

# IDS CASE STUDY: Case Western Reserve University

Creating a Community Resource to Evaluate  
Programs and Policies in Cuyahoga County

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AUGUST 2013

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Over a decade ago, Dr. Claudia Coulton, the Lillian F. Harris Professor of Urban Research & Social Change at Case Western Reserve University's Mandel School of Applied Social Science, started the integrated data system to examine the benefits and limitations of Cuyahoga County's Invest in Children initiative. Since its founding, Coulton and her affiliates in the Mandel School's Center on Urban Poverty and Community Development have been deeply engaged with developing and maintaining the Center's integrated data system (IDS). Currently, Coulton and her colleague, Dr. Robert L. Fischer, a research associate professor in the Mandel School, co-direct the Center on Urban Poverty and Community Development and manage its integrated data system. The integrated data system is now known as the ChildHood Integrated Longitudinal Data system (CHILD). It covers children up to 18 years of age living in Cuyahoga County beginning with the 1992 birth cohort. Data from numerous agencies are linked at the individual level. Data sources include birth certificates, publically subsidized child care, home visiting and early intervention, child abuse and neglect investigations, child welfare placements, juvenile justice filings, TANF, SNAP, Medicaid participation, and public school student records. Additional data sources are added as new agencies begin to work with the Center and become interested in seeing their data linked in order to address cross-sector policy issues and program needs.

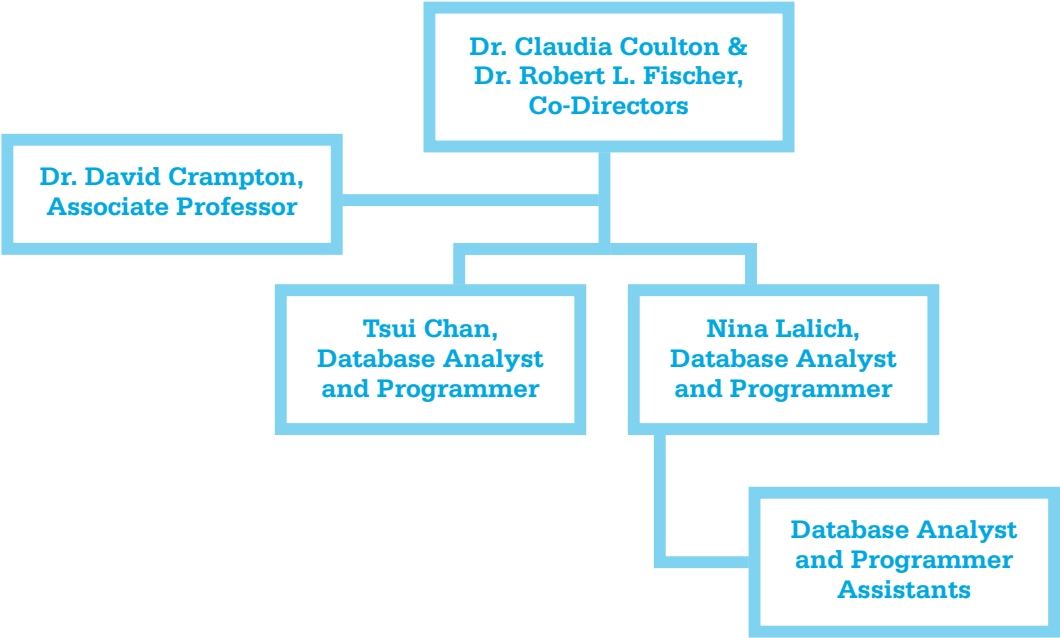
**FIGURE 1. Contributing Agencies, Case Western Reserve University's ChildHood Integrated Longitudinal Data.**



During the site visit, I conducted semi-structured interviews with four members of the Case Western Reserve University community who work with the integrated data system: Dr. Claudia Coulton; Dr. Robert L. Fischer; Dr. David Crampton, an associate professor at the Mandel School; and Nina Lalich, the database analyst and programmer. In addition, I met with two members of the non-profit community who work closely with these researchers on policy-driven research and evaluations: Dr. Rebekah Dorman, the director of Invest in Children and the Cuyahoga County Office of Early

Childhood, and Leslie Strnisha, a program officer with the Sisters of Charity Foundation of Cleveland. The interviews were based on an interview protocol developed with the University of Pennsylvania’s Actionable Intelligence for Social Policy (AISP) team. Using standard qualitative methods, I coded these interviews for four themes—securing and maintaining legal agreements; establishing governance processes; data analytics management and processes; and economic and political realities to sustain operations—to understand the evolution and benefits of Case Western Reserve University’s integrated data system.

