Life Course Theory looks at health as an integrated continuum where biological, behavioral, psychological, social and environmental factors interact to shape health outcomes across the course of a person’s life. The adoption of the Life Course Theory into public health practice requires movement away from isolated efforts and encourages broader thinking about the factors impacting health. Instead of concentrating on one health disease or condition at a time, the Life Course Theory looks to social, economic and environmental factors as underlying causes of persistent inequalities in health.

The indicators in the report were calculated according to guidelines published by the Association of Maternal and Child Health Programs. For each indicator, a brief description of the topic and definition, connection to the Life Course Theory, and data source are provided in the report. When possible, a state-level estimate for each indicator was calculated with 95% confidence intervals (CI) and Florida’s status was compared to the nation. The indicators were then stratified by race/ethnicity when available and appropriate.

This section details the following life course indicators related to organizational measurement capacity:

**LC-46.** Capacity to Assess Lead Exposure

**LC-47.** Data Capacity to Support Integrated Childhood Research

**LC-48.** States with P-20W Longitudinal Datasets

LC-46: Capacity to Assess Lead Exposure

Being exposed to lead during childhood can have detrimental effects on brain development, including intelligence quotients, ability to pay attention, and academic achievement\(^1\). The effects of lead exposure cannot be reversed.\(^1\) Although products (i.e. paint, gasoline) containing lead were banned in 1978, they may still exist in older structures. Those living in poverty in older structures are at the greatest risk for lead exposure.\(^1\) Children are particularly vulnerable to lead exposure, not only because they are growing and developing, but because they absorb lead at higher levels than adults. Children absorb 40% of a dose of lead compared with only 10% in adults.\(^2\) Through mandating the report of lead poisoning, future exposure to lead in the community can be prevented by identifying and eliminating sources of lead exposure.

**Data source:** Council of State and Territorial Epidemiologists (CSTE) State Reportable Conditions Assessment (SRCA), 2010  
**Numerator:** State level - Yes/No to the following question: *Does your state have an explicit requirement that blood lead test results be reported to the state health department?*  
National level - Number of states/districts/territories with an explicit requirement that blood lead test results be reported to the state health department  
**Denominator:** State level - None  
National level - Number of states/districts/territories

| Table 1: Percent of States with an Explicit Requirement that Blood Lead Test Results be Reported to State Health Department, 2010 |
|---------------------------------------------|------------------|
| Nation\(^3\) | Florida\(^4\) |
| 69.1% | Yes |

Although CSTE considers lead poisoning a nationally notifiable condition, whether that information gets reported to the CDC depends on the reporting status at the state level. The state must mandate reporting of lead poisoning to be included in national lead poisoning surveillance efforts. Approximately 69% of states explicitly require the reporting of blood lead tests to their state health department; Florida is one such state (Table 1). The Florida Department of Health’s Lead Poisoning Prevention Program is the entity responsible for state-wide surveillance, blood lead screening, and education.\(^5\)

LC-47: Data Capacity to Support Integrated Childhood Research

Routine access to timely datasets is vital for maternal and child health (MCH) programmatic efforts, especially as states work to incorporate the Life Course Theory. In order to demonstrate core MCH data capacity, the MCH Bureau of the Health Resources and Services Administration (HRSA) began collecting data through their Title V Information System (TVIS).\(^6\) States are asked to report their ability to obtain eight specific priority datasets for program planning and policy purposes in a timely manner.

The eight datasets are as follows:
1. Annual linkage of infant birth and infant death certificates
2. Annual linkage of birth certificates and Medicaid Eligibility or Paid Claims Files
3. Annual linkage of birth certificates and Women, Infant and Children (WIC) eligibility files
4. Annual linkage of birth certificates and newborn screening files
5. Hospital discharge survey for at least 90% of in-state discharges
6. Annual birth defects surveillance system
7. Survey of recent mothers at least every two years (such as the Pregnancy Risk Assessment Monitoring System (PRAMS))
8. Youth Risk Behavior Survey (YRBS)

This ability to access the first seven priority datasets is measured by a three-point scoring system:
1= No, the MCH agency does not have the ability
2=Yes, the MCH agency sometimes has this ability, but not on a consistent basis
3=Yes, the MCH agency always has this ability.

