school district) data of the number of six-year-olds who were receiving speech, language impairment, or autism services divided by the number of children in their cohort who were receiving speech, language impairment, or autism services at age three.

Data Availability

Overall

This measure was not piloted, so data availability was not assessed through implementation; however, these data are likely to be available at the school district or county from state education departments, either through online data portals or by request.

States may differ in terms of what agency is responsible for early intervention services. If this agency is not the department of education, or is not linked to the department of education, data for children at age three may not be available.

Subpopulations

Most education departments collect data by race/ethnicity and income, so these subpopulations are likely to be available.

Assessment

Data Quality

Student-level data would be ideal, but this is unlikely to be available currently, so this measure will be based on cohort-level data. As a result, the data will include “noise”, including children who moved in or out of the cohort, children who received services at age three but no longer need them at age six, or children who received services at age three and age six but who moved into the cohort at age four or five so would appear as unidentified. However, because there is currently a significant proportion of children in Kindergarten who were not identified in Pre-K, this noise is unlikely to be significant enough to create issues with interpretation. As the proportion shrinks, higher quality, student-level data may be necessary.

The cohort-data may also be impacted by administrative features of how early intervention is implemented in various states. Data may be incomplete or none existent in states where early intervention is not handled, in whole or in part, by the education department.

Data Development Opportunities

Movements toward unique student identifiers by state departments of education could provide the opportunity for student-level data in the future. Other data development opportunities will be brought to light through a pilot implementation of this measure.

Table 24: Preliminary Assessment for Unidentified Issues at Kindergarten Entry

Notes	
Data Power	High: Cohort level data is likely available at the local level from most state education departments.
Communication Power	Medium: This indicator may be hard to understand using the full definition of the measure, but better understood with a more simply worded title.
Proxy Power	High: This measure provides fair indication of early child development system functioning and seamlessness.
Overall Readiness	Ready: This measure is ready for pilot implementation as defined.

Options for Ongoing Implementation

- Pilot measure as defined.

SPM 2.1-2.5: Service Integration Standards (pilot in-progress)

Desired Data

The workgroup seeks an EC service system self-assessment on five Service Integration Standards, which are currently defined as:

- SPM 2.1: Understanding the full range of family strengths and needs
- SPM 2.2: Helping families get to the right place(s), where their needs can be met
- SPM 2.3: Working together when multiple service providers are involved with the same family
- SPM 2.4: Sharing data, both for improved service coordination at the case level and to support planning and quality improvement at the system level
- SPM 2.5: Professional development and organizational capacity building is supported

Each measure is to be evaluated along a continuum of four levels of integration or coordination, from 1 (not integrated) to 4 (well integrated).

Implementation involves using a tool to survey workers in the system. Communities will need to identify: 1) their preferred method of getting input (e.g. an in-person collaborative process, or an online survey, or both), and 2) participants, both in terms of their role within the system and how many to include. The tool also asks communities to identify ways to improve coordination.

For SPM 2.1, 2.2, and 2.3, parents' perspectives on their own experiences with the system would also be informative; a version of the tool may be developed to survey or interview parents.

The final format of the information gathered, whether qualitative, quantitative or both, is still to be determined.

Data Availability

Vermont and Orange County piloted the draft Survey Integration Standards. The current draft of the survey was found to be difficult for pilot stakeholders to complete. As such, no additional performance standard data is currently available.

Assessment

Data Quality

No data have been collected thus far. Data quality could be impacted by several factors that are likely to be addressed through continued piloting, including:

- The system performance measures have inconsistent wording and may not meet standard syntax for a performance measure.
- Questions in the current draft of the tool do not map directly to each of the five system performance measures, which impairs the ability of communities to track performance on each measure.
- Codification of results will aid cross-site comparisons and improve the efficiency and utility of within-site discussions, learning, and progress tracking.
- Depending on how respondents are selected, results could be incomplete or skewed.

Data Development Opportunities

- Tool identifies four levels of service integration. For online survey administration, consider an auto-generated rating that rolls up sub-scales within the survey. Summarizing survey feedback in this manner would make it possible to clearly communicate results to an independent group assembled to engage in in-depth discussions to collaboratively review and rate their system.
- Piloting communities will want to provide feedback on: ease of implementation, value of process, long-term sustainability, and the highest utility format for results.
- Once piloted and finalized, the tool could be rolled out to EC communities broadly or limited to engaged EC-LINC communities.
- The survey may be fielded to a subset of community early childhood leaders or implemented among broader early childhood stakeholders. The challenge between pursuing a more inclusive information gathering process and supporting a more intensive assessment may be balanced by developing different levels of survey access depending on the stakeholder respondent.
- Build parent experience into the measures, where relevant.

