

## Connecticut Early Childhood Data Systems: Summary of Challenges as of July 2008<sup>1</sup>

The Connecticut Early Childhood Education Cabinet, established in law in 2005 and given additional mandates by the 2007 Connecticut General Assembly, has been working on data challenges since its inception. These were first documented in the Cabinet's 2006 Results Based Accountability report to the Appropriations Committee. In each subsequent year, a data agenda has been provided for each program included in the Cabinet's RBA reports to Appropriations. This brief report summarizes information on the status of Cabinet-related early childhood data development, interoperability and reporting, to date.

### Connecticut Data Challenges Related to Children and Youth

In a widely distributed compendium of Connecticut data work having to do with children and adolescents more than 12 separate data development initiatives were identified (October 2006). A summary of these and other findings to date was reported to the Cabinet in November 2007.<sup>2</sup> Data challenges identified across these efforts included the collection of many data elements but the production of little information, limits in data development capability, and structural and policy limitations on data reporting and sharing. Specific findings in each category are summarized in Appendix A of this report.

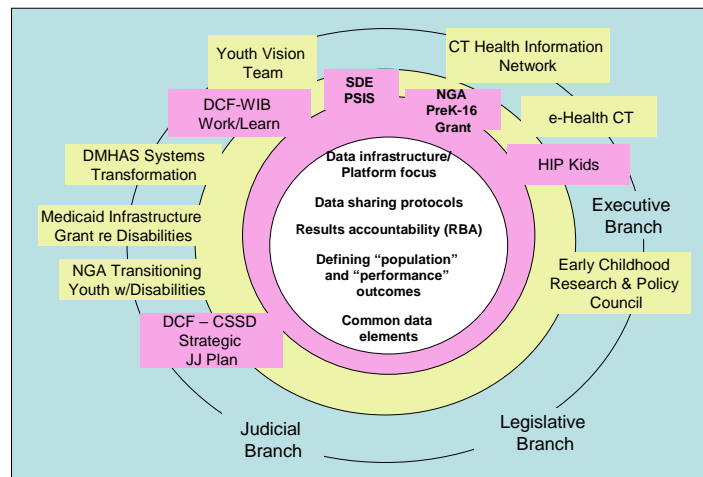
### Early Childhood Data Challenges Identified from PCG Studies

In State Fiscal Year 2008, the Early Childhood Education Cabinet utilized some of its legislatively appropriated resources to contract with the Public Consulting Group (PCG), a national management consulting corporation holding a master contract with the State of Connecticut to provide consulting services. The PCG reviewed current RBA reports, collected data on the Cabinet's birth cohort and on young parents, examined the flow of early childhood data across state agencies, and collected memoranda of understanding related to data sharing and case management. PCG reviewed the data management systems and reporting protocols of seven state agencies providing services to children and families throughout the state. Specifically, PCG examined:

- 7 data management systems
- 18 reports
- 2 data dictionaries
- 3 data extracts.<sup>3</sup>

### Data Infrastructure Initiatives Related to Children and Youth

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<sup>1</sup> This summary was compiled by Dr. Janice Gruendel, Co-Chair of the Connecticut Early Childhood Education Cabinet. It has been posted to the Early Childhood Investment Initiative website as of March 9, 2009. For more information, contact – [janice.gruendel@aya.yale.edu](mailto:janice.gruendel@aya.yale.edu)

<sup>2</sup> "Synopsis of Data Work," Early Childhood Education Cabinet Meeting Documents, November 2007. Online at -- [www.ctearlychildhood.org/fileManagerRecursive/default.asp?LevelID=2&Year=2007&Month=11](http://www.ctearlychildhood.org/fileManagerRecursive/default.asp?LevelID=2&Year=2007&Month=11)

<sup>3</sup> In some cases, agencies did not maintain a "technical" data system but still collected relevant information on children and families. This information may have been contained in individual paper or electronic files and managed by multiple users. In cases where this occurred, PCG supplemented the systems review by collecting and analyzing reports, data dictionaries and extracts.