**FIGURE 2. Center on Urban Poverty and Community Development’s Integrated Data System Organizational Chart**



**❖ Securing and Maintaining Legal Agreements and Ethical Data Use**

Like other sites in the AISP network, the researchers who manage the operations with the Center’s integrated data system have developed individualized memoranda of

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understanding (MOUs) with the agencies that contribute data. Each of these individual MOUs complies with federal, state, and local legislation regarding data use and practice. Due to university policies, Coulton and Fischer, the co-directors of the integrated data system, rarely oversee this process. Rather, university legal staff members work with lawyers in each of the contributing agencies to develop MOUs that often resemble a legal agreement between Case Western Reserve University and the agencies that supply the data. Similar to other AISP network sites, Coulton and Fischer note that the researchers who are affiliated with the Center on Urban Poverty and Community Development's integrated data system are custodians of the data that these agencies contribute. Thus, the university sees the Center's research staff as stewards who collaborate with the agencies that supply the data and ensure ethical and legal data use and practice (Coulton and Fischer, interview, April 5).

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## ❖ **Establishing Governance Processes for Data Use**

The Center's integrated data system is generally regarded as an internal research tool and resource for individuals who are affiliated with Mandel School's Center on Urban Poverty and Community Development. Since it is an internal tool, Coulton and her team have not developed a formal governing or advisory board. Even though the staff members have not created a formal governing board, they do consult with their stakeholders, particularly those in Cuyahoga County, who contribute data and fund their work. The Center also routinely assembles advisory groups for particular project or grant applications, such as the Promise Neighborhoods Initiative, to increase

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capacity and generate discussions among the agencies that supply data, the foundations that fund grants, and officials that develop policies at the local, state, and federal levels. In her interview, Coulton described the Center's complementary data system, NEO CANDO, which is the Northeast Ohio Community and Neighborhood Data for Organizing, as a free and publicly accessible social and economic data system. NEO CANDO allows users to access tabulations of data from the same administrative agency data sets that go into the CHILD system. NEO CANDO provides counts and rates on key social indicators for all neighborhoods in the 17 county Northeast Ohio region or specific neighborhoods within Cleveland (<http://neocando.case.edu>).

Case Western Reserve University researchers participated in a multi-site Actionable Intelligence for Social Policy study funded through the John D. and Catherine T. MacArthur Foundation that examined the lives of youth who experience foster care and the likelihood that they would become involved with the juvenile justice system. The study examined the life trajectories of youth served by both systems to understand factors that predict which youth in foster care will go on to have a juvenile justice filing and which factors predict a more resilient outcome. Through the use of integrated data, the researchers focused on demographic factors as well as potentially changeable characteristics of their foster care involvement that can be the focus of practice and policy reform. The findings suggest that about 24% of youth who experienced at least one foster care placement went on to become involved in the juvenile justice system. In addition, researchers examined how the chances of a juvenile justice petition change over time following entry into out-of-home care. In Cuyahoga County, 29.9% of youth who first entered foster care after their ninth birthday were involved with the juvenile justice system, compared to just 16.3% of children first placed as infants. This translates into an 83.6% greater risk for youth who enter foster care later in life. Males and African American youth were generally at greater risk for later juvenile justice involvement. Finally, youth who experienced a greater number of child welfare spells, or were placed in congregate or group foster care, were also at greater risk. Taken together, these findings indicate that policymakers should consider ways to increase coordination and collaboration between child welfare and juvenile justice agencies to prevent or address

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developing behavior problems for children on pathways to juvenile justice. To do this, policymakers should tailor programs and services for those youth entering or in foster care that are most likely to become involved with the juvenile justice system (Goerge et al., 2013).

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In addition to this multi-site study, Coulton and her team have begun an innovative project that leverages their integrated data system to evaluate the effectiveness of social impact bonds (SIBs) in Cuyahoga County. SIBs, which are also known as Pay for Success Bonds, Social Innovative Financing, and Social Benefit Bonds, provide governments with a risk-free way to implement innovative social programs that often take months or years to demonstrate results. Governments who engage in this practice identify problems that they want to tackle, and then, they work with an intermediary group that is charged with raising capital from independent investors—banks, foundations, and individuals. If the new policy or program is successful, the government repays the investors with returns calculated based on the net savings that the government receives as a result of the program’s success (Pettus, 2013). Currently, Coulton and her team of researchers are working with government agencies and foundations in Cuyahoga County to use the university’s integrated data system to assess the potential benefits of a SIB offering. If the SIB is pursued, the IDS would be crucial to tracking the cost savings that the government would accrue if and when these programs are successful.