Table 25: Preliminary Assessment for Service Integration Standards

Notes	
Data Power	Low: No data exists to populate this measure, but there is potential for the measure to produce quantifiable results if the existing 1-4 level framework is used to produce results.
Communication Power	Medium: Piloting communities expressed some difficulties explaining process and measures with leadership.
Proxy Power	Medium: Piloting revealed challenges with articulating the value proposition into survey questions and challenging communicating to survey audience (policy and systems staff tend to understand goal of survey, but those with the information to respond reported difficulty doing so).
Overall Readiness	Mixed: Initial piloting revealed issues to be resolved before further piloting.

Options for Ongoing Implementation

- Align survey questions with the five service coordination standards and refine titles of standards for better consistency and clarity.
- Refine survey to reflect changes discussed during the in-person meeting, including adding parent experience into the measures, where relevant, and integrating the newly added fifth standard (SPM 2.5) into the tool.
- Continue pilot implementation, including conversations with EC-LINC agency managers and CSSP to describe the effort.

SPM 3.1: Changing Public Norms and Opinions on Early Childhood

Desired Data

Population-level data that enable communities to determine the baseline result and trend in public norms or opinions on the importance of early childhood in their region. Communities select a measure of public norms or public opinion on early childhood of their choosing. Criteria or guidelines to help communities select an appropriate measure still need to be determined.

Data Availability

Data availability is highly variable, depending on whether a community has an existing assessment of public norms or opinions on early childhood; a national source of data is not available. Communities without an existing assessment may be interested in implementing a survey or assessment in use in another community. Data sources identified by some of the EC-LINC Outcomes and Metrics workgroup communities include:

- *Let's Grow Kids* – population-level survey asking respondents' opinion of the importance of the first three years of life.
- *First 5 California Talk, Read, Sing Campaign* – commercials to get parents to talk, sing read to kids at any age, including early age, and follow up survey questions in California Health Interview Survey (CHIS) whether respondents who saw the commercial changed behavior. (CHIS also asks whether parents read or sing to children, which is Population-Level Indicator 2.3).
- *Vroom* – app to encourage parents to engage in developmentally beneficial activities with young children, and assessments conducted by Vroom to measure the efficacy of the program.

Assessment

Data Quality

Data quality may vary depending on the measure selected by a community. Quality could be more consistent with specific guidelines or criteria for measure selection. This measure does not enable direct comparison between communities, unless communities select the same measure, but it may help communities assess whether their public outreach and education activities are improving public opinions or norms about early childhood.

Data Development Opportunities

Some existing metrics provide a potential model for communities to implement in their region. The flexibility built into the measure enables communities to continue to use a measure that they are either already using, or select or create a measure that best suits their region's needs. However, the fluid nature of this measure may require additional technical assistance or guidance for communities looking to adopt this measure.

Table 26: Preliminary Assessment for Changing Public Norms

Notes	
Data Power	Medium: Data power depends on the quality of the measure selected; lack of a uniform measure inhibits broad cross-community comparison, although selected communities may use the same metric.
Communication Power	High: Most measures of public opinion on early childhood are likely to be easily understood by diverse stakeholders.
Proxy Power	High: Survey data measuring public opinions on early childhood provide a direct way to measure the system’s progress on the associated value proposition.
Overall Readiness	Mixed: Measure requires further identification of parameters around metric selection and how to implement given flexible definition.

Options for Ongoing Implementation

- Further define the measure.
- Identify criteria or guidelines to facilitate quality metric selection by communities.
- Identify how to implement, given flexible definition, and pilot measure as defined.

SPM 3.2: Results to Expect if Norms are Changed (to be developed)

Desired Data

A population-level measure of whether communities are taking actions in line with their value for early childhood. The measure may reflect actions, policies, or behaviors that are indicative of support (or lack of support) for early childhood. The workgroup considered measures including: parental leave adoption; child care and scheduling accommodations for parents with off-hours jobs; child care facilities with service hours in off-hours; and whether EC is sitting at other tables (not just the other way around), including public safety and parks/recreation.

Data Availability

Whether data are available depends on the measure selected to populate this measure.

Assessment

Data Quality

Data quality depends on the measure selected.

Data Development Opportunities

Selecting an existing “off-the-shelf” dataset would facilitate implementation, but this may not be possible or desirable. Lack of data for measures of interest could be a barrier, necessitating data development advocacy.

Table 27: Preliminary Assessment for Results of Changing Norms

Notes	
Data Power	TBD
Communication Power	TBD
Proxy Power	TBD
Overall Readiness	Not Ready: Measure needs to be defined and developed.

Options for Ongoing Implementation

- Commence work on developing new SPM 3.2 designed to measure the results one would expect to see if norms related to early childhood are changed.