States are also asked to report on their participation status in the YRBS using the following scoring system:
1=No
2= Yes, the state participates but the sample size is not large enough for valid statewide estimates for this age group
3=Yes, the state participates and the sample size is large enough for valid statewide estimates for this age group

**Data source:** Title V Information System (TVIS) - Health Systems Capacity Indicator 9, Title V Block Grant FY 2013 Annual Report

**Numerator:**
- State level - Number of priority datasets the state Title V agency always has timely access to for policy and program planning purposes (score of 3)
- National level - Number of states that always have timely access (score of 3) to at least five priority datasets

**Denominator:**
- State level - Total number of priority datasets (N=8)
- National level - The number of states and the District of Columbia

<table>
<thead>
<tr>
<th>Table 2. Percent of States with Access to Priority Datasets with a Score of 3 (Always Have Timely Access), 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nation-Percentage of States with score of 3 for at least 5 priority datasets</td>
</tr>
<tr>
<td>72.5% (37 out of 51 states)</td>
</tr>
</tbody>
</table>

Florida scored the following five datasets as “3” meaning that the MCH agency always has the ability to access (Table 2):
- Annual linkage of infant birth and death certificates
- Annual linkage of birth certificates and WIC eligibility files
- Annual birth defects surveillance system
- Survey of recent mothers at least every two years (PRAMS)
- YRBS
Linkage and data sharing creates partnerships and collaboration across programs. Additionally, timely access to these linked datasets allows for enhanced research on risk and protective factors for mothers, infants, children, and families.

**Research Spotlight**

A validation study of birth certificate data was conducted looking at Medicaid enrollment at delivery and WIC prenatal participation. This study involved a linkage of the following data sources for the years 2004-2005: birth certificate data, Medicaid files, WIC participation data, and PRAMS. Using Medicaid enrollment data and WIC prenatal participation data as the “gold standards” this study found that the birth certificate underreports Medicaid payments for delivery. Both PRAMS and birth certificate reporting of WIC prenatal participation are good. When utilizing these and other birth certificate data elements for decision making purposes, researchers, policy makers, and state and local health practitioners should be aware of the accuracy of the data sources.

**LC-48: States with P-20W Longitudinal Datasets**

Education is a powerful social determinant of health behaviors and health outcomes such as heart disease, diabetes, alcohol use, and smoking. Education also impacts birth outcomes: birth weight increases significantly with higher maternal education. The P (Preschool)-20W Longitudinal Dataset was developed in an effort to capture educational data and make it usable and accessible to public health professionals. A P-20W Linkage includes data spanning preschool, K-12, higher education, and the workforce. In the future, the linking of the P-20W longitudinal datasets with health data will enrich data analysis capabilities and further life course research. This indicator serves to measure public health capacity to address life course and to examine health equity issues across the educational continuum.

The Data Quality Campaign has developed ten essential actions that a state may take to ensure they have a fully functional P-20W longitudinal data system. The progress of achieving the ten essential actions varies greatly state-by-state (Table 3).

<table>
<thead>
<tr>
<th>State Action</th>
<th>Florida Completed: Yes (Y) or No (N)</th>
<th>Number of States with Action Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Link state K-12 data systems with early learning, postsecondary, workforce, and other critical state agency data systems</td>
<td>Y</td>
<td>18</td>
</tr>
<tr>
<td>Create stable sustained support for longitudinal data systems</td>
<td>Y</td>
<td>41</td>
</tr>
<tr>
<td>Develop governance structures to guide data collection and use</td>
<td>N</td>
<td>43</td>
</tr>
<tr>
<td>Build state data repositories</td>
<td>Y</td>
<td>48</td>
</tr>
<tr>
<td>Provide timely, role-based access to data while protecting privacy</td>
<td>N</td>
<td>9</td>
</tr>
</tbody>
</table>
Table 3: Ten State Actions to Ensure Effective Data Use, Florida Status 2013

<table>
<thead>
<tr>
<th>Action</th>
<th>Florida Status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create progress reports with student-level data for educators, students, and parents</td>
<td>Yes</td>
<td>38%</td>
</tr>
<tr>
<td>Create reports with longitudinal statistics to guide system-level change</td>
<td>Yes</td>
<td>46%</td>
</tr>
<tr>
<td>Develop a purposeful research agenda</td>
<td>Yes</td>
<td>41%</td>
</tr>
<tr>
<td>Implement policies and promote practices to build educators’ capacity to use data</td>
<td>Yes</td>
<td>12%</td>
</tr>
<tr>
<td>Promote strategies to raise awareness of available data</td>
<td>Yes</td>
<td>34%</td>
</tr>
</tbody>
</table>

Data source: The Data Quality Campaign (DQC), 2013
Numerator: Number of states, territories, and jurisdictions that completed eight or more essential actions of fully functional P-20 W longitudinal data systems
Denominator: Total number of states, territories, and jurisdictions

Table 4: Percent of States with Eight or More Essential Actions of Fully Functional P-20W Longitudinal Data Systems, 2013

<table>
<thead>
<tr>
<th>National</th>
<th>Florida</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.4% (14 out of 51 States)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Florida has completed eight “Actions to Ensure Effective Data Use” (Table 4) and is one of only 14 states to do so. These actions have been supported through 2014 Florida Statutes to promote the development of longitudinal datasets as well as state-wide funding. According to the Data Quality Campaign, Florida has two more state actions to complete before fulfilling all the actions of a fully functioning P-20W longitudinal data system. These actions include developing governance structures to guide data collection and use and to provide timely, role-based access to data while protecting privacy (Table 3).
References