Beyond these initiatives, the Case Western Reserve University researchers are also deeply engaged with local foundations and non-profit agencies that rely on the integrated data system to evaluate and improve their programs and policies. Since 1999, the researchers affiliated with the integrated data system have collaborated with Invest

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in Children and the Cuyahoga County Office of Early Childhood to measure well-being indicators for children throughout Cuyahoga County and to evaluate the programs that Invest in Children created. Dr. Rebekah Dorman, who has been the director of Invest in Children for the past four years, believes that this collaboration has provided critical feedback about the efficacy of the programs that the organization has implemented and about how to change these programs to improve outcomes for early childhood learners throughout the county. The researchers at the Center on Urban Poverty and Community Development have developed profiles that highlight well-being indicators for children in Cuyahoga County's 11 council districts. These profiles are one-page reports with summary statistics that detail well-being indicators for children living in a particular council district and comparison statistics that illustrate the same indicators for children throughout the county. These profiles are publicly available to encourage discussion among council members, service providers, policy analysts, and community members (Dorman, interview, April 5).

In addition to this initiative, the researchers affiliated with the Center on Urban Poverty and Community Development have also been working closely with Leslie Strnisha, a program officer with the Sisters of Charity Foundation of Cleveland (<http://www.socfdncleveland.org>). For over 15 years, the Sisters of Charity Foundation of Cleveland has provided grants to grassroots activists and non-profit organizations that are engaged in work to improve the lives of families, women, and children living in poverty. The foundation focuses primarily on finding ways to end homelessness and reduce health and education disparities in Cleveland's Central neighborhood. This neighborhood has the highest concentration of public housing residents in the city and much higher rates of child poverty and health disparities when compared to the city and county. The Sister of Charity Foundation of Cleveland staff members meet regularly with Central residents and listen to their concerns so that they can devise programs and initiatives that meet their most pressing needs. For example, when the Cleveland School District dismantled their middle school system and moved to a K-8 configuration for its schools, residents noticed that the middle school youth lost many of their afterschool programs and activities. To address these concerns, the foundation



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created programming, such as college visits, career counseling, and arts programs, for adolescents who lived in the community. In the past several years the foundation has been working closely with university and community partners to augment their work in the Central community, and recently, they partnered with Coulton and Fischer to brainstorm how they might leverage the data housed within Case Western’s IDS to evaluate the policies and programs that they have put in place to improve the lives of Central youth (Strnisha, interview, April 5).

Currently, Coulton and Fischer are thinking critically about how they can increase access to the Center’s integrated data system for researchers who are not affiliated with the Center or Case Western Reserve University. Opening the database to other social scientists and policy analysts requires thinking deeply about how to screen proposals and ensure quality data use and practice among external partners. Moreover, it demands that the Center devise a way to charge external researchers to ensure that the Center can cover operating expenses and analytical services, which are generally covered through funding from foundations and federal grants that Coulton and Fischer have secured (Coulton and Fischer, interview, April 5).

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## ❖ Data management and analytic processes

Nina Lalich, the database analyst and programmer, oversees the data management and analytic processes for the Mandel School’s Center on Urban Poverty and Community Development integrated data system and works closely with the data suppliers to retrieve, clean, and store the data in a timely manner. Each data supplier decides the frequency for sending their data to the data warehouse—some deposit data on a weekly basis while others send their data on an annual basis—depending on the supplier’s

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capacity to send data and the needs that the researchers might have. Lalich retrieves the data through several processes. Typically, the data suppliers send their data to Lalich over an FTP server that they host internally at their agencies. Lalich has an account for each of these servers, and after she logs into her account, she can access and download the data. In some cases, agencies send their data files to Lalich using either encrypted CDs or emails that only she can access. Finally, in one case, Lalich physically goes to the data supplier's office and copies the data on an encrypted flash drive that changes its password periodically to ensure security. Lalich says that she has tried to remain flexible with the agencies to make the data retrieval process as easy and secure as possible. After Lalich has retrieved the data, she stores it on a server that is maintained in the Center on Urban Poverty and Community Development with state-of-the-art security protocols to protect the data. Researchers and staff who are affiliated with the Center on Urban Poverty and Community Development access the data using a password-protected portal on their computers. The data management and use protocols are approved by the University's Institutional Review Board (IRB).