SPM 3.3: Community Leadership Engagement in Early Childhood

Desired Data

The measure, as currently conceived, is not necessarily meant to create quantitative data. The goal is for communities or early childhood systems to use the tool to understand the extent to which different domains' leaders are engaged in early childhood, and to identify actions to increase engagement. The measure is defined as follows: "community performance on an assessment tool measuring whether leaders throughout the community understand the importance of early childhood and are engaged in efforts to make the community more supportive of young children and their families."

Data Availability

The tool is still in development and a revised draft will be provided to the Outcomes and Metrics workgroup participants to share with their leadership for input. Vermont has indicated an interest in piloting the tool.

Assessment

Data Quality

While the measure is not intended to create quantitative data, qualitative results can be still be impacted by tool design and implementation. For example, depending on how respondents are selected, selection bias could be an issue and lead to skewed results (e.g. if the people/person selected to represent a particular domain assess(es) engagement in a way that would not be consistent with how others in that domain would assess engagement).

Data Development Opportunities

The workgroup suggested several revisions to the tool prior to piloting:

- Add Parents as a sector and put them first
- Add K-12 Education as a sector.
- Change Hospitals to Healthcare, which would expand it to include pediatricians.
- Add definitions or examples for each sector (e.g. Service Organizations includes Rotary, Junior League, etc.)
- For the four rating levels, describe what is meant for each rating.
- Add a question that articulates what you need. E.g. "What have you already done to reach out to this sector?" or "What do you want from this sector that you don't already have?"

Table 28: Preliminary Assessment for Community Leadership Engagement

Notes	
Data Power	Low: Assessment tool is not intended to create quantitative data or enable cross-community comparisons.
Communication Power	High: Assessment tool offers tiered responses for levels of engagement among different domains, offering a way to communicate results in a clear manner to diverse stakeholders.
Proxy Power	High: Results would measure the diversity and breadth of early childhood support across community domains.
Overall Readiness	Mixed: Tool requires further refinement before ready to implement.

Options for Ongoing Implementation

- CSSP staff to revise and send to participants to share with their leadership, if desired.
- Pilot the assessment tool with interested communities once revised.

PLI 3.3: Communities and Neighborhoods are Child and Family Friendly

Desired Data

The workgroup seeks to identify an existing or build a new index measure that synthesizes the degree to which communities and neighborhoods are child and family friendly. Workgroup discussion identified key components that frame child and family friendly communities and neighborhoods, and also identified existing indices that may be appropriate for use.

Key components that comprise a child and family community identified during the in-person meeting include:

- Safety
- Stability
- Nurturing
- Respectful climate

The final format of the measure will depend on the selected index, but is likely to present as a score or numeric assessment.

Data Availability

Overall

This measure was not piloted, so data availability was not assessed through implementation. Group members identified multiple possible metrics, including:

- Families feel a sense of belonging and hope within a neighborhood;
- Walkability;
- Availability of parks;
- Mapping of liquor stores or grocery stores;
- School data;
- Crime maps.

Workgroup members discussed a variety of existing tools that could measure and or inform development of data for child and family friendly communities, including:

- The Misery Index (poverty, school performance, child care availability, crime, single parents);
- Community report cards;
- UNICEF community reporting tool;
- Prevention Institute's THRIVE tool for health and resilience;
- Social Capital Databank;
- The National Survey of Children's Health neighborhood safety and support metrics.

Data availability will depend on the index selected, the availability of data for that index at the regional, state, and national level and/or the feasibility of implementation of the index at the regional, state, or national level.

Subpopulations

Depending on the metric selected and the implementation approach, data may be disaggregated at the neighborhood or census tract level based on income and/or racial/ethnic neighborhood demographics.

Assessment

Data Quality

No data have been collected thus far. Data quality could be impacted by several factors, including:

- The final index selected and/or developed to measure this indicator.
- The ability for the final index to assess informal community connections as well as protective factors that may lead to widely different outcomes in one neighborhood over another, even if they have similar characteristics and service systems.
- The final definition of “family friendly community”, and implications for index development, with careful attention to avoid development of a “gentrification index.”

Data Development Opportunities

- Define “family friendly community” with clear language.
- Avoid development of a “gentrification index” instead of a “family friendly community index” by incorporating informal supports, demographic variation, protective factors, and and/other contextual factors that impact index interpretation.

Table 29: Preliminary Assessment for Communities are Family Friendly

Notes	
Data Power	TBD
Communication Power	TBD
Proxy Power	TBD

Options for Ongoing Implementation

- Share resources or existing indices that may be good models or sources of measurement for the indicator.
- Commence work on developing PLI 3.3 in a format consistent with other PLIs.
- Pilot resulting draft index among interested EC-LINC communities.