In its Executive Summary of this work (July 2008), Public Consulting Group identified two “overarching data management and access problems” among Connecticut agencies serving young children:

- It is impossible to know how many children and/or families are receiving services from multiple state agencies.
- Uniform outcome measures do not exist across programs preventing comparable program evaluation.

### ***Problem 1: Counting Children and Families***

***Much data gathering; little consistency.*** While all state agencies track, compile and maintain information children and families, there is no consistency in how this occurs. Some agencies maintain elaborate data systems to track the comprehensive array of services provided to children and families from entrance to exit, while others collect very specific information for sole purpose of completing reports and fulfilling requirements....Data systems and/or data collection may not provide enough detail to allow agencies or programs to link families. Data may be collected on a child and a parent, but in some cases, no data element connects the parent to the child. This is the case with the State Department of Education (SDE) Even Start data system. Data is collected on parents and children in the program, but the parents are not linked to their children.

***No common client or program identifier.*** A single, common, unique identifier has the possibility to link data on individuals and families receiving multiple services throughout the state. A child currently receiving services cannot be tracked across multiple programs or agencies leading to an uncoordinated system of care. In addition, the lack of a unique program identifier makes it difficult to fully understand the “universe” of child care and early education programs throughout the state. These programs cannot be fully documented because there is no universal database recording unduplicated program, and there is no single program identifier that can be used to view centers across programs / paying agencies.

***Limited systems interface.*** Conducting data matching and analysis from multiple agencies is difficult and time consuming, because Connecticut agencies utilize different data systems that do not interface across *or within* agencies. As one example, SDE utilizes the Connecticut Adult Reporting System (CARS) for their Adult Education population, Public School Information System (PSIS) for the K-12 population, and Prekindergarten Information System (PKIS) for the preschool population. Each of these systems is maintained by different data groups within SDE and therefore managed by different staff members.

In some instances, in order to match files across agencies, paper files are *physically transferred* from one agency to another. As an example, SDE automatically enrolls students into the free and reduced lunch program if their family is a food stamp participant. To conduct this match, Food Stamp files from the Department of Social Services (DSS) are physically carried over to SDE.

***Federal-state systems challenges.*** Head Start providers complete monthly paper-based Activity Reports for the state. Once complete they are delivered to state officials where they must be entered into an Excel spreadsheet, when staff at the state level have the time to complete this work. Of note, all information contained in the state Head Start Monthly Activity report is also captured in the yearly federal Program Information Report (PIR) that is submitted to the federal government. The state must collect this information separately because the federal Head Start report may not be released until 18 months after the PIR is submitted

***Agreements for data sharing.*** Many state agencies have traditionally drafted agreements for the purpose of sharing resources or exchanging money for service collaboration. There are however, an increasing number of

agreements being drafted for the purpose of exchanging data to improve service delivery and outcomes for children and families. As this happens, it will become increasingly important to inform other agencies, policy makers and the general public about the types of data they collect, keep, and report on.

While data sharing agreements are public record, many do not exist in the public domain. Many state agency employees are unaware of agreements they maintain with other agencies and contactors, or even where existing MOU / MOA documents are located. In some cases, state agencies may be aware of these agreements but lack the appropriate staff resources to locate and transfer a copy of the agreement to a third party. Also, multiple layers of administrative oversight can prevent data agreements from being shared.

**Ownership policies.** PCG requested data and reports specific to young parents and their children and children born in calendar year 2006. Data collection was sporadic due to privacy and confidentiality issues, timeliness of data, and data production challenges. Agencies were hesitant to produce data, though our requests were for aggregate information only. In addition, access to program reports was not always granted.

## **Problem 2: Uniform outcomes measures across programs preventing comparable program evaluation**

Across the 27 RBA programs reviewed in SFY 08, PCG determined that uniform data collection methods, measurement tools and outcomes do not exist. While each program established broad goals designed to meet the purpose of Connecticut's *Ready by Five, Fine by Nine Framework*, data measurement and outcome goals that are not consistent between programs. As a result, the Cabinet is currently not able to look across programs offering similar services and discern the high performing ones from the low performing ones or make value judgments based on comparable data measures.