Since the Center's researchers are the primary consumers of the data, Lalich has not created de-identified data sets. Rather, researchers are careful when they publish their findings so that no one can re-identify the data that they used. In most cases, they present data on an aggregate level so that readers understand general trends and can devise more effective policies and practices based on their studies. Although she has not created a de-identified data set, Lalich has implemented several procedures to link the data to ensure that it is ready for the researcher to use on a variety of projects. First, she relies on a pre-packaged macro that runs on SAS to link the data and create reports that highlight missing or problematic linkages. During this phase, the program uses the child's date of birth and the mother's date of birth to link the data. Once this phase is complete, Lalich conducts a manual review to identify potential duplicates. She never deletes potential duplicate data fields. If she suspects that she has identified a duplicate in her data set, she assigns two different IDs to these data and decides how to handle these data during the research process. Lalich often hires undergraduate or graduate students who are trained in computer science or data analytics to assist her with this process.

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Data use also shapes Case Western's data quality standards and procedures. Lalich generally cleans data on a project-by-project basis and works closely with the researchers who are affiliated with the Center and data providers to identify missing or invalid data. For example, the staff often has to standardize race variables for particular projects since many of the agencies use different criteria. In most cases, Lalich will have a conversation with the data suppliers to understand how they have categorized the data, and then, she will work closely with researchers to understand their research needs, ensure that the data are valid, and create a unknown category, if necessary, to identify missing or problematic data. As Lalich said, she tries to keep the data in its original form so that she can clean it or standardize it when the researchers are ready to use it (Lalich, interview, April 5).

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## ❖ **Economic and Political Realities for Sustaining the IDS**

Initially, Case Western Reserve University funded its integrated data system with foundational support from The Cleveland Foundation. This foundation supported the Invest in Children initiative, and at least in its early phases, funded the operational costs for the database to ensure that the staff could build and maintain it. While these foundations have continued to support the integrated data system, the level of support has diminished and the research staff has had to find ways to maintain the database with minimal support from the university. David Crampton, who is an associate professor at the Mandel School of Applied Sciences, notes that the research staff often generate interesting research questions or potential studies, but due to the limited funds available they routinely have to consider “how much time and resources it would take” to investigate their ideas (Crampton, interview, April 5). Even though the Mandel School's Center on Urban Poverty and Community Development integrated data system is a university resource, Coulton and her team do not receive funds from the university. As foundation and government funding decreases, the researchers who work with the database have had to make strategic decisions about projects they should pursue and how to allocate their time judiciously (Coulton and Fischer, interview, April 5).

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Despite these funding challenges, the researchers are hopeful about the promises of integrated data systems for improving the quality and delivery of social services in Cuyahoga County. When they reflect on their work, many of them remarked that they are proud of their ability to produce quality, policy-driven research that addresses the needs of youth and their families in the region in an efficient and cost-effective manner. In addition, they believe that their data warehouse is a unique resource that county residents, local foundations, government agencies, and engaged researchers can use in a variety of ways. As David Crampton suggests, the integrated database allows researchers to ask interesting questions that in the past “would have required someone going into the [case] files and looking” for pieces of information over a particular period of time (Crampton, interview, April 5).

The researchers affiliated with the Center on Urban Poverty and Community Development are also particularly proud of the multi-site juvenile justice study that they have been involved in over the past year. This study, which the John D. and Catherine T. MacArthur Foundation supported, focused on “dually involved” or “crossover” youth—those youth involved in both the child welfare and juvenile justice systems—in Cuyahoga County/Cleveland; Cook County/Chicago; and New York City. Many of the researchers at the Center believe that this multi-site study represents the potential that integrated data systems can offer policy-driven researchers and analysts. During the research design phase, individuals at the three sites had to determine the best ways to investigate this question across three distinct geographical regions and three different data sets. After careful deliberation about the research design, they found several similarities and differences across these three cities that raised new questions, about the meaning of these findings and the policies that they should implement to improve outcomes for foster care youth (Interview, Crampton, April 5, 2013). Coulton and her colleagues at Case Western Reserve University recognize that their integrated data system is a critical research tool and are committed to maintaining it as a community resource to reduce urban poverty and enhance community development throughout Cuyahoga County.

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## ❖ About AISP

AISP is an initiative funded by the John D. and Catherine T. MacArthur Foundation through a grant to University of Pennsylvania Professors Dennis Culhane, School of Social Policy and Practice, and John Fantuzzo, Graduate School of Education. The principal aim of AISP is to improve the quality of education, health and human service agencies' policies and practices through the use of integrated data systems. Quality integrated data systems are designed to help executive leaders in municipal, county, and state government evaluate and establish effective programs for the people they serve.

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### ❖ Recommended Citation

Kitzmilller, Erika M. (2013). *IDS Case Study: Case Western Reserve University: Creating a Community Resource to Evaluate Programs and Policies in Cuyahoga County*. Actionable Intelligence for Social Policy (AISP), University of Pennsylvania.