### **Six Public Consulting Group Recommendations**

#### **1. Publish data sharing agreements and maintain copies centrally**

Data management and coordination will become increasingly important for the coordination and fiscal accountability of Connecticut early care and education programs. Thus, it will be essential to bring data sharing agreements into the public domain. Few agencies currently have a strategic communications plan or public education process that informs other agencies of these agreements. Each state agency should create and maintain an MOU file for the purposes of easily locating and sharing these agreements with interested parties. The importance of routinely sharing these agreements will be essential for planning, accountability, and interagency systems building efforts.

#### **2. Develop a unique ID for early childhood programs and individual clients**

Connecticut should implement a statewide unique identification number for early childhood programs and individual clients. A single identification number utilized statewide will help facilitate data sharing, outcomes measurement and reporting. This identifier could be an individual's SSN or the State Assigned Student Identifier (SASID). The following identifiers are currently in use:

- State Department of Education: SASID (State Assigned Student Identification Number)
- Department of Social Services: Medicaid Number
- Department of Public Health: Medicaid Number, SSN (Social Security Number), Vital Records Number
- Department of Labor: SSN
- Department of Children and Families: SSN

After ensuring data integrity, agencies can use a single unique identifier (e.g., SSN, SASID, Medicaid Number) along with other demographic information to develop a crosswalk that is capable of linking client information in different agency data systems.

### 3. Examine individual agency data systems to determine how best to connect data on families

Analyzing the data collection, handling and reporting methods of each agency has shown how data is shared among and between agencies and organizations in Connecticut. This has allowed us to map agency relationships and highlight areas of coordination and gaps in communication. Next steps in completing a review of data systems may include looking at individual agencies' data systems to determine what data elements should be added for outcomes measurement and to link parents and children within the electronic case record.

### 4. Implement statewide early childhood data sharing policy to improve service delivery, program evaluation and budgeting

The Early Childhood Education Cabinet should lead the effort to create draft policy and/or legislation that addresses data sharing for improved service delivery, program evaluation and budgeting. The Cabinet should highlight the efforts of its Data Matters Working Group and draw from similar studies that show the financial benefit of a coordinated and comprehensive early care and education service delivery system.

### 5. Examine data system staffing to determine the need for additional resources or coordination

Data collection and maintenance at many state agencies is often fragmented, under-resourced and insular. Many of our requests to collect information for the purposes of this research were denied due to the lack of staff resources to accommodate our requests. A further evaluation of state agencies and the staffing resources they dedicate to data management will be an important next step in understanding the appropriate levels required to enhance cross-agency data sharing.

### 6. Develop common measures and indicators to be used to measure similar programs.

As required under PA 07-03 of the Connecticut General Statutes, the Cabinet should take steps to define a common set of measures and indicators which can be used in conjunction with the RBA tool. This will allow for uniform program measurement across early childhood programs and providers. Data measures should be specific to the type of program and population served, have quantifiable measures, and timeframes that allow changes to be made in an appropriate manner.

Appendix A: Summary of Connecticut Data Challenges related to Children and Youth (11.07)		
Data vs. Information	Data Development Limitations	Data Sharing Structural and/or Policy Limits
<ol style="list-style-type: none"> <li>1. Questionable accuracy and reliability of current data</li> <li>2. Lack of data dictionaries and common definitions for common terminology</li> <li>3. Lack of current data on key child outcome indicators for program and policy analysis</li> <li>4. Disaggregated data by community (or other key variables) is often unavailable</li> <li>5. "Unique" client identifiers are rare within and across agencies</li> <li>6. Program performance data do not relate to client outcomes</li> </ol>	<ol style="list-style-type: none"> <li>1. Many client records not yet in electronic form</li> <li>2. Limited use of web-based entry and query systems</li> <li>3. Data development and training personnel do not systematically connect with client and program personnel</li> <li>4. Current data systems will not support real time data sharing for children/families served across agencies</li> </ol>	<ol style="list-style-type: none"> <li>1. Limited communication across agencies detailing what data are collected by each</li> <li>2. Databases do not "talk to each other"</li> <li>3. Agencies operate with disparate hardware and software within internal units and across each other</li> <li>4. Federal and state law/policy <i>can</i> constrain data development and information sharing, but agency policy may overstate these constraints</li> </